cogent medicine

Cogent Medicine

Taylor & Francis
Taylor & Francis Group

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/oamd20

12th Excellence in Pediatrics Conference – 2020 Book of Abstracts

Excellence Pediatrics & Rue des Vignerons

To cite this article: Excellence Pediatrics & Rue des Vignerons (2020) 12th Excellence in Pediatrics Conference – 2020 Book of Abstracts, Cogent Medicine, 7:1, 1848781

To link to this article: https://doi.org/10.1080/2331205X.2020.1848781

Published online: 02 Dec 2020.

cogent medicine

EiP
EXCELLENCE IN PEDIATRICS
INSTITUTE

2020 VIRTUAL 12th CONFERENCE 3-5 DECEMBER

BOOK OF ABSTRACTS

ISSN 2297-931X

Cogent Medicine (2020), 7:1848781

cogent oa

Pediatrics, *Cogent Medicine* (2020), 7: 1848781
https://doi.org/10.1080/2331205X.2020.1848781

cogent medicine

PEDIATRICS | CONFERENCE ABSTRACTS

12th Excellence in Pediatrics Conference – 2020 Book of Abstracts

Session

OP1: Oral Presentations (OP-1)

Time: **Thursday, 3 December 2020**: **14:00—15:00**	*Location*: **Virtual**

Presentations

ID: 143/OP1: 1

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: COVID-19

Keywords: COVID_19, infant, infection

A 3.5-month-old infant infected by SARS-COV-2. The youngest patient in Greece.

Katsaras, George; Oikonomou, Evaggelos; Lazaridi, Eleni; Gouni, Dimitra; Kyparissi, Giannoula; Tsitsani, Pelagia

Pediatric Department, General Hospital of Pella, Hospital Unit of Edessa, Greece

Background: In December 2019, a novel disease was found in Wuhan, China, that was named coronavirus disease 2019 (Covid-19) and the virus causing it was named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). On Wednesday, February 26, Greece confirmed the first coronavirus case. On Saturday, August 15, we confirmed the youngest Covid-19 patient in our country.

Case Study: On 13 August 2020, a 3.5-month-old girl was admitted to the Pediatric Emergency Room, with reported fever (38.3oC) for 24 hours and mild rhinitis. There wasn't any Covid-19 positive person in the infant's environment. Both parents were free of symptoms with no recent travel history. On admission, the clinical examination revealed a well-appearing infant, apart from mild rhinitis, with normal findings from the auscultation and the examination of all systems. She was afebrile with 98% oxygen saturation and normal respiratory rate. Laboratory results were normal for her age. A chest radiograph was not performed because of her wellbeing. Due to the recent rise of the-novel-coronavirus cases in our region, we classified her as a suspected case of Covid-19. A nasopharyngeal specimen taken on admission and tested by rRT-PCR confirmed the diagnosis of Covid-19 infection. She became afebrile after 24 hours and was released on her 3rd hospital day. Her parents were found negative for Covid-19 infection and are about to submit a second specimen in 7 days.

Learning Points Discussion: Clinical manifestations of children's Covid-19 cases are less severe than those of adult patients, probably due to differences in the expression of the angiotensin-converting enzyme (ACE) 2 receptor necessary for SARS-CoV-2 binding and infection. This receptor

is expressed in airways, lungs and the intestine. However, young children, particularly infants, are vulnerable to 2019-nCoV infection and when infected may be asymptomatic or oligosymptomatic. The current literature suggests that children do not appear to be "superspreaders", as they were initially thought. Broader studies are required to identify the relationship between the severity of children's symptoms and their role in the transmission of SARS-CoV-2.

ID: 147/OP1: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: COVID-19

Keywords: Covid19, sepsis, newborn

Clinical and biochemical manifestations of newborns and young infants who presented with a sepsis-like picture: Comparison between COVID-19 positive and negative groups (a controlled study)

Alsliman, Hafez khaled; Hassan, Manasik; Alamri, Mohammed; Alhothi, Abdulla; Abdalla, Tasneim; Alomari, Ohood; Magboul, Samar; Khalil, Ahmed; Soliman, Ashraf

Hamad Medical Corporation, Qatar

Background: Since the announcement of COVID-19 infection as a pandemic in March 2020, multiple described the different presentations, course and outcome of this infection in adults and children. However, very limited data described the manifestations of this disease in newborns and very young infants.

Aim of the Study: To describe the clinical presentations and biochemical profile of symptomatic COVID-19 positive newborns who presented with sepsis-like-picture and compare them with COVID-19 negative newborns who presented with sepsis-like-picture during the same period.

Methods: A controlled single institutional retrospective study was performed between April 1st—July 2020 at Hamad Medical Center, Qatar. All infants < 8 weeks of age admitted with sepsis-like -pictures were studied. They were divided into COVID-19 positive PCR (nasal swab) group and COVID negative one (control). Details of biochemical chemistry across the groups were recorded and compared.

Results: Eighty-one newborns were studied: 40 control (COVID negative) and 41 COVID positives. White cell counts found to be lower in the positive compared to the negative group (mean 8.42 versus 12.5 × 109/L respectively) (P 0.0001). Lymphocyte % were higher in COVID positive versus the negative group (59% versus 41% respectively) The ANC neutrophil count was lower in the positive versus the negative group (mean = 2 × 109/L versus 5 × 109/L respectively (P 0.0001). Serum albumin was lower in the COVID-19 positive versus the negative group (mean = 35 g/L versus 44 g/L respectively) (P < 0.0001) . Sepsis-workup and lumbar puncture (LP) were performed in 27 of COVID-19 positive newborns and in all the negative group. 26/27 of CSF cultures were negative in the COVID-19 positive group (1 case had Klebsiella meningitis). All the COVID19 negative group had negative CSF cultures. Both groups had negative blood cultures. Nine of the COVID negative group had positive urine cultures while none of the COVID positive had positive urine culture. 4 of the COVID negative group showed Rhinovirus in their respiratory viral screening. The mean viral load (CT value) for COVID-19 positive group was 17 denoting considerable viral load.

Conclusions: Newborns and young infants who presented with sepsis-like and were COVID 19 positive had significantly lower neutrophil count and albumin level and higher lymphocyte count compared to COVID-19 negative infants. Their low CT value denoted considerably high viral load.

ID: 218/OP1: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, COVID-19

Keywords: COVID-19, Telehealth, telemedicine, communication

Clinicians' and patients' experience of paediatric telephone clinics during the COVID-19 pandemic

Mullen, Sorcha; Busher, Aisling; Fitzsimons, John
Children's Health Ireland, Temple Street Hospital, Dublin, Ireland.

Background: Telephone clinics, a first-time initiative, enabled us to provide ongoing care to paediatric patients during the COVID-19 pandemic. Telephone clinics are established in adult services and have shown promising results. Our aims were to evaluate the patient/parent experience and doctor experience of paediatric telephone clinics at Temple Street Hospital, a tertiary referral centre, during COVID-19 and to inform on future improvement efforts.

Methods: We conducted a telephone questionnaire with 78 randomly selected respondents who took part in a telephone consultation for their child over a 3-week period in June 2020. 33 patients were from a general paediatric cohort and 45 were from specialties (Dermatology, Neurodisability, Neurology, Respiratory and Metabolic). The questionnaire consisted of 9 questions and took 2 minutes to complete. An anonymised survey on clinician experience was also performed, during which 47 clinicians (28 consultants, 19 NCHDs) gave feedback on carrying out telephone clinics. Doctor training and risk management during telephone consultations were also evaluated.

Results: Overall, 79% of parents agreed that telephone clinics could be implemented as part of their child's future management. 90% of parents reported good communication during the consultation and 89% of parents were satisfied with the management and follow-up plan. Parents listed the telephone clinics as efficient and convenient, but their reservations included no physical exam and their child being excluded. Nearly half of clinicians surveyed had conducted >30 telephone clinics in a 3-month period since March 2020 with 55% voicing that they are easier than face-to-face. 70% of doctors believe they had the necessary skills for telephone consultations with 94% agreeing that they carry additional risks than face-to-face clinics. Interestingly, only 16% of those surveyed had ever received training for telephone clinics with over 65% expressing they would benefit from communication training. Clinicians found the telephone clinics were efficient, saved on travel, allowed effective triaging and were suitable for follow-up patients. Negatives included that they were unsuitable for certain specialities and the lack of physical exam and in-person communication cues. 92% of doctors think there is an important role for telephone clinics after COVID-19.

Conclusions: Our study illustrates that telephone clinics have a key role in delivering future care to paediatric patients, especially for follow-up patients and for instances of time/travel efficiency. They provide mutual benefit to the health professional, parent and patients. However, as paediatric telemedicine is an evolving area and its implementation needs refinement, more work is needed.

ID: 157/OP1: 4

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: COVID-19

Keywords: COVID-19, remdesivir

Pediatric patients with COVID-19 treated with remdesivir: a case series in a tertiary hospital

Vieira de Melo, Joana[1]; Milheiro Silva, Tiago[1]; Côrte-Real, Rita[2]; Brito, Maria João[1]
[1]Pediatric Infectious Diseases Unit, Hospital Dona Estefânia, CHULC, Lisbon, Portugal; [2]Laboratory of Molecular Biology, Clinical Pathology Department, Hospital de São José, CHULC, Lisbon, Portugal

Background: Remdesivir (RDV) has been shown to have inhibitory activity in the replication of SARS-CoV-2 in vitro and in animal models. Portuguese National Authority for Drugs and Health Products has approved RDV use in COVID-19 pediatric patients with more than 12 years, although compassionate use is still allowed in younger ages. We aim to describe our experience with RDV in severe COVID-19 pediatric patients.

Case Study: We included hospitalized children in a tertiary hospital centre in Portugal, from March to July 2020 who met the inclusion criteria for compassionate use of RDV (hospitalized with confirmed SARS-CoV-2 infection by polymerase chain reaction [PCR]) and none of the exclusion criteria (evidence of multiorgan failure, use of more than one pressor, alanine aminotransferase > 5 x upper limit of normal and estimated glomerular filtration rate < 30 mL/min using Schwartz Formula). Informed consent was obtained from the legal representative. We collected demographic and clinical data, laboratory results, administered drugs and adverse events. A total of 4 patients were treated with RDV, the median age was 4.5 years old (4 months—10 years), 2 were female and 3 had known comorbidities. COVID-19 diagnosis spectrum was multisystem inflammatory syndrome (2), acute respiratory distress syndrome (1) and hypoxemic pneumonia with myocarditis (1). RDV was initiated between day 2 and day 18 after the onset of symptoms (median day 3 of disease). Two patients completed 5 days and 2 patients 10 days of RDV. In all patients, SARS-CoV-2 real-time polymerase chain reaction (rRT-PCR) cycle threshold (CT) was progressively higher since the beginning of treatment. The first undetectable SARS-CoV-2 rRT-PCR ranged between day 2 of RDV and day 8 after completion of 10 days (median 3.5 completed days of RDV). Other drugs were administered simultaneously including antibiotics (clindamycin, cefotaxime, ceftriaxone, vancomycin, gentamicin, amikacin), valganciclovir, corticosteroids, immunoglobulin and enoxaparin. There were no pharmacologic interactions between RDV and those drugs nor RDV associated adverse effects.

Learning Points Discussion: It is essential to study specific therapeutic agents given the potential severity of COVID-19 in pediatric patients. In this case series, favourable clinical evolution was observed and there was no report of pharmacologic interactions nor adverse effects due to RDV.

ID: 141/OP1: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: COVID-19

Keywords: COVID19 infection, neonates and young infants, sepsis

Prevalence of COVID19 infection and Their Clinical Manifestations in Newborns and Young Infants Presented with Sepsis-like picture: A comparative study between COVID19 positive and negative infants.

Hassan, Manasik; Alsliman, Hafez; Alamri, Mohammed; Alhothi, Abdulla; Abdalla, Tasneim; Alomari, Ohood; Magboul, Samar; Khalil, Ahmed; Soliman, Ashraf
Hamad medical corporation, Qatar

Background: The SARS-CoV-2 causes a clinical syndrome designated coronavirus disease 2019 (COVID19) with a spectrum of manifestations ranging from mild upper respiratory tract infection to severe pneumonitis, acute respiratory distress syndrome (ARDS) and death. Few cases have been observed in children and adolescents who seem to have a more favourable clinical course than other

age groups, and even fewer in newborn babies. Very limited data are available about the clinical course of the diseases in symptomatic newborns and very young infants with COVID19 infection.

Methods: We conducted a controlled single institutional retrospective study between April 1st—July 2020 at Hamad Medical Center, Qatar. It included all newborns and infants < 8 weeks of age admitted with sepsis-like-picture. These infants were divided into those with COVID-19 positive PCR (nasal swab) and COVID negative group (control group). Details of demographic and clinical presentation were reviewed in both groups.

Results: 81 patients were studied, 41 were COVID-19 positive and 40 were negative. Male: female ratio was 0.8:1 in both groups. The COVID19 positive group were older than the negative group (mean age 32 versus 17 days respectively) ($p < 0.01$). Fever was present in 90 % of COVID19 positive infants versus 80% of the negative group. COVID19 positive infants had a higher occurrence of nasal congestion and cough (39% and 29% respectively) versus the negative group (20% and 3% respectively) ($P < 0.05$). 15% among COVID-19 positive had diarrhoea versus 8% of the negative group. Vomiting occurred in 7% of the COVID19 positive infants versus 5% in the negative group. Poor feeding and hypo-activity were significantly higher among in the COVID negative group (58% and 45% respectively) versus the positive group (22% and 12% respectively) (P-value 0.0004). Full sepsis-workup and lumbar puncture (LP) was performed in 27(67%) COVID-19 positive while partial septic workup was done in (23%) of them. Full septic workup was done in 92% of the negative group. 26/27 of CSF cultures were negative in the COVID-19 positive except (1 case had Klebsiella meningitis). All of the COVID19 negative group had negative CSF cultures. COVID19

Table 1. Symptoms and singes of COVID-19 +ve neonate and COVID-19 –ve one

Symptoms N (%)	COVID +ve neonates N 41	COVID -ve neonates N 40	P value
Fever	36 (90%)	32 (80%)	0.2
Nasal congestion	16 (39%)	8 (20%)	0.03
Cough	12 (29%)	1 (3%)	0.0009
Poor feeding	9 (22%)	23 (58%)	0.0004
Hypo-activity	5 (12%)	18 (45%)	0.0004
Irritability	5 (12%)	8 (20%)	0.17
Diarrhea	6 (15%)	3 (8%)	0.15
Vomiting	3 (7%)	2 (5%)	0.33
Signs N (%)			
Tachypnea	0 (0%)	1 (3%)	0.16
Chest retraction	1 (2%)	19 (49%)	0.038
pallor	2 (5%)	0 (0%)	0.079923
Vital sings N (%)			
Temperature (36.5-37.5) axillary	38.10 (36.6-39.2)	38.25 (37.5-39.5)	0.12
Heart rate (normal range 110-160)	165.39	158.45	0.07
Respiratory rate (30-60)	45.10	44.13	0.22
Blood pressure systolic (65-85)	87.83	82.10	0.001
Blood pressure diastolic (45-55)	51.51	45.90	0.001
Oxygen saturation (> 94%)	41 (100) %	40 (100) %	

Table 2. Hospital stay

	COVID+ve neonates N 41	COVID-ve neonates N 40	P value
PICU admission N (%)	2 (5%)	6 (18%)	0.06
PICU length of stay (days)	6.5	6.3	0.09
Length of hospital stay (days)	4.5 (1-37)	8 (3-24)	0.001
Anti-biotic administration N (%)	36 (90 %)	40 (100%)	0.02
Anti-biotic duration (days)	3.7 (0-21)	7.5 (2-14)	2.5
Co-infection	5 (12%)	12 (30%)	0.02
Recovered fully	39 (95%)	38 (95%)	0.4

positive group received antibiotics for 3.5 days vs the negative group (7.5 days). (P0.02) Table 1 and Table 2.

Conclusions: In this cohort, 40/81 infants (49%) presented with early-onset sepsis-like-picture were COVID19 positive. Our study showed that COVID positive presentation in neonates might simulate sepsis-like-picture due to other causes. Screening newborns with sepsis-like-picture for COVID19 is necessary during this epidemic.

ID: 294/OP1: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, COVID-19

Keywords: Medical education, teaching

Continuing medical education during a pandemic; adapting to the times and planning for the future

Carey, RA; Mahomed, H; Gallagher, S; Murphy, AM

Department of Paediatrics, University Hospital Limerick (UHL)

Introduction: From March 2020, as a result of WHO and Irish Government restrictions, the way in which Post Graduate Medical Education in Paediatrics was delivered had to be revised promptly and indefinitely. In the Department of Paediatrics at UHL, a virtual teaching model was adopted using multiple different video platforms.

Objectives: This study aimed to assess the strengths and weaknesses of this virtual teaching model from the consumer perspective in the aftermath of lockdown with a view to planning our Departmental Post Graduate Teaching Programme for 2021.

Methods: A questionnaire (see attached) was circulated among all Paediatric Non—Consultant Doctors (NCHDs) of all grades. This was distributed during the first week of September-traditionally the start of the academic year. The survey included a free-text section to provide general feedback on their feelings towards this teaching model.

Results: A total of 22 of the 29 "Doctors in Training" working in our Department at this time responded to the survey. Of respondents, 45% reported some experience with virtual teaching prior to the COVID-19 pandemic. Advantages of virtual teaching included being able to log on when off-site, e.g., on leave, post-call (90%); finding the sessions easier to attend while on break (40%); easier to take notes (13%). No advantages to virtual teaching were reported by 9% of NCHDs. Disadvantages included internet connection problems (90%), finding it harder to participate (77%) and easier to tune out (72%). 81% said their participation levels were reduced compared with face to face. The majority of NCHDs surveyed (59%) do not favour continuing with either a hybrid or exclusively virtual teaching programme

Conclusions: Overall, trainees prefer the traditional face-to-face teaching model. However, given the ongoing world crisis, it would be pertinent to review the common challenges faced by virtual teaching programmes in order to maximise participation and value of educational sessions.

Session

OP2: Oral Presentations (OP-2)

Time: **Thursday, 3 December 2020**: **15:00—16:00**	*Location*: **Virtual**

Presentations

ID: 186/OP2: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, INFECTIOUS DISEASES, COVID-19

Keywords: COVID-19, Hand hygiene, hand washing, social media

Proper Hand Hygiene during COVID-19 pandemic: a report from Qatar

Magboul, Samar[1]; Khalil, Ahmed[2]; Mohamed, Abeir[1]; Al-Nahar, Mohammed[1]; Hamid, Eiman[1]; Almaslamani, Eman[3]; Hassan, Manasik[1]

[1]hamad medical corporation, Pediatrics department, Qatar; [2]hamad medical corporation, Pharmacy department, Qatar; [3]sidra medicine, pediatrics infectious diseases department, Qatar

Background: Since Coronavirus Disease 2019(COVID-19) has been considered a pandemic by the World Health Organization (WHO)in February 2019, social media has played a major role in the awareness of the population.

Aim: COVID-19 pandemic has had a global impact, discovering and implementing optimum preventive measures including proper hand hygiene should receive the utmost attention. In this paper, we tried to compare the knowledge of proper hand hygiene between health care professionals and parents.

Methods: 209 participants were enrolled and filled a paper-based survey. Participants included 50 doctors,40 nurses,18 health-allied and 50 of patients' parents.

Results: Upon checking knowledge of the concept of proper Hand hygiene, all of the medical participants were sure of their knowledge, however, 26% of the parents did not know about it. Only 52% of parents are doing hand hygiene according to the 5 moments of hand hygiene, after handshakes and opening doors or touching any surface, compared to72% of doctors and 87% of nurses, however, all allied health participants were able to do proper hand hygiene. When asked

about whether proper hand hygiene could prevent transmission of COVID-19 infection,18% of parents answered with "NO" and 10% of doctors agreed with them. and When asked about their source of information,78%indicated that they get their knowledge from circulating social media and awareness posts, 38% doctors answered the same whereas 36% of other doctors learnt from their own search(Internet). The majority of parents (58%) and doctors (68%) believe that repeated handwashing with soap and water would be more effective in protecting from COVID-19 infection than using alcohol-based hand sanitizer or wearing gloves. 98% of parents and 96% of doctors mentioned that their hand hygiene method and frequency have improved after announcing COVID-19 being pandemic.

Discussion: COVID-19 has affected almost all countries around the globe with the current number of confirmed cases exceeding 26 million, causing a huge impact on our lives. Preventive measures and following the instructions of decreasing spread remains the main ways to control the pandemic. The study demonstrates the knowledge of health-care workers and the general population towards hand hygiene in relation to COVID-19.

Conclusions: Social media has a great impact on the global awareness and prevention of COVID-19 infection. A good proportion of the population including healthcare workers has learnt how to perform hand hygiene techniques from it. This might direct our efforts in using social media to ensure proper and correct measures of hand hygiene are perceived by the general population.

ID: 180/OP2: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: COVID-19

Keywords: COVID-19, chest x-ray in COVID-19, neonatal sepsis

Radiological findings in chest x-ray in Covid-19 neonates and young infants

Abdalla, Tasneim; Bedair, El said Mohamad; Al-Omari, Ohood; Magboul, Samar; Khalil, Ahmed; Soliman, Ashraf; Hassan, Manasik

Hamad medical corporation, Qatar

Introduction: There is a lot of debate regarding the role of the plain chest x-ray in the diagnosis of coronavirus disease 2019 (COVID-19) infection and associated complications. Limited studies available in the literature investigating the diagnostic imaging results and findings in newborns and young infants with COVID-19 infection. We reported the imaging features of COVID-19 in 32 neonates and young infants < 2 months of age.

Case Study and Method: A cohort single-institution retrospective study occurred from 1st of April through July 2020 total which included all the neonates and young infants up to 2 months of age admitted as a case of fever and sepsis-like picture with positive COVID-19 in the nasal PCR testing, a total of 41 patients included in which chest x-ray has been done in 78% of them (32 subjects) and findings have been reported and compared.

Results: 75% (24 patients) of the subjects with COVID-19 PCR positive who went through diagnostic imaging showed only mild changes in their chest x-ray. On the other hand, only 3.1% (1 neonate) of the patients found to have severe changes in form of superadded consolidations in both lungs, which was mainly peripheral. No chest changes with clear lungs and normal pulmonary vascularity occurred in 6.2% (2) of the patients, with 15.6% (5) patients showed moderate changes Table 1.

For more details on the exact diagnostic imaging findings; Slightly accentuated central lung vascularity was observed in the chest x-ray of 12.5% of the subjects, while Prominent hilar shadows with increased linear lung shadowing, mainly perihilar and pericardiac, was found in

34% of the patients, furthermore, x-ray chest of 28% of our patients showed Increased linear lung shadowing with tiny bead-like appearance distributed peripherally and at the lower lobes of the lungs, looking forward, Superadded peribronchial cuffing and perivascular haziness with lace line fine linear appearance of interstitium was noted in 9.3% of the subjects and finally Ground glass fine opacities (GGO) scattered in two or more lobes of both lungs occurred in 6.2% of the patients.

Table 1. The degree of severity of chest changes are presented in Table 1

Changes	No of Pt	%
No change	2	6.2
Mild changes	24	75
Moderate changes	5	15.6
Severe changes	1	3.1

Conclusions: Chest x-ray changes in the majority of the symptomatic newborns with COVID-19 infection were mild. Ground glass opacity in chest x-ray represented moderate severity of chest involvement, while consolidations represented marked severity in those patients. Overall Fine beaded appearance, Ground glass opacities and peripheral consolidations were more specific manifestations of Covid-19 which was found in a number of the affected neonates.

ID: 145/OP2: 3

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, RHEUMATOLOGY, COVID-19

Keywords: Neonatal COVID-19, SARS-CoV-2, multisystem inflammatory syndrome of children MIS-C, pediatric multi-system inflammatory syndrome PIMS.

Refractory multi-inflammatory syndrome in a two weeks old neonate with COVID-19 treated successfully with intravenous immunoglobulin, steroids and anakinra

Magboul, Samar[1]; Khalil, Ahmed[2]; Alshami, Ahmad[3]; Aleido, Mohamed[3]; Alhothi, Abdulla[1]; Ellithy, Khaled[4]; Al Amri, Mohamed[3]; Hassan, Manasik[1]

[1]hamad medical corporation, Pediatrics department, General pediatrics; [2]hamad medical corporation, pharmacy department, clinical pharmacy; [3]hamad medical corporation, pediatrics department, pediatrics emergency centres; [4]hamad medical corporation, pediatrics department, pediatrics intensive care

Introduction: WHO described the multi-system inflammatory syndrome in children (MIS-C) and is recommending clinicians to report those cases to get a better understanding of the disease and clinicians can learn more.

Case Study: Two weeks old female baby presented with fever and admitted to pediatrics inpatient, Initial workup was to rule out neonatal sepsis, including a Lumbar Puncture, she was then checked for COVID-19 polymerase chain reaction (PCR) and found positive. The baby was spiking high-grade fever, she clinically and hemodynamically continued to be stable, inflammatory markers were increasing. However, her clinical examination only revealed mild hepatosplenomegaly with no skin rash, lymph nodes enlargement, or Kawasaki disease signs. Complete blood counts (CBCs) showed lymphocytic leukocytosis with (total WBC 31,600/µL), she had normocytic normochromic anaemia with haemoglobin level dropping up to (8.7 g/dL), and mild thrombocytopenia(124 x10^3/ µL). Her

C-reactive protein (CRP) was steadily rising from (6 to 84 mg/dl), hypoalbuminemia (23 g/l), hyponatremia(127mEq/L), and her lactic acid reached up to (6.4 mmol/l) with normal PH and Kidney function. Liver functions showed mild liver transaminitis with normal coagulation. All her cultures came back negative. The baby was transferred to the main hospital in the pediatrics inpatient unit in an isolation room to complete the investigation as a multi-system inflammatory syndrome of children (MIS-C) was suspected. Her ferritin level markedly raised(1773 ug/l), Troponin, and her Natriuretic peptide test(pro-BNP) were both increased, she also had an Echocardiogram done twice, it was showing normal coronary arteries and contractility. With her persistent tachycardia and low haemoglobin, she was transfused with packed red blood cells. On the same day, a pediatric rheumatologist reviewed the baby and advised to start (IVIG two grams per kilogram per dose), along with high dose Aspirin. The same day she was given one dose of Dexamethasone, then Methylprednisolone as pulse steroid for three days. After IVIG infusion, the baby continued to have high inflammatory markers, then second-line therapy, immunomodulatory therapy (Anakinra) was started as a refractory case. She received Anakinra on day 17 of illness for 9 days then stopped. The baby then re-spiked fever and after 24 hours from discontinued Anakinra, a second dose of IVIG was given, then inflammatory markers went back to normal. She was discharged home after a total of 5 weeks of hospitalization in good condition with follow up.

Conclusions: Pediatricians should be aware of such presentations, and inform caregivers about common signs and symptoms. Anakinra may be considered as an effective second agent in(IVIG and steroid-refractory pediatric cases).

ID: 127/OP2: 4

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: HEALTH ECONOMICS & MANAGEMENT, PUBLIC HEALTH, COVID-19

Keywords: Covid, Pandemic, PPE, NHS, Management

The role of Personal Protective Equipment (PPE) in the UK health system during the COVID- 19 pandemic

Loh, Melissa[1]; Iyengar, Karthikeyan P[2]; Loh, William YC[3]

[1]Dental Core Trainee in Oral and Maxillofacial Surgery, Wirral University Teaching Hospital; [2]Trauma and Orthopaedic Surgeon, Southport and Ormskirk NHS Trust; [3]Consultant Orthopaedic and Upper Limb Surgeon, Southport and Ormskirk NHS Trust

Introduction: The severe acute respiratory syndrome Coronavirus 2, SARS-CoV-2 has had a significant effect on all areas of the National Health Service (NHS) in the United Kingdom, including the practice of dentistry. Due to the highly contagious nature of the virus, a significant amount of dental and surgical elective treatment has come to a halt. Dental treatment consists of a high number of Aerosol Generating Procedures (AGPs) and Aerosol Generating Exposures (AGEs) which can encourage the transmission of the virus through a community. In order to protect both clinicians and patients, the importance of personal protective equipment (PPE) has never been of greater importance. As the role of Personal Protective Equipment (PPE) in the COVID-19 pandemic is evolving, clinicians should be aware of the importance of Personal Protective Equipment (PPE) available and its implications in patient care.

Aim: The audience should understand the clinical importance of the Personal Protective Equipment (PPE) in the provision of safe healthcare treatment. Clinicians need to be vigilant about possible Aerosol Generating Procedures (AGPs) and Aerosol Generating Exposures (AGEs) and practice steps to reduce the possibility of viral transmission as much as possible. Public Health England (PHE) issued general guidance on the appropriate PPE required for clinicians working within one metre of

patients with possible or confirmed COVID-19 patients which includes a fluid repellent facemask, apron, nitrile gloves and eye protection.

Conclusion: Hand hygiene also plays an important role in reducing viral transmission. An overarching appreciation must be given to restricting the number of patient visits if possible: consideration to providing longer appointments for the same patient to limit the number of PPE's donned and doffed. In addition, consideration for remote or telephone consultations could reduce the number of patients entering the dental and medical practices. Restricting the number of unnecessary staff required in an AGP setting will aid in reducing the number of PPEs used as well as decrease the risk of unnecessary possible COVID-19 contact. Healthcare professionals have a duty of care to their patients and should continue to act in their best interests as per the General Dental Councils' (GDC) standards. It is now mandatory, patients wear a face-mask in the clinical waiting rooms as well as in indoor settings.

ID: 126/OP2: 5

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: HEALTH ECONOMICS & MANAGEMENT, PUBLIC HEALTH, COVID-19

Keywords: Covid, Pandemic, Telehealth, NHS, Management

The Role of Telehealth during COVID-19 and beyond in the practice of Dentistry and other allied surgical specialities

Loh, Melissa[1]; Loh, Declan[2]; Loh, William YC[3]

[1]Dental Core Trainee, Wirral University Teaching Hospital; [2]Medical Student at University of Liverpool Medical School; [3]Consultant in Trauma and Orthopaedic Surgery at Southport and Ormskirk Hospital

Background and Objectives: During periods of pandemic disease, the practice of Dentistry and other allied surgical specialities must alter patient management strategies in order to reduce the transmission of disease. This oral presentation will outline the roles of telehealth remote consultations including virtual out-patient clinic appointments, telephone conversations and secure video networking systems to provide optimum patient-centred care.

Methods: As the timescale of a pandemic stabilises over time, new modes of care delivery must be devised. The most recent pandemic to have affected the National Health System (NHS) in the United Kingdom (UK) has been the severe acute respiratory syndrome Coronavirus 2, SARS-CoV-2. Within the UK, guidelines for various specialities have been issued which offers baseline guidance on the clinical response to the pandemic. Channels of communication outside the traditional face-to-face interviews allow the remote review of patients while aiding the provision of optimum care and putting patients' best interests first. A "remote consultation" is where the patient and clinician engage in a consultation method where both parties are not "face-to-face". Indications for telehealth: 1. Reduce the risk of viral transmission between clinician and patient as both parties are in the same physical location at the same time. This is in accordance with the government's advice for social distancing. 2. Patients who are unable to travel (eg. high-risk patient categories including patient over the age of seventy or very young patients) 3. Assist with risk stratification, enabling clinicians to appropriately triage urgent reviews and determine if a traditional "face-to-face" consultation is indicated. Methods of telehealth 1. Telephone consultations, 2. Video consultations, 3. Virtual new patient, review and follow-up clinics, Smartphone technology.

Learning Points Discussion: Remote consultation strategies have been rapidly implemented in order to reduce the rate of transmission of this virus between clinicians and patients. The twenty-first century has witnessed a revolutionized communicative technology-based society and it is

these telecommunication technologies healthcare must look to incorporate into everyday practice to optimise patient care.

ID: 297/OP2: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, COVID-19

Keywords: ENT, foreign bodies, COVID-19, paediatrics

ENT foreign bodies during the COVID-19 pandemic: a focus on paediatric patients

Farina, Sofia; Kuo, Louise; Tan, Shawn; Nair, Dilip

Department of Otolaryngology, Head & Neck Surgery, Royal Berkshire Hospital, Reading, United Kingdom

Background: Foreign bodies (FBs) within the ear, nose and throat are a common otorhinolaryngological (ENT) presentation amongst children, and the emergence of the COVID-19 pandemic has presented a new challenge to their management. Children play an important role in community-based viral transmission, so current strategies in the management of FBs must also minimise the risk of spread of COVID-19 to both patients and staff members. This study aims to review the management of FBs within the ENT Paediatric Department at the Royal Berkshire Hospital, Reading, during the COVID-19 pandemic.

Methods: Data was collected prospectively for two periods: during COVID-19 lockdown (April-July 2020) and post COVID-19 lockdown (July-September 2020). Outcome measures included the rate of unscheduled re-presentation to the hospital within seven days of initial ENT assessment and the rate of ENT team members involved in the management of these FBs contracting COVID-19. Full PPE was used in line with ENT UK guidance.

Results: 48 Paediatric patients presented to our ENT department during the full period, 29 (60.4%) during lockdown and 19 (39.6%) post-lockdown. The mean age was 4.02 years and the median 2 years. 25 (52.1%) FBs were found in the nose, 16 (33.3%) in the ear and 7 (14.6%) in the throat. The majority of FBs were inorganic in nature (75%), whilst organic and sharp objects were less common, 16.7% and 0.08% respectively. 12.5% of cases were reassured and discharged from our service, 18.8% were managed conservatively with scheduled follow up, 33.3% of FBs were removed with otomicroscopic techniques, 29.2% were removed in theatre under general anaesthetic, 1 case was brought to theatre and no FB was found, 1 FB fell out at home, and 1 case was transferred to another hospital for FB removal. There were no unscheduled representations to the hospital within seven days of initial ENT assessment and no ENT team members involved in the management of these FBs contracted COVID-19.

Conclusions: By strictly adhering to ENT UK guidelines for using PPE, our ENT department at the Royal Berkshire Hospital has provided a safe and effective service for the management of FBs in paediatric patients whilst simultaneously successfully preserving staff safety during and after the first COVID-19 lockdown period. This has given us valuable lessons in managing FBs in light of the ever-increasing likelihood of a second national lockdown and the longevity of COVID-19.

Session

OP3: Oral Presentations (OP-3)

Time: **Friday, 4 December 2020**: **9:00—10:00**	*Location*: **Virtual**

Presentations

ID: 213/OP3: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: INFECTIOUS DISEASES, GASTROENTEROLOGY, PUBLIC HEALTH

Keywords: Bacterial infection, Gastroenteritis, Pediatrics, Public health, Rotavirus

A study on epidemiology and aetiology of acute gastroenteritis

Mosca, Sara[1]; Alba, Diana[2]; Moreira, Mafalda[2]; Ribeiro, Maria do Céu[2]; Machado, Leonilde[2]; Tomás, Edite[2]

[1]Department of Pediatrics, Centro Materno-Infantil do Norte, Centro Hospitalar Universitário do Porto, Portugal; [2]Department of Pediatrics, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal

Background: Acute gastroenteritis (AGE) remains an important cause of child morbidity and mortality worldwide. Therefore, it is essential to understand which information should be gathered (e.g., symptoms, risk factors, immunization), in order to distinguish between a viral and bacterial infection. Especially, as the last has a higher risk of ward admission and dehydration, with consequent higher costs and longer hospital admissions.

Methods: Retrospective analysis of the clinical records of all patients admitted to the pediatric ward with AGE at a level two hospital over the last 4 years. Statistical analysis was performed using SPSS Statistics V26.0.

Results: Five-hundred and six patients were included, with a median age of 18 months (P25-P75: 9–49 months) and 55% were male. Oral intolerance was the main admission criterion in 81% of the patients; the mean (standard deviation [sd]) length of hospitalization was 5 days (4.1). Stool sample analysis was performed in 420 patients and 251 had a positive result (46% bacteria). Symptoms such as high fever (temperature above 39.5ºC), vomiting, abdominal pain and blood or mucus in the stool in bacterial AGE was statistically significant ($p < 0.001$). Bacterial infection was also more prevalent than viral AGE in children older than 3 years old, as well as in patients with contaminated water consumption ($p < 0.001$). Regarding blood analysis, bacterial AGE presented a significantly higher neutrophils count ($\mu = 7176$, $p = 0.016$) and C-reactive protein (CRP) ($\mu = 76.1$, $p < 0.001$).

Conclusions: In our sample, as stated in the literature, high fever, blood or mucus in the stool are more likely to be present in bacterial infection, as well as neutrophilia and an elevated CRP. A possible explanation for the similar prevalence between viral and bacterial AGE is the proportion of children with contaminated water consumption in rural areas and the protective effect of a complete immunization against rotavirus.

ID: 181/OP3: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: audit, overweight, obesity, growth

Identification and management of children and adolescents with obesity referred to a General Paediatric Outpatient Department.

McGirr, Jessica[1]; O'Malley, Grace[2,3]; Walsh, Órla[1,4]

[1]Dept of General Paediatrics & Adolescent Medicine, Children's Health Ireland at Temple Street, Dublin, Ireland; [2]W82GO Child and Adolescent Weight Management Service, Children's Health Ireland at Temple Street, Dublin, Ireland; [3]School of Physiotherapy, Division of Population Health Sciences, Royal College of Surgeons in Ireland, Dublin, Ireland; [4]Dept of General Paediatrics, Children's Health Ireland at Connolly, Dublin, Ireland

Background: 25% of Irish children experience overweight or obesity which can affect their health in the short- and long-term(1). Current guidelines recommend that growth measurement be standard practice with each professional paediatric contact and that children be offered tailored clinical intervention(2,3). This study aimed to identify all children/adolescents with overweight (BMI≥91st centile) or obesity (BMI≥98th centile) attending the outpatient department and to audit our processes in their identification and management against NICE Guideline CG189 and Quality Standard QS127(4,5). With the ultimate aim of enabling earlier detection and optimising opportunities for early intervention, including collaboration with primary care services.

Methods: A retrospective electronic chart review was performed following institutional approval. BMI growth charts (generated for every patient≥2 years) were used to identify children/adolescents (2–18 years) with overweight/obesity attending the department for any reason in January and February 2020. The patient journey from referral to post-clinic correspondence was audited to ascertain if overweight/obesity was identified, whether this was communicated to the child/their carer and whether an intervention was offered.

Results: Of 466 children/adolescents ≥2 years with a recorded height/weight seen during the study period, 27% (n = 127) were identified with overweight/obesity. 91% (n = 115) were referred for reasons not primarily related to the assessment/management of excess weight. This group (n = 115) was further analysed. Height and weight and/or BMI were communicated in 14% (n = 16) of referral letters. On assessment, 47% (n = 54) were identified with overweight, 51.3% (n = 59) with obesity/severe obesity and 1.7% (n = 2) with morbid obesity. Permission to discuss growth was not documented in any cases. A record of discussing growth was observed for 16% (n = 18) of patients/their carer. In the post-clinic correspondence to the primary care physician (n = 111), height and weight and/or BMI were communicated in 57% (n = 63) of letters.

Conclusions: The percentage of children attending our outpatient department with overweight/obesity is in keeping with national figures. Whilst growth measurement occurred systematically, the findings were not always shared with children/their carer or the initial referrer. Further research is required to ascertain what barriers exist to the discussion of growth with presenting families and how communication with primary care might be enhanced. Additional education of healthcare providers is required to develop standardised procedures around the processes for referral, clinical encounter and post-clinic actions related to child growth. This will help us meet the significant health needs of this growing population.

ID: 182/OP3: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: overweight, obesity, growth, audit, NICE

Paediatric obesity- an audit of new referrals to a General Paediatric Outpatient Department.

McGirr, Jessica[1]; O'Malley, Grace[2,3]; Walsh, Órla[1,4]

[1]Dept of General Paediatrics & Adolescent Medicine, Children's Health Ireland at Temple Street, Dublin, Ireland.; [2]W82GO Child and Adolescent Weight Management Service, Children's Health Ireland at Temple Street, Dublin, Ireland.; [3]School of Physiotherapy, Division of Population Health Sciences, Royal College of Surgeons in Ireland, Dublin, Ireland.; [4]Dept of General Paediatrics, Children's Health Ireland at Connolly, Dublin, Ireland.

Background: 25% of Irish children experience overweight or obesity which can affect their health in the short- and long-term(1). This study aimed to audit our processes related to the assessment and management of paediatric obesity against NICE Guideline CG189 and Quality Standard QS127 (2,3). With the ultimate goal of improving service design, delivery and outcomes in order to ensure that our pathway is aligned with internationally recognised standards.

Methods: A retrospective electronic chart review was performed following institutional approval. Referral letters for scheduled appointments from October 2019 to February 2020 were reviewed. New referrals for assessment and management of obesity were identified for analysis. Clinical notes and post-clinic correspondence were analysed with a focus on history taking, examination and intervention offered. Referrals received by the national paediatric hospital-based weight management service were also reviewed.

Results: There were 33 scheduled new appointments for assessment and management of obesity during the study period; 82%(n = 27) of which were attended. On assessment, 65.4% (n = 17) of children/adolescents were identified with obesity, 46.2%(n = 12) with severe obesity and 34.6%(n = 9) with morbid obesity(4). One child <2 years presented, with a recorded weight≥99.6th centile. History-taking content included information related to; diet (92.6%, n = 25), physical activity (88.9%,n = 24), sleep (33.3%,n = 9) and screen time (11.1%,n = 3). Documentation of the following examinations was noted; height/weight 100%(n = 27), cardiovascular 88.9%(n = 24), respiratory 77.8%(n = 21), abdominal 77.8%(n = 21), endocrine 48.2% (n = 13), tanner staging 11.1%(n = 3), waist circumference 7.4%(n = 2) and musculoskeletal 3.7% (n = 1). A record of patient education provided in the following areas was observed; dietary 44.4%(n = 12), physical activity 33.3%(n = 9), hydration 11.1%(n = 3), sleep hygiene 7.4%(n = 2), reduction of screen time 3.7%(n = 1) and general lifestyle advice 3.7%(n = 1). A realistic target was set with 7.4%(n = 2) of children/their carer. 92.6%(n = 25) of children/ adolescents were referred to the hospital- based weight management service, but 24%(n = 6) of these referrals were not received.

Conclusions: The majority of children were appropriately referred to a multicomponent, hospital-based weight management service, but almost one-quarter of these were not received. Significant variability in history taking, examination and provision of education was observed. Additional education of healthcare providers is required to develop standardised procedures for the assessment and management of children with obesity to align with recommended standards. A review of the onward referral pathway is also required to address the breakdown in communication. These steps are essential if we are to provide early, integrated care to a complex growing population at risk of developing significant long-term health needs if this is not achieved.

ID: 187/OP3: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, PUBLIC HEALTH, EMERGENCY PEDIATRICS

Keywords: Fever, Antipyretics, Knowledge, Qatar

Parents' knowledge, attitudes and beliefs regarding fever in children: a cross-sectional study in Qatar

Elajez, Reem; Mohamed, Tasabeh Saeed Ibrahim; Mohamed, Aia; Hamid, Eiman; Alsharawy, Karim; Shurab, Nada; Toaimah, Fatihi
Hamad Medical Corporation, Qatar

Background: Fever phobia remains extremely widespread among parents. This significantly affects fever home management and antipyretics use. We aimed to explore the knowledge, attitudes, and beliefs of parents in the State of Qatar about fever in children.

Methods: Survey-based, cross-sectional study for parents bringing their children to Al-Sadd Pediatric Emergency Center, the most populated pediatric emergency centre in Qatar. The survey developed from previously validated similar studies in addition to the recent guidelines. Surveys were collected over six months between October 2019 and March 2020.

Results: Most participants were mothers (71.8%), and more than half of the participants had one or two children (57.8%). Two-third of parents (65.8%) defined fever correctly as temperature ≥ 38° C. Eighty parents (20%) reported not having a thermometer, and they depend on touching the child by the hand to determine fever existence. Almost all parents (95.7%) believed that untreated fever could cause harm, were the most common reported complication was seizures (66.5%). Thus, the majority of parents (71%) believed that every child with a fever needs antipyretic even if playful. Parents used to give antipyretics as syrups in 62.5% while 30% preferred giving both syrups and suppositories together. In addition to antipyretics administration, 48.5% use home remedies (i.e. cold sponges) while 42.5% seek physician assistance.

Conclusions: Parental knowledge of fever and its management was found to be deficient, which concurs with existing literature in other regions. Pediatricians should play a significant role to provide parents with accurate information about childhood fever and its home management whenever possible.

ID: 111/OP3: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PUBLIC HEALTH

Keywords: ASD, solar geoengineering, aluminum, global warming

Solar geoengineering by injecting aluminum oxide aerosol is a serious threat to global children mental health

Ghirga, Giovanni
San Paolo General Hospital Civitavecchia (Rome), Italy

Background: A possible geoengineering method to mitigate the global warming aspect of climate change is the injection of sulfate aerosols into the lower stratosphere, closely mimicking the way large volcanic eruptions cool the climate (Harvard's Solar Geoengineering Research Program). It has been suggested that aerosols with aluminum oxide could be used instead to dramatically increase the amount of light scatter achieved on a per mass basis. However, health issues from long term aluminum exposition should be addressed. Method. Medline was searched for possible health effects from human aluminum exposition following its injection in the lower stratosphere and subsequent worldwide land precipitation. Results. Aluminum has often been regarded as not posing a significant health hazard if the human body burden of aluminum has increased. Nevertheless, aluminum has been included among 200 neurotoxic chemicals that are silently eroding intelligence, disrupting behaviours, truncating future achievements, and damaging

societies perhaps most seriously in developing countries. This is called the "Silent Pandemic of Neurodevelopmental Toxicity in Children". Recently, the aluminum content of brain tissue obtained from donors with Autism Spectrum Disorders (ADT) was detected consistently high. The preeminence of intracellular aluminum associated with non-neuronal cells was a standout observation in autism brain tissue and may offer clues as to both the origin of the brain aluminum as well as a putative role in autism spectrum disorder. Furthermore, the prevalence of autism spectrum disorder is increasing. The last findings from the Autism and Developmental Disabilities Monitoring (ADDM) Network show that an estimated 1 in 54 8-year-old children was identified with ASD in 2016 higher than estimates from their previous report of 1 in 59 based on 2014 data.

Conclusion: The average residence time of a particle in the lower stratosphere is approximately 1–2 years. After eventual transport into the troposphere, the particles undergo relatively rapid mixing processes by weather events, turbulence, cloudscale overturning, and are mostly removed from the atmosphere by dry deposition, sedimentation, or scavenging by clouds finally polluting the environment. Worldwide land precipitation of aluminum following aerosol spraying into the lower stratosphere could increase human body exposure and potentially contribute to increasing ASD prevalence.

ID: 239/OP3: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PSYCHIATRY, PUBLIC HEALTH

Keywords: Mental health, bullying, adolescents, HBSC

How is disability and bullying victimization related to psychosomatic complaints? A cross-sectional study on Swedish children

Augustine, Lilly[1]; Bjereld, Ylva[2]; Turner, Russel[3]
[1]Jönköping University, Sweden; [2]Linköping University, Sweden; [3]Gothenburg University, Sweden

Background: Having a disability puts children at higher risk for being bullied. In turn, there is a clear association between bullying victimization and psychosomatic complaints. The aim of this study is to analyse how bullying victimization is: a) associated with psychosomatic complaints among children with a self-rated disability or chronic conditions; b) if support from teachers and family impacts on this association.

Method: The study was based on data from two waves of the Swedish Health Behaviour in School-aged Children (HBSC) survey conducted in winter 2013/14 and 2017/18. In total, 12,161 children participated in the survey (7867 in 2013/14 and 4294 in 2017/18). Bullying victimization and disability status were combined into one variable containing four groups of children; 1) being bullied and having a disability, 2) bullied with no disability, 3) disability and not bullied, and 4) neither bullied nor having a disability. A multinomial logistic regression model was performed to analyse how the four groups of children were associated with psychosomatic complaints and if the association was altered by the inclusion of additional variables for teacher/family support and communication with parents.

Results: A total of 11,837 children answered the questions on bullying and disability, of the 156 (1.3%) were categorized as both bullied and having a disability, 503 children (4.2%) were only bullied (, and 1622 children (13.7%) were not bullied but had a disability. Most children (80.7%) were neither bullied nor had a disability (reference group). Both bullying victimization and disability were associated with psychosomatic complaints. The highest OR for psychosomatic complaints was identified in the group of children that were both bullied and had disabilities (OR = 8.17), followed by bullied-only children (OR = 3.78), and disability-only (OR = 1.87), in comparison to the reference group. Bullying and disability was associated with low teacher support and poor family

communication, and when adjusting for these factors the risk for psychosomatic complaints decreased.

Conclusions: Disability and bullying victimization were associated with psychosomatic complaints and having low teacher support and poor family communication. Bullied and/or disabled children are therefore at higher risk of having current mental health problems, which might also create future health issues for this group. The result highlights the importance of bullying interventions for children with chronic conditions or disabilities.

ID: 287/OP3: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS

Keywords: flow, emergency, distancing

Improving paediatric flow: a quality improvement project

Li, Danning; Abeywickrema, Movin; Vadeyar, Sharvari; Ward, Abby; Abberton, Tom; Rweyemamu, Justina Kokuhumbya

University Hospitals Birmingham, United Kingdom

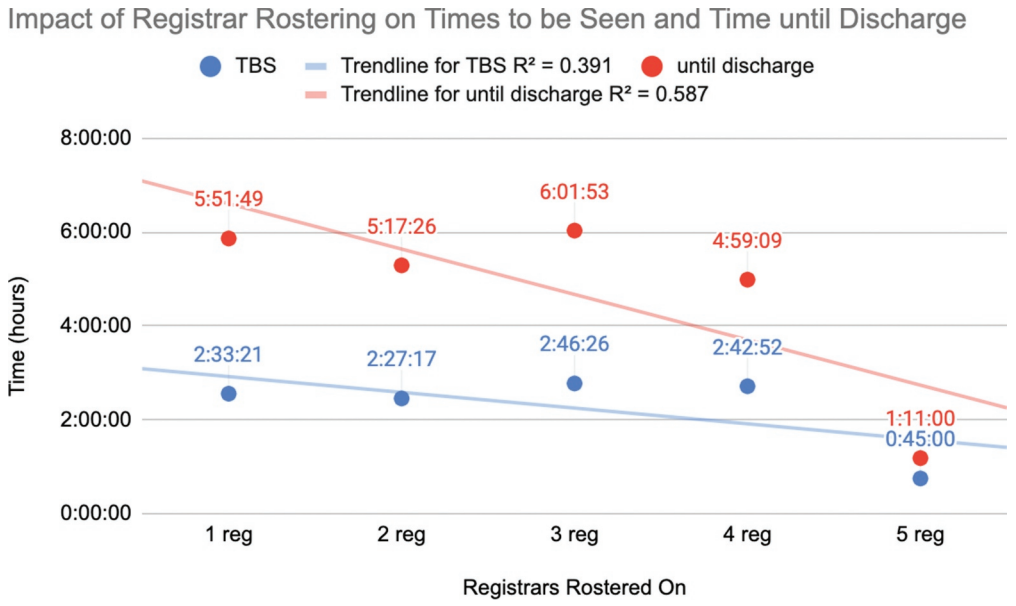
Introduction: RCPCH guidelines for acute paediatric services were first published in 2010; these set standards for time to senior review for paediatric medical admissions in the UK: Standard 2 tier two (registrar/middle grade) review within four hours, Standard 3 consultant review within fourteen hours. Our aim was to implement these two key care standards for our unit's practice through increasing proportions of reviews within these time frames and measuring the impact on patient flow.

Methods: Five quality improvement (QI) cycles were completed between March 2018 and March 2020. 288 patient data sets from acute paediatric admissions to Heartlands Hospital were reviewed retrospectively. Data was captured on time to triage, time to first medical assessment, middle-grade review, consultant review and discharge. Length of stay from admission to discharge was used as a measure of patient flow. Recommendations from an audit of compliance with the key standards informed QI interventional strategies. These included the extension of consultant on-site availability out of routine working hours (after cycle 2), highlighting patients awaiting consultant review during team handover (after cycle 3), and improving middle-grade staff rostering (after cycle 4).

Results: Extending consultant on-site cover altered the proportion of patients seen within fourteen hours from 57.9% (cycle 2) to 53.3% (cycle 3, $p = 0.79$) with improvement to 95% (cycle 4, $p = 0.005$) after highlighting consultant priority review. Improved registrar cover increased the proportion meeting senior review within four hours from 82.9% (cycle 4) to 96.2% (cycle 5, $p = 0.028$). A large proportion of paediatric patients were managed and discharged at tier two-level (75% in cycle 4, 42% in cycle 5). An inverse correlation was seen (R-value of −0.587) between time to final discharge and an increasing number of tier two doctors per shift (cycle 4). Consultant expansion showed an inverse correlation with time to consultant review (R-value −0.791). Over the five cycles, the average length of stay increased from 229 minutes (cycle 1) to 329 minutes (cycle 5), despite earlier tier two and consultant review.

Conclusions: Adequate tier two staffing is a priority for the prompt review of acute paediatric patients. We challenge the recent RCPCH proposal to reduce the number of UK paediatric trainees. Going forwards, alternative factors such as nursing rostering and bed management need to be considered when analysing paediatric flow. Additionally, the impact of COVID-19 restrictions on paediatric flow is yet to be explored.

Figure 1.



Session

OP4: Oral Presentations (OP-4)

Time: **Friday, 4 December 2020**: **10:00—11:00**	*Location*: **Virtual**

Presentations

ID: 198/OP4: 1

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, RARE DISEASES

Keywords: Waandenburg Syndrome, rare diseases

A case report of Waardenburg syndrome

Pimenta, Sofia Alexandra Morais; Soares, Joana; Ferreira, Adriana; Sousa, Eulália; Machado, Leonilde

Department of Pediatrics, Centro Hospitalar Tâmega e Sousa, Portugal

Background: Waardenburg syndrome (WS) is a rare genetic disorder determined by the absence of melanocytes from the eyes, hair, and skin. The diagnosis is clinical and should be considered if the patient has two major (sensorineural deafness, iris pigmentary abnormality, abnormalities of hair pigmentation, dystopia canthorum, first degree relative with WS) or one major plus two minor criteria (hypopigmented patches of skin, synophrys, broad nasal root, hypoplasia of alae nasi, premature greying of the scalp). There are four types of WA, which are distinguished by their physical characteristics and sometimes by their genetic cause.

Case Study: We report a case of a 14-year-old girl, third daughter of non-consanguineous parents, born after a full-term pregnancy who was referred to the Pediatric outpatient clinic because of dysmorphic features and cognitive impairment. Father and grandfather had the same physical

features and the grandfather was deaf. She presents white hair, hypertelorism, broad and high nose root, wide nasal bridge, off filter, prognathism, synophrys and leucoderma. Based on the Waardenburg criteria, a clinical diagnosis was performed. She was referred to the Genetics outpatient clinic to further evaluation.

Learning Points Discussion: Genetic counselling is beneficial for affected patients and their families. Although it is a rare condition it is important to be aware of these features to diagnose and manage these patients. The treatment of WS is directed toward the specific symptoms and may require a multidisciplinary team, so this clinical case enhances the relevance of the multidisciplinary approach and follow-up.

ID: 105/OP4: 2

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: RARE DISEASES, RHEUMATOLOGY

Keywords: undifferentiated autoinflammatory disease, unclassified autoinflammatory disease, child, anakinra, IL-1 receptor antagonist

Efficacy and safety of anakinra for undifferentiated autoinflammatory diseases in children: a retrospective case review

Garg, Suchika[1]; Wynne, Karen[2]; Omoyinmi, Ebun[1]; Eleftheriou, Despina[1,2,3]; Brogan, Paul[1,2]

[1]Infection, Inflammation and Rheumatology Section, Great Ormond Street Institute of Child Health, University College London, Great Ormond Street Hospital NHS Foundation Trust; [2]Department of Paediatric Rheumatology, Great Ormond Street Hospital NHS Foundation Trust; [3]ARUK Centre for Adolescent Rheumatology, University College London, London, UK

Background: Autoinflammation is characterized by dysregulation of the innate immune system, often with a monogenic cause. Although there are many genetic autoinflammatory diseases, four main diseases have been the focus of clinical research: FMF, CAPS, TRAPS and MKD. Consequently, virtually all the high-level therapeutic evidence pertains to these diseases. An important emerging group, however, are patients with atypical or unclassified or undifferentiated autoinflammatory diseases (uAID), who still require therapeutic intervention to prevent disease-related morbidity. Anakinra is an IL-1 receptor antagonist used for various forms of autoinflammation, but little is known about its efficacy or safety in patients with uAID.

Objective: To retrospectively review the efficacy and safety of anakinra in paediatric patients with uAID.

Methods: Retrospective study of uAID children at a single tertiary referral centre. The efficacy of anakinra was evaluated using physician global assessment (PGA), and serological response assessed by levels of serum amyloid A (SAA) and C-reactive protein (CRP). Safety was assessed by exploring adverse events including infection and adverse drug reactions.

Results: This study included 22 patients, 14/22 (64%) females and 8/22 (36%) males of median age 7.1 years (range 0.13–14.11), with the following diagnoses: unclassified autoinflammation (n = 16) and mutation-negative CAPS (n = 6). The median starting dose of anakinra was 2 mg/kg (range 2–6), and the median duration of treatment was 19.6 months (range 0.8,100). Pre-anakinra treatment the median PGA, on a 3-point-Likert scale, was 2/3 (range 1–2); which fell to 1 (range 0–2) within three months of treatment. Within this time frame, 8/22 (36%) patients achieved complete clinical and serological remission), while 8/22 (36%) achieved a partial response. Six/22 (27%) had no response to anakinra. Notable adverse events included death (3/22, 14%), and the

need for allogeneic haematopoietic stem cell transplantation (1/22, 5%). There were no new safety signals, and anakinra was overall well tolerated.

Conclusions: In this retrospective study, 72% of paediatric uAID responded to anakinra, with 36% achieving full clinical and serological remission within 3 months. These results suggest that empirical trials of IL-1 blockade may be warranted in children with uAID. Clear stopping criteria based on predefined parameters should be considered when embarking on such empiric treatment, however, since non-responders require alternative therapeutic approaches, facilitated by a definitive molecular diagnosis where possible, to obtain disease control.

ID: 188/OP4: 3

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, GASTROENTEROLOGY

Keywords: meropenem, drug-induced liver injury

Meropenem induced liver injury as a rare adverse effects

Dafallah, Musa Mohammed; Elmasoudi, Ahmed Salah; Hassan, Manasik
HAMAD MEDICAL CORPORATION, Qatar

Background: Meropenem is a broad-spectrum antibiotic against aerobic and anaerobic gram-positive/gram-negative organisms with the greatest utility in treating severe infections among hospitalized children, but still having other medication side effects of using it. We report a case of acute liver injury as a rare side effect of meropenem.

Case report: A 5-year-old boy bedridden in the hospital with hypoxic-ischemic encephalopathy and multiple comorbidities on multiple anti-epileptic drugs (phenobarbitone, valproite, lacosamide and levetiracetam) and nitrofurantoin for recurrent UTI. He is known to be allergic to cefepime Table 1.

Recently he had spikes of fever up to 40`C axillary with respiratory distress. On examination, He was hemodynamically stable. Chest, CVS and abdomen were with unremarkable findings. He underwent partial septic workup included (Blood culture, urine culture and chest x-ray). Due to his allergic reaction to cefepime, he was started on Meropenem presumed hospital-acquired infection.

Table 1. Trends of LFTs during the course of disease

Date	ALT	AST	ALP	GGT	Albumin	Bilirubin
Before meropenem	**18 U/L**	**39 U/L**	**225**	**N/A**	**L 30**	**Normal**
After meropenem	**394 U/L**	**746 U/L**	**330**	**N/A**	**L 26**	**Normal**
Day 3 on M	1,884 U/L	3,234 U/L	309	N/A	L 28	Normal
M stopped.	**1,350 U/L**	**725 U/L**	**288**	**89 H**	**L 26**	**Normal**
(T) day 1	1,262 U/L	562 U/L	310	N/A	L 26	Normal
(T) day 2	931 U/L	309 U/L	361	N/A	L 25	Normal
(T) day 3	684 U/L	166 U/L	378	N/A	L 25	Normal
(T) day 4	566 U/L	121 U/L	346	79 H	L 26	Normal
(T) day 5	404 U/L	74 U/L	258	N/A	L 25	Normal
(T) day 10	116 U/L	46 U/L	252	65 H	L 33	Normal

ALT: 5-20 U/L, AST: 0-48 U/L, ALP (Alkaline Phosphatase): 93-309 U/L, GGT: 3-22 U/L

L: low, meropenem: M, Tazocin: T

The initial workup including complete blood count, comprehensive metabolic panel and inflammatory markers were reassuring and urine culture showed Pseudomonas aeruginosa with negative blood culture.

Results: Upon daily follow up, He showed right upper quadrant tenderness although his clinical condition was improving and became afebrile for 48 hours since meropenem was started. Urgent blood investigation showed a picture of liver decompensation (mixed of hepatic and cholestatic features without jaundice) and coagulopathy. Gastroenterology team was consulted and advised to start vitamin K while sending labs to exclude infectious/autoimmune hepatitis in which all were unremarkable. Neurology team advised to do the level of anti-epileptic medication, valproate discontinued as the level came low, others were continued.

Liver ultrasound on day 5 of meropenem, showed diffuse peri-cholecystic oedema as reactive change/inflammatory squealy. Upon discussion with the ID team as to the possibility of meropenem induced liver injury, the patient was shifted to (Piperacillin/Tazobactam) to cover UTI.

Patient outcome: Shifting patient to tazocin resulted in the total recovery of the liver decompensation in form of complete normalization of the liver function/coagulopathy within 10 days and normal US liver after 2 weeks.

Discussion: Several studies have demonstrated that meropenem is an effective/safe treatment for children with serious infections. Multiple side effects reported in the literature, however drug-induced liver injury, such as meropenem, is a diagnosis that should be in mind after excluding other causes of hepatic infectious/autoimmune disease.

Conclusions: Meropenem remains an excellent antimicrobial agent especially for severe infections with a good safety profile, however rare side effects such as acute liver injury is considerable after exclusion of other causes.

ID: 115/OP4: 4

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: HAEMATOLOGY/ONCOLOGY

Keywords: Acute myeloid leukaemia, bone marrow transplant, graft versus host disease, multiple extramedullary relapses, palliative radiotherapy

A case report of an 8-year-old with multiple relapses of acute myeloid leukaemia post-transplant: cured with palliative radiotherapy

Srikumar, Banuja; Taj, Mary; Furness, Caroline; Mandeville, Henry
Royal Marsden Hospital (Sutton), United Kingdom

Background: Acute myeloid leukaemia (AML) is uncommon in the paediatric population and accounts for approximately 15–20% of acute childhood leukaemias. In particular, AML accounts for less than 10% of acute leukaemias in children under 10 years of age. The current long-term survival rate for paediatric AML is 65 to 70%, comparatively lower than ALL. The overall survival rate in children who relapse following treatment of AML is significantly lower at 16–34%. We report the clinical course of a patient who presented with multiple extramedullary relapses of myeloid leukaemia post-transplant.

Case Study: An 8-year-old boy presented with relapsed acute myeloid leukaemia (AML) following completion of initial treatment, and underwent sibling allogeneic stem cell transplant (SCT) in remission, 8 months after initial diagnosis. He subsequently developed acute graft versus host

disease (GvHD) involving skin, liver and gastrointestinal tract (GIT) and was treated with ciclosporin, prednisolone and MMF. Despite this, he progressed to life-threatening grade four acute GvHD 1 year following transplant with predominant liver involvement. He developed other complications including respiratory distress syndrome requiring high-frequency ventilation (HFOV), veno-occlusive disease (VOD), hypertension and transplant-associated thrombotic microangiopathy. His additional issues included on-going chronic GvHD requiring low dose steroid therapy at 4 years post-transplant. First localised extramedullary relapse was diagnosed at 11 months post-transplant in the right femur and was successfully treated with radiotherapy. PET-CT scan post-radiotherapy showed a further mass in the left femur, consistent with underlying leukaemia, in addition to the progression of the original mass in the right femur. He received palliative radiotherapy to left femur due to severe GvHD and large deposits of extramedullary disease. Unfortunately, he presented with further multiple relapses with uninvolved bone marrow and underwent palliative radiotherapy.

Learning Points Discussion: Our patient's overall management following transplant has been extremely challenging. The reasons include previous intense treatment with chemotherapy, radiotherapy and high dose immunosuppressive therapy for severe GvHD. However, he has a complete resolution of his active leukaemia following monotherapy with palliative radiation and continues to have disease-free survival for a minimum of 6 years since his first post-transplant relapse in March 2015.

ID: 142/OP4: 5

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: INFECTIOUS DISEASES

Keywords: bacillus cereus, osteomyelitis

Bacillus cereus osteomyelitis, what a rare diagnosis in an immunocompetent child!!

Mustafa, Amira[2]; Alabbas, Ali[2]; Hassan, Manasik[1]
[1]Hamad medical corporation, Qatar; [2]Sidra Medicine

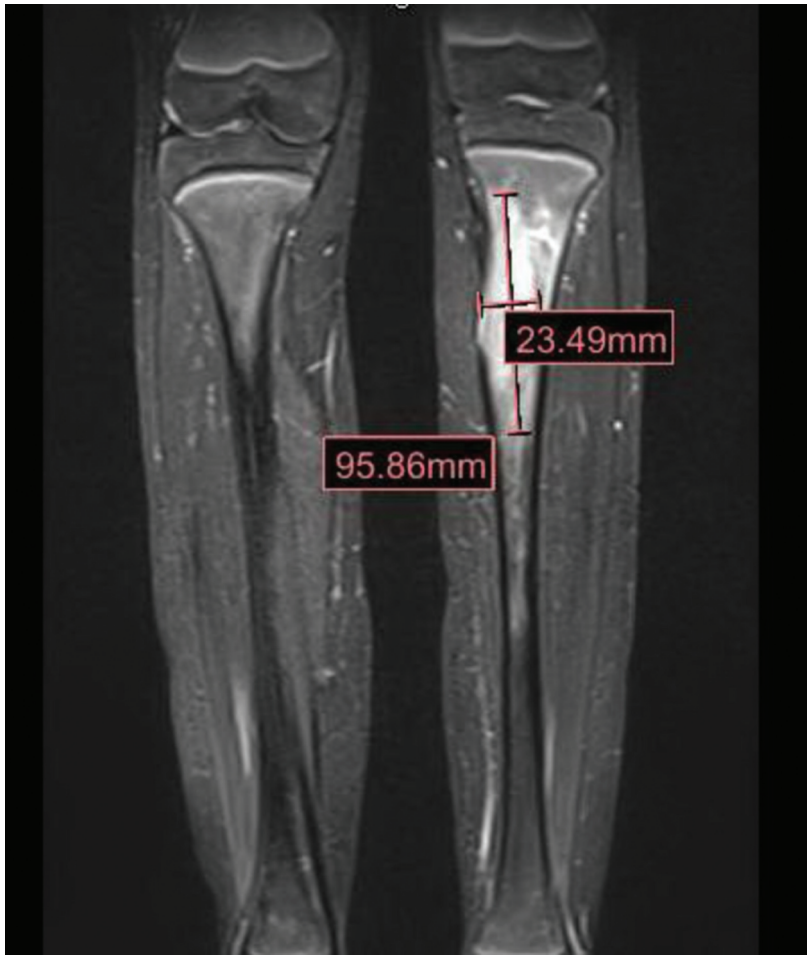
Background: Bacillus cereus is Gram-positive rod bacteria associated with food poisoning and gastrointestinal manifestation; recently it started to be associated with serious infection: pneumonia, sepsis, particularly in immunosuppressed individuals, intravenous drug abusers and neonates. Isolated bone infections by B.Cereus species is rare in immunocompetent children or adults with no comorbidities.

Case Study: A previously healthy 11-years old girl, presented to a pediatric emergency (ED) with a 1-month history of left leg swelling and pain. The patient was initially seen in an orthopaedic centre for chronic leg swelling. MRI leg showed a suspicious lesion in the leg, underwent an incisional biopsy, found no evidence of malignancy and discharged home with close follow up. The tissue culture grew bacteria and the family called to step in ED. In ED, she was having left leg swelling and pain. The pain was of chronic onset, relieved partially by rest and painkillers, not radiating, swelling involved the anterior part of the left leg with no redness, hotness. There were no other joint involvements, fever, poor appetite or weight loss. Past history with no significant, completed immunization and family history negative for chronic disease.

Examination showed a lesion in the left upper leg with local tenderness, but no redness joints involvement, lymphadenopathy or hepatosplenomegaly with an inability to bear weight on it Figure 1.

Results: Child laboratory studies revealed a normal white blood cell count, inflammatory markers, C-reactive protein, ESR, chemistry panel, lactate dehydrogenase, peripheral smear and uric acid. Radiograph of the patient's left lower extremity showed an ill-defined sclerotic lesion with some

Figure 1.



periosteal reaction. Chest radiograph was normal. MRI of lower limbs showed an ill-defined expanding bony lesion in the proximal metaphysis of the left tibia bone, periosteal reaction and cortical thickening high suspicion of osteosarcoma, whole-body MRI showed no other lesions. Bone biopsy showed multiple fragments of variably thickened bony trabeculae with no evidence of malignancy. Tissues culture grew gram-positive bacteria (bacillus Cereus). In a multidisciplinary meeting, involving pediatric orthopaedic, infection disease, oncology and general concluded that the child had Bacillus cereus left tibia osteomyelitis with no evidence of underlying risk factor. The child was discharged home on oral linezolid for 3 months after completing 2 weeks of intravenous antibiotic in the hospital with close follow up in clinics. Repeated MRI of the legs after 2 months showed significant improvement.

Learning Points Discussion: Bacillus cereus organisms cause systemic infections. Osteomyelitis is rare especially in immunocompetent patients with a representation of chronic lesion and initial diagnosis as bone malignancy.

ID: 281/OP4: 6

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, RARE DISEASES

Keywords: Osteosarcoma, Bone, Tumour, Malignancy.

Bone tumours in general paediatric practice.

Hamza, Elyassa; Woon, Yuxin; Loughman, Peter; Carey, Ruth; Murphy, Anne-Marie
Department of Paediatrics, University Hospital Limerick, Ireland.

Background: Osteosarcoma is the commonest childhood primary bone malignancy with peak incidence being 13–16 years, with male predominance. It arises from mesenchymal cells producing an osteoid matrix, typically at the distal femur or proximal tibia. The most common presentations are localised pain, swelling or limp.

Aims: To outline the longitudinal course of paediatric osteosarcoma.

Methods: A retrospective case series detailing 4 patients with biopsy-confirmed osteosarcoma in the paediatric population at UHL diagnosed between 2017–2019.

Results: Case Study 1: 8-year-old female presented with worsening right ankle pain and limp for 4 weeks. A tender swelling was evident over the right medial malleolus. Imaging revealed a right distal tibial diametaphyseal sclerotic mass, without metastasis. A biopsy confirmed osteosarcoma. Treatment involved chemotherapy (Euramos-1) and a right below-knee amputation. Case Study 2: A 6-year-old female referred to the emergency department by her GP with 2–3 weeks of worsening left leg pain and limp. A hard lump was palpated at the distal left thigh. Imaging demonstrated lucent, sclerotic bone lesions at the distal femoral diaphysis, with bone destruction and periosteal reaction. Osteosarcoma was confirmed on biopsy. Treatment involved chemotherapy (2 cycles of EURAMOS-1), with subsequent resection of the tumour and prosthetic insertion. Case Study 3: A 14-year-old male athlete presented to his GP with progressive right leg pain. Trauma to the knee 2 months later caused significant pain and swelling. Imaging revealed tibial cortex periosteal reaction and heterogeneous cortical density, with local knee joint involvement. A biopsy confirmed right proximal tibia osteosarcoma. Bilateral pulmonary metastases were identified. Treatment commenced with EURAMOS-1 chemotherapy and a right above-knee amputation. Case Study 4: A 12-year-old male presented with 5 days of swelling below his right knee, associated with limb weakness. Imaging revealed a 12 × 8 cm nodule in the right proximal tibia. Osteosarcoma was confirmed on biopsy, with pulmonary metastasis identified on imaging. Despite neoadjuvant chemotherapy (EURAMOS-1) and limb-conserving surgery, metastasis to the abdomen and pulmonary vasculature occurred, causing thrombi requiring further surgery. The patient passed away 2 years following diagnosis.

Discussion: Although childhood malignancies are rare, they remain the most common cause of disease-related death in children. In Ireland, there are approximately 137 new cases of cancers diagnosed in children under the age of 15 per year. The most prevalent childhood cancers in developed countries are leukaemias, tumours of the brain and central nervous system, and lymphomas. However, in our regional paediatric centre, primary bone tumours are the most common childhood cancer after haematopoietic malignancies.

Session

HBSC/Symposium (OP-5)

Time: **Friday, 4 December 2020**: **14:00—15:00**	*Location*: **Virtual**

Presentations

ID: 226/OP5-HBSC-S: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE

Keywords: adolescence, gender identity, developmental contexts, perceived support, satisfaction

Developmental contexts and gender identity: why do perceived support and satisfaction with family and friends matter?

Ciria-Barreiro, Esther; Jiménez-Iglesias, Antonia; Sánchez-Queija, Inmaculada; Leal-López, Eva; Rivera, Francisco

University of Seville, Spain

Introduction: Recently, the cross-national Health Behaviour in School-aged Children (HBSC) study has shown a special interest in analyzing gender diversity in adolescence. This international study examines different aspects of health and health behaviours as well as the influence of developmental contexts during this developmental stage. Micro-systems such as family and friends could act as assets or risk factors for positive development, especially for transgender adolescents. Previous research has shown lower levels of perceived support in gender minorities compared to cisgenders youths, which could be associated with increased difficulties in facing some specific life events (e.g., coming out).

Aim: Thus, the aim of this research is to investigate adolescents' perceived support and satisfaction with their families and friends according to their gender identity.

Results: The sample consisted of 303 transgender adolescents and 909 cisgender adolescents between the ages of 15 and 18 (M = 16.41; SD = 1.07), who had participated in the 2018 HBSC survey in Spain. The Multidimensional Scale of Perceived Social Support and Cantril's Ladder about satisfaction with the contexts were employed to examine both family and friendship networks. Means comparisons (Student's t) and Cohen's d effect size tests were used to contrasting frequencies and to estimate the effect size of the possible differences. Transgender non-binary adolescents showed the lowest scores in perceived support and satisfaction with both contexts. No statistically significant differences were found between non-binary and binary transgender adolescents; however, they were detected between non-binary transgender and cisgender adolescents. These findings invite experts to create and improve strategies to make the developmental contexts safer for gender minority adolescents. Moreover, the needs of non-binary transgender adolescents should be studied with more care in order to recognize their specific reality.

This oral communication will be presented together with András Kolto, Andreas Heinz and Concepción Moreno-Maldonado as a symposium: "Sex, gender and gender identity: reflections and discussions in the Health Behaviour in School-Aged Children international network"

ID: 225/OP5-HBSC-S: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: adolescence, gender identity, cisgender, transgender

Identifying sex and gender diversity in adolescents surveys: An analysis of the results from the Health Behaviour in School-Aged Children (HBSC) and the OPINA Barometer project in Spain

Moreno-Maldonado, Concepción; Ciria-Barreiro, Esther; Luna, Sara; Francisco, Rivera

University of Seville, Spain

Background: The need for inclusive gender identity measures in quantitative research has become more apparent in recent years. However, quantitative research does not currently offer a "golden measure" for evaluating gender identity, especially during adolescence. The two-step approach—asking adolescents about their current gender identity and their sex status—is the most recommended measure to identify transgender adolescents.

Research question: Can a double-item measure detect different gender identities in surveys of adolescents?

Methods: Two samples were analyzed. The first was composed of 19,242 15–18-year-old adolescents who participated in the 2018 Health Behaviour in School-Aged Children (HBSC) study in Spain. The second sample included 2,362 15–18-year-old adolescents who collaborated in the OPINA Barometer in Spain. To estimate the prevalence of the gender identity categories, a question about the sex was crossed with a question designed ad hoc by the Spanish team about gender identity. Descriptive statistics were calculated.

Results: Regarding the first sample, 89.7% of participants considered their sex assigned at birth to be congruent with their gender identity (cisgender); 0.50% saw themselves as binary transgender; 1.2% did not identify with the binominal categories (non-binary transgender); 0.4% of responses were irrelevant, and 8.4% avoided answering the self-identity gender question. In the sample of the second survey, 92.5% of adolescents were labelled as cisgender; 1.2% as binary transgender; 1.8% as non-binary transgender; 2.4% as incoherent responders; and 2.0% of participants did not answer the self-identity gender question.

Conclusions: Asking questions that allow sex and gender diversity to be identified can help to destigmatize minority groups, facilitate the evaluation of prevalence and characteristics of gender minority groups and make recommendations that inform policy and programs. Although this double-item measure may help to detect different gender identities in adolescence, several points must be discussed.

ID: 167/OP5-HBSC-S: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE

Keywords: Sex assigned at birth, Gender identity, Gender, Adolescent health, Health Behaviour in School-aged Children (HBSC)

Measuring sex and gender identity in a cross-national adolescent population survey: Perspectives of adolescent health experts from 44 countries

Költő, András[1]; Heinz, Andreas[2]; Moreno-Maldonado, Concepcion[3]; Cosma, Alina[4]; Piper, Adele[5]; Saewyc, Elizabeth M.[6]; Nic Gabhainn, Saoirse[1]

[1]Health Promotion Research Centre, National University of Ireland Galway; [2]Faculty of Humanities, Education and Social Sciences, University of Luxembourg; [3]Department of Developmental and Educational Psychology, University of Seville; [4]Faculty of Physical Culture, Palacký University Olomouc; [5]Institute of Health & Wellbeing, University of Glasgow; [6]Stigma and Resilience Among Vulnerable Youth Centre, School of Nursing, University of British Columbia

Introduction: The Health Behaviour in School-aged Children (HBSC) is a World Health Organization collaborative cross-cultural study of adolescents aged 11–15 years, from 50 countries and regions in Europe, North America and the former Soviet republics. Since 1983 (the first survey round), the sex/gender of the respondents have been categorised with the question "Are you a boy or a girl?", the response options being "a boy" and "a girl". In the light of lived experiences of young people

and contemporary theoretical and empirical approaches to the measurement of sex assigned birth and gender identity, this item is contested.

Research Questions: What are HBSC National Research Teams' experiences with using this item? What is their position on any potential change or amendment of the item? Have they already made any changes? Do they see potential drawbacks and benefits in changing the item?

Method: In Summer 2019, an online survey was conducted with HBSC National Teams, to understand member countries' position on the measurement of sex and gender in the HBSC survey.

Results: Of the 50 research teams, 44 responded to the online questionnaire. Opinions on potential changes or amendments of the item were polarised, with 19 teams (43%) not supporting any changes, 15 teams (34%) agreeing with a change, and 10 teams (23%) indicating they don't know or not sure if changes are necessary. Various arguments were raised for and against any changes or amendments. Six national teams already implemented a change, by adding a third response option, replacing the item, or using additional items.

Conclusions: The results demonstrate that the issue of sex and gender in HBSC needs to be addressed, but methodological, political and cultural implications need to be considered. The complexity of this problem makes it impossible to suggest a "one-size-fits-all" solution.

ID: 195/OP5-HBSC-S: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE

Keywords: Gender identity, Gender, Adolescent health, item non-response, Health Behaviour in School-aged Children (HBSC)

What is problematic about binary questions on gender in health surveys—a missing answer analysis

Heinz, Andreas[1]; Költő, András[2]; Godeau, Emmanuelle[3]; Ehlinger, Virginie[4]; van Duin, Claire[1]; Catunda, Carolina[1]; Willems, Helmut[1]

[1]University of Luxembourg, Luxembourg; [2]NUI Galway; [3]École des Hautes Études en Santé Publique; [4]Institut national de la santé et de la recherche médicale

Background: In many studies, participants who do not state their gender are excluded from the analysis. This may be appropriate if they do not answer the questionnaire seriously. However, some participants may have understandable reasons for not reporting their gender, e.g., questioning their gender identity.

Research question: How many students and which students do not answer the question on gender?

Methods: We analyzed data of the Health Behaviour in School-aged Children study from Ireland, France, Hungary, Scotland, Belgium (Flemish) and Luxembourg (n = 40,053). To explore the reasons for non-response, we divided the participants into 3 groups: 1. Responders answered both socio-demographic questions (age and gender) 2. age non-responders did not answer the question on age. 3. Gender non-responders answered the question on age, but not the one on gender.

Results: 311 out of 40,053 (0.8%) pupils aged 11–18 did not report their gender. About 40% of them did not answer the age question either. However, the other 60% belong to the group of gender non-responders and this group is disadvantaged compared to responders: they report lower self-rated health, more health complaints, less family support and more substance use

(alcohol, tobacco, cannabis). 1.9% of pupils did not answer the question about age. These age non-responders answered the questionnaire more selectively overall and skipped more questions.

Conclusion: The data suggest that the reasons for age non-response and gender non-response are different. For age non-responders, the fear of de-anonymization seems to be the reason for not indicating their age. Not answering the question on gender is rare. If the participants answered the question on age, but not the question on gender, then the variable gender is missing not at random. The health problems of gender non-responders correspond to the health problems of gender non-conforming adolescents. Thus, the question arises if the group of gender non-responders should be included in the analysis and if the question on gender should be asked differently in the future.

Session

OP6: Oral Presentations (OP-6)

Time: **Friday, 4 December 2020**: **15:00—16:00**	*Location*: **Virtual**

Presentations

ID: 228/OP6: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE

Keywords: Mental health Mental well-being Well-being Adolescent Adolescence Trends Schoolwork pressure Life satisfaction Psychosomatic health complaints Country variation Cross-national Multilevel analysis HBSC

Cross-national time trends in adolescent mental well-being from 2002 to 2018 and the explanatory role of schoolwork pressure

Cosma, Alina
Palacký University Olomouc, Czech Republic

Purpose: Previous research has shown inconsistent time trends in adolescent mental well-being, but potential underlying mechanisms for such trends are yet to be examined. This study investigates cross-national time trends in adolescent mental well-being (psychosomatic health complaints and life satisfaction) in mainly European countries and the extent to which time trends in schoolwork pressure explain these trends.

Methods: Data from 915,054 adolescents from 36 countries (50.8% girls; mean age = 13.54; standard deviation age = 1.63) across five Health Behaviour in School-aged Children surveys (2002, 2006, 2010, 2014, and 2018) were included in the analyses. Hierarchical multilevel models estimated cross-national trends in adolescent mental well-being and schoolwork pressure. We also tested whether schoolwork pressure could explain these trends in mental well-being.

Results: A small linear increase over time in psychosomatic complaints and schoolwork pressure was found. No change in life satisfaction emerged. Furthermore, there was large cross-country variation in the prevalence of, and trends over time in, adolescent mental well-being and schoolwork pressure. Overall, declines in well-being and increases in schoolwork pressure were apparent

in the higher income countries. Across countries, the small increase in schoolwork pressure over time partly explained the increase in psychosomatic health complaints.

Conclusions: Our findings do not provide evidence for substantial declines in mental well-being among adolescents. Yet, the small increase in mental well-being and increases in schoolwork pressure appear to be quite consistent across high-income countries. This calls for the attention of public health professionals and policy-makers. Country differences in trends in both adolescent mental well-being outcomes and schoolwork pressure were considerable, which requires caution regarding the cross-national generalization of national trends.

ID: 164/OP6: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: NUTRITION & DIETS, ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: sugar-sweetened beverages, multilevel, school environment, adolescent

Daily consumption of sugar-sweetened beverages among adolescents: the role of contextual school factors

Lebacq, Thérésa; Rouche, Manon; Bellanger, Amélie; Dujeu, Maud; Holmberg, Emma; Eggen, Morgane; Desnouck, Véronique; Chatelan, Angeline; Castetbon, Katia

School of Public Health, Université libre de Bruxelles, Belgium

Background: Beyond individual and family determinants, school context may influence adolescent dietary choices, such as the consumption of sugar-sweetened beverages (SSB). Availability of foods and the development of health-promoting actions may be an important factor in this regard. The purpose of this study was to assess the role of contextual school factors in the daily consumption of SSB among French-speaking adolescents in Belgium.

Methods: Data were collected within the cross-sectional "Health Behaviour in School-aged Children" (HBSC) survey conducted in 2018 in French-speaking schools of Belgium. Observations of 7,547 students (aged 11 to 21 years) in 123 secondary schools were used for the analyses. Frequency of SSB (sugary and light drinks, energy drinks and flavoured milk) and fast-food consumption, screen time and sociodemographic characteristics were self-reported by the pupils. School-level data were collected through questionnaires completed by school staff members. Multilevel logistic regression analyses, adjusted for individual lifestyle and sociodemographic characteristics, assessed the role of the school context in daily SSB consumption. Each school-level variable was tested consecutively to identify those which contributed to explain the global school effect.

Results: Overall, 47.9% of the adolescents reported drinking SSB every day. Around half (47.2%) of the students could buy soft drinks at school, 80.3% attended schools allowing to go out during breaks, 60.6% attended schools where actions to promote healthy dietary choices were developed and 49.2% where actions to limit the SSB consumption were developed. A significant school effect was found regarding the individual daily SSB consumption (variance of the random effect for schools: 0.42; 95% CI 0.31–0.57), even after including individual sociodemographic and lifestyle variables in the model (variance of the random effect for schools: 0.27; 95% CI 0.19–0.38). School SSB availability and health-promoting actions did not contribute to explaining between-school variation. Higher school socioeconomic status and school size were significantly associated with lower odds of daily SSB consumption and partly explained between-school variation: the proportional reductions of the between-school variance were 40.7% and 11.1%, respectively.

Conclusions: Daily SSB consumption varied among pupils from various school settings. Such differences were not explained by the access to SSB at school, nor the development of health-

promoting actions as measured in this survey, but partly by structural characteristics like school socioeconomic status and size. While the characteristics of school-based interventions should be considered in future studies, our results suggest the need to develop multi-contextual interventions to reduce SSB consumption in adolescents.

ID: 168/OP6: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PUBLIC HEALTH

Keywords: Trend analysis, sugar-sweetened beverages, soft drinks, artificially sweetened beverages, adolescence, adolescents, Health Behaviour in School-aged Children survey, HBSC, social inequalities, socioeconomic position

Time trends in the consumption of sugar- and artificially sweetened beverages among adolescents from 21 European countries between 2002 and 2018

Chatelan, Angeline[1]; Lebacq, Thérésa[1]; Rouche, Manon[1]; Dzielska, Anna[2]; Fismen, Anne-Siri[3]; Kelly, Colette[4]; Castetbon, Katia[1]

[1]University libre de Bruxelles, Ecole de Santé Publique, Brussels, Belgium; [2]Institute of Mother and Child, Department of Child and Adolescent Health, Warsaw, Poland; [3]Norwegian Institute of Public Health, Department of Health Promotion, Bergen, Norway; [4]Health Promotion Research Centre, School of Health Sciences, NUI Galway, Ireland

Background: High intake of sugar-sweetened beverages (SSBs) contributes to childhood obesity. In Europe, time trends in the consumption of SSBs and artificially sweetened beverages (ASBs) are limited. In addition, differences in the methodologies hinder cross-national comparisons. We described temporal trends in the prevalence of daily consumption of SSBs (2002–2018) and ASBs (2006–2018) among European adolescents and explored how social inequalities in SSB and ASB consumption have evolved during this period.

Methods: We used data from the five most recent survey years of the "Health Behaviour in School-aged Children" study: 2002, 2006, 2010, 2014 and 2018. Nationally representative samples of pupils from Western, Northern and Southern Europe completed a standardized questionnaire at school. Consumption frequency of SSBs was assessed in 530,976 adolescents (21 countries, girls: 50.7%, 11y-,13y-,15y-olds: 33.4%, 34.6% and 32.0%, respectively) and, for ASBs, in 70,156 adolescents (5 countries). Within countries, we classified participants into 3 socioeconomic categories using the ridit-transform Family Affluence Scale (FAS), based on 4 to 6 household wealth items. National sex- and age-standardized prevalences of daily SSB and ASB consumption were calculated by survey years. Multilevel logistic models adjusted for sex and age estimated time trends (time as a continuous variable; for social inequalities evolution: FAS*time).

Results: Prevalences of daily SSB consumption declined linearly in all 21 countries between 2002 and 2018 (P for 21 national trends ≤0.002). Relative reductions in the proportions of daily SSB consumers greatly varied across countries: from <23% (France: −22.3%; French-speaking Belgium: −22.6%, Austria: −22.9%) to >72% (Norway: −72.1%; England: −74.9%; Ireland: −84.8%). Still in 2018, ≥1/6 pupils consumed SSB every day in 9/21 countries. In 8/21 countries, the proportion of pupils reporting daily consumption of SSBs decreased more sharply in more affluent families, thereby widening social inequalities. Social inequalities in SSB consumption have reduced in France only (most improvement in less affluent adolescents). Reductions in daily ASB consumption were observed in all five studied countries (absolute differences in prevalence: ≥-5.2%; relative differences: ≥-31.5%, P for trends ≤0.001). Social inequalities in ASB consumption widened in 2/5 countries.

Conclusions: SSB and ASB consumption in European adolescents decreased between 2002 and 2018 but remained high in almost half of the studied countries. Social inequalities in SSB and ASB consumption have increased over time in about 40% of countries. These results can serve as a first step to evaluate initiatives addressing nutrition in youth over the last decades.

ID: 240/OP6: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH, COVID-19

Keywords: adolescence, remote school, psychosocial disruptions, sedentary behaviours, lockdown

Czech adolescents health behaviours during COVID-19 lockdown

Ng, Kwok[1,2]; Cosma, Alina[3]; Svacina, Karel[4]; Boniel-Nissim, Meyran[5]; Badura, Petr[4]

[1]School of Educational Sciences and Psychology, University of Eastern Finland, Finland; [2]Physical Activity for Health Research Cluster, Department of Physical Education and Sport Sciences, University of Limerick, Ireland; [3]Olomouc University Social Health Institute, Palacky University, Olomouc, Czechia; [4]Faculty of Physical Culture, Palacky University, Olomouc, Czechia; [5]Department of Behavioral Sciences, Kinneret College on the Sea of Galilee, Israel

Background: Following the announcement of COVID-19 as a global pandemic, educational institutions were closed in 186 countries, whereby 74% of enrolled school students were forced into lockdown. The extraordinary circumstances during the lockdown and school closures had the potential to make changes to adolescent health behaviours. In the Czech Republic, the school closure lasted 12 weeks (March to June 2020). The natural effect from lockdown and school closure on Czech adolescents is still to be investigated, therefore the purpose of this study was to explore adolescent's living circumstances during the lockdown and how they perceived the changes in their health behaviours.

Method: In June 2020, 3,440 adolescents from all the regions of Czechia aged 11, 13, and 15 years completed a survey (response rate of 25–33%). Living circumstances during lockdown were measured by 1) direct exposure to COVID-19 virus, 2) living circumstances through economic, psychosocial disruptions and positive opportunities, and schooling during the lockdown. Frequency of health behaviours including moderate-to-vigorous physical activity (MVPA), eating behaviours, sleep time, and screen time was analysed by perceptions in changes in the respective behaviours during the lockdown. Comparisons between genders and age were the primary statistical analyses.

Results: Less than 1% (n = 23) adolescents reported to have had a positive diagnosis of COVID-19. Girls (36.6%) reported a higher rate of psychosocial disruptions than boys (25.8%). With increasing age, adolescents reported more psychosocial disruptions during the lockdown in Czechia and fewer positive opportunities. Compared to younger age groups, a higher number of 15-year-olds reported to have received not enough school support, not to have appropriate space at home to do school work, or not to receive enough information about the ongoing pandemic. Adolescents increased MVPA and healthy eating behaviours as compared to pre-lockdown. Vice-versa, adolescents decreased soft and energy drink consumption. Around half of the adolescents reported longer daily screen time during lockdown compared to pre-lockdown.

Conclusions: Actionable health behaviours such as MVPA and healthy eating increased during the lockdown, while soft and energy drink consumption decreased. These findings suggest homes could act as supportive settings for these health behaviours during circumstances such as lockdowns. These results can inform stakeholders for further school closures and regional and national lockdowns.

ID: 243/OP6: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE

Keywords: Problematic social media use, online communication, adolescence, well-being, social support

The influence of well-being, social support, media use and sociodemographic factors on problematic social media use among Luxembourgish adolescents.

Van Duin, Claire Martine; Heinz, Andreas; Willems, Helmut
University of Luxembourg, Luxembourg

Background: Adolescents spend an increasing amount of time communicating online. Previous research has indicated that electronic media communication has been associated with positive outcomes on adolescent well-being and development, however, problematic social media use is on the rise. This study investigates factors that influence problematic social media use (PSMU), based on previous empirical research and the Differential Susceptibility to Media Effects Model by Valkenburg and Peter (2013).

Methods: The data used in this study stems from the 2018 Health Behaviour for School-aged Children (HBSC) study in Luxembourg. Data from elementary and secondary school students aged 11 to 18 was used (N = 6164), which was collected through a written survey. A four-stage hierarchical multiple regression analysis was conducted using SPSS, with problematic social media use as the dependent variable. 14 independent variables were included in the model, added in four blocks: sociodemographic factors, social support factors, well-being factors and media use factors.

Results: The results indicate that in stage one of the hierarchical regression, the sociodemographic predictors accounted for 3% of the variation in problematic social media use. The addition of the social support factors to the model in stage two explained an additional 7% of the variation in problematic social media use, and the addition of the well-being factors in stage three an additional 5.3%. In stage four of the hierarchical regression media use factors were added to the model, and the four blocks of predictors accounted for 22.2% of the variation in problematic social media use (Adjusted R2 = 0.222). The most important predictors for problematic social media use were preference for online social interaction ($\beta = 0.205$, $p < .001$), the intensity of electronic media communication ($\beta = 0.155$, $p < .001$), psychosomatic complaints ($\beta = 0.136$, $p < .001$), perceived stress ($\beta = 0.122$, $p < .001$) and cyberbullying perpetration ($\beta = 0.117$, $p < .001$).

Conclusions: The block of sociodemographic factors contributed minimally to the explanation of the variance in problematic social media use in the model. The most important predictors for problematic social media use were preference for online social interaction, the intensity of electronic media communication, psychosomatic complaints, perceived stress and cyberbullying perpetration. This suggests that there are several starting points for the prevention of problematic social media use among adolescents.

ID: 269/OP6: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PUBLIC HEALTH

Keywords: internet gaming disorders, adolescents, predictors,

Predictors for internet gaming disorder in adolescents in Slovenia

Jericek Klanscek, Helena; Zupanic, Tina; Roskar, Maja
National Institute for Public Health, Slovenia

Background: Playing computer and online games among adolescents have been rising in recent years. This relatively poorly explored area shows contradictory findings, from potential benefits to developing serious internet gaming disorder or addiction. Gaming among adolescents is related to multiple factors, such as family and peer relationships, violence and mental health. The objective of this article was to investigate the frequency of online gaming, signs of internet gaming disorder and predictors for internet gaming disorder among Slovenian adolescents.

Methods: Analyses were based on Slovenian data from the 2018 HBSC study, which included a representative sample of 7449 boys and girls, aged 11, 13, 15 and 17. The data were analysed with the SPSS Statistics 25 program. Chi-squared test and regression analyses were performed.

Results: Our results show that 19% of adolescents play online games almost every day and 20% are playing 2 or more hours daily, mostly 13-year-old boys. The frequency, time spent on playing, and signs of addiction are statistically significantly ($p \leq 0.05$) connected with gender, age, type of family and subjective family well being, communication with parents, experiencing psychosomatic symptoms, school stress, fighting and bullying, family and friend support. In [Table 1–269] we show that higher odds for internet gaming disorders are held among male adolescents (OR = 4.5), those who find it more difficult to communicate with their father (OR = 1.4), who experience multiple health complains more than once a week (OR = 1.8), who sleep less than 9 hours daily on

Table 1. Results of logistic regression analysis – signs of internet gaming disorder

	Parameter estimation (B)	Statistical significance	Odds Ratio Exp(B)	95% CI	
				Lower	Upper
Gender*					
Boys	1.507	0.000**	4.512	3.319	6.135
Age					
13-year-olds	0.108	0.492	1.114	0.819	1.515
15-year-olds	-0.100	0.570	0.905	0.642	1.276
17-year-olds	-0.201	0.273	0.818	0.571	1.171
Communication with mother					
Difficult or very difficult	0.191	0.190	1.210	0.910	1.609
Communication with father					
Difficult or very difficult	0.360	0.005**	1.433	1.114	1.845
At least two psychosomatic symptoms more than once a week					
Yes	0.596	0.000**	1.815	1.427	2.307
Fighting at least three times in the last year					
Yes	0.150	0.319	1.162	0.865	1.560
Bullying others at least two times a month in the last couple of months					
Yes	0.835	0.000**	2.304	1.723	3.081
Being bullied at least once a month in the last couple of months					
Yes	0.284	0.019**	1.328	1.047	1.685
Perception of school pressure					
Some or a lot	0.331	0.004**	1.392	1.110	1.746
Sleeping nine or more hours during weekdays					
No	0.447	0.007**	1.564	1.131	2.163
Family support	-0.027	0.311	0.973	0.924	1.026
Friend support	-0.141	0.000**	0.869	0.818	0.922

Notes. *Reference groups: gender – girls; age – 11-year-olds; communication with mother/father – easy or very easy; psychosomatic symptoms – less than 2; fighting – less than 3 times in the last 6 months; bullied others – no; victim of bullying – no; perception of school pressure – not at all or a little; sleep – 9 hours or more; ** $p < 0.05$

weekdays (OR = 1.6), who bullies (OR = 2.3) or are bullied (OR = 1.3), who feel more pressured by the school work (OR = 1.4) and among those who have less friend support (OR = 1.2).

Conclusions: The majority of adolescents have access to a computer with an Internet connection and their (problematic) use has been growing in the past years. The findings of this study are in line with the findings of other researchers and provide us with important starting points for new prevention and promotional program preparation. Our results suggested that higher odds for internet gaming disorders are held among adolescents with more psychosomatic symptoms, who are more under school pressure and sleep less. The relation between fighting and bullying should be further explored as other studies show varying results. More in-depth quantitative and qualitative studies of these topics would be useful, encompassing various areas and exploring protective factors and also potential benefits.

Session

OP7: Oral Presentations (OP-7)

Time: **Friday, 4 December 2020**: **16:30—17:30**	*Location*: **Virtual**

Presentations

ID: 124/OP7: 1

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: INFECTIOUS DISEASES, NUTRITION & DIETS, ALLERGY, IMMUNOLOGY & RESPIRATORY

Keywords: Probiotics, Infections, Respiratory, Randomised, Meta-analysis

Can probiotics reduce the risk of acute respiratory tract infections in children?

Hussain, Hamzah
University of Nottingham, United Kingdom

Background: Acute respiratory tract infections are a major cause of morbidity and a leading health problem. Due to the various range of pathogens that cause disease a single effective treatment isn't currently available. However, there is a large amount of research interest in the use of probiotics as a novel treatment when dealing with many conditions. Research has shown some benefit in treating infectious diarrhoea and other gastro-related conditions. This benefit may be transferable to infections in other systems which could be the key to tackling this problem and additionally overcoming antibiotic resistance.

Objectives: This systematic review aims to evaluate the clinical evidence regarding the effect of probiotic administration on acute respiratory tract infections in children specifically.

Search Methods: PubMed (January 1970-October 2018), EMBASE (January 1980-October 2018) and reference lists of articles were searched. No grey literature was included in the data.

Selection Criteria: Randomised control trials, comparing probiotics with placebos. Non randomised trials and studies published in languages other than English were excluded.

Data Collection and Analysis: Data were extracted by one person. No authors were contacted. A qualitative synthesis was carried out and a meta-analysis was also conducted. 14 trials involving 3,637 patients were included in the qualitative analysis. 9 of these were used in the meta-analysis.

Results: Probiotics were able to reduce the incidence of RTIs in children (RR = 0.848, 95% CI 0.787–0.915, P < 0.001) when compared with a control group. There were only 3 serious adverse events reported from the trials.*

Conclusions: Probiotics have considerable potential for use in the prevention of various disorders and infections. However, it must be acknowledged that many probiotic health claims have not yet been completely validated by experimental evidence and any current positive results are only marginal. Additionally, the efficacy of a specific bacterial strain cannot be generalised to other probiotic organisms.

ID: 129/OP7: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS

Keywords: exclusive breastfeeding, formula feeding, mothers

Factors influencing the practice of exclusive breastfeeding among the mothers

Al Saleh, Abdullah Saleh[1,2]

[1]National Guard Health Affairs, King Abdualziz Medical City, Saudi Arabia; [2]Department of Family Medicine and Primary Care, National Guard Comprehensive Specialized Clinic

Background: Exclusive breastfeeding (EBF) is an essential part of early infant feeding. Promotion of EBF is the single most cost-effective intervention for reducing infant mortality in developing countries. Understanding the factors influencing EBF is crucial to promote this essential feeding policy during infancy.

Objective: This study was carried out to identify factors influencing the practice of EBF among mothers.

Method: A cross-sectional study was conducted at the National Guard Comprehensive Specialized Clinic in Riyadh, Saudi Arabia. The study population consisted of 500 mother-infant pairs attending the pediatrics clinic. Data were collected through direct interviews using a predesigned questionnaire. The collected data were tabulated and statistically analyzed.

Results: Out of 500 infants enrolled in the study, 54 (10.8%) were EBF. The prevalence of exclusive formula feeding and mixed (breast and formula) feeding was 57% and 32.2%, respectively. Statistically significant factors promoting EBF were the age of mother, parity, mother's work status, and antenatal advice. The most common reason for nonexclusive breastfeeding was inadequate breast milk production followed by maternal work.

Conclusions: The majority of mothers presented suboptimal breastfeeding practices. Programs promoting exclusive breastfeeding should therefore vigorously pursue public awareness on EBF practice during the first six months of the life of an infant.

ID: 165/OP7: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS

Keywords: regurgitation, gastroesophageal reflux, thickened formula, functional gastrointestinal disorder

Novel anti-regurgitation formula with carob bean gum, pre- and postbiotics is safe and well-tolerated: a double-blind, randomized, controlled trial.

Bellaiche, Marc[1]; Ludwig, Thomas[2]; Arciszewska, Małgorzata[3]; Bongers, Anke[2]; Gomes, Cédrico[4]; Świat, Agnieszka[5,6]; Dakklia, Faouzi[7]; Piollet, Anne[8]; Oozeer, Raish[2]; Vandenplas, Yvan[9]

[1]Hospital Robert-Debré, GI department, Paris, France; [2]Danone Nutricia Research, The Netherlands; [3]Poliklinika Ginekologiczno-Poloznicza Sp. Z.O.O Sp.K, Bialystok, Poland; [4]Senlis hospital, pediatric service, Taverny, France; [5]Centrum Medyczne Promed, Krakow, Poland; [6]Centrum Medyczne Plejady, Krakow, Poland; [7]Centre Condorcet, Hôpital Privé d'Antony, Antony, France; [8]Chamalières, France; [9]KidZ Health Castle, UZ Brussel, Vrije Universiteit Brussel, Brussels, Belgium

Background and Aim: Regurgitation is the most frequent functional gastrointestinal (GI) disorder in infants and commonly associated with other GI symptoms. For uncomplicated regurgitation parental reassurance and nutritional advice are the preferred management. This includes optional usage of thickened anti-regurgitation (AR) formulae in non-exclusively breastfed children. The aim of this double-blind, randomized, controlled study was to investigate the GI tolerance and safety of a novel AR formula.

Methods: 182 fully formula-fed infants aged 21 to 91 days diagnosed with regurgitation according to adapted Rome IV criteria were included in the study, consisting of a 4-week main phase and an optional 4-week extension (ClinicalTrials.gov Identifier NCT03371615). Infants were randomly allocated to one of two AR formulae. The novel AR (Test) formula contained 0.4 g/100 ml carob bean gum (CBG) as thickener, postbiotics derived from the Lactofidus fermentation process, and a prebiotic mixture of 0.4 g/100 ml short-chain galactooligosaccharides and long-chain fructo-oligosaccharides (scGOS/lcFOS, ratio 9:1). The Control AR formula contained CBG (0.4 g/100 ml) and postbiotics, but no scGOS/lcFOS, and had a history of safe use. The primary study outcome was the Infant Gastrointestinal Symptom Questionnaire (IGSQ) sum score (range 13–65) at Week 4. Other outcomes included IGSQ item scores, Adverse Events (AEs), growth parameters, stool characteristics, and regurgitation severity.

Results: Equivalence within predefined equivalence margins of the IGSQ sum score at Week 4 was demonstrated for the Test versus Control group. IGSQ sum scores statistically significantly improved for both groups from baseline after 1 week of intervention (Mixed Model Repeated Measures, $p < 0.001$). There were no significant differences between groups in stool frequency, stool consistency and occurrence of diarrhoea. Both study groups showed adequate growth and improvement of regurgitation complaints. Adverse Event data did not show any safety concerns. The assessment of the effect modification of the baseline level of GI distress showed that the baseline IGSQ sum score impacted the intervention effect on the 4-week IGSQ sum score (baseline by intervention interaction $p < 0.1$). A subsequent posthoc subgroup analysis showed that in the subgroup of infants with a baseline IGSQ sum score ≥35 (the overall median), a statistically significant improvement of the IGSQ score was observed in the Test versus Control group ($p = 0.008$).

Conclusions: The novel AR formula combining CBG with scGOS/lcFOS and postbiotics is well-tolerated, safe and supports adequate growth. Post-hoc results suggest the new formula has a more pronounced positive effect on overall GI health in those infants with more GI distress.

ID: 222/OP7: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS, ADOLESCENT MEDICINE

Keywords: obesity, dyslipidemia, hypertension, adolescents

Teenagers' dietary and exercise habits: what happened in 17 years?

Silva, Diana; Moreira, Biana; Banganho, Denise; Ferreira, Inês; Teles, Hugo; Cachão, Joana; Brito, Teresa; Oliveira, Inês; Parente, Susana; Freixo, José

Serviço de Pediatria, Centro Hospitalar de Setúbal, E.P.E., Portugal

Background: Teenagers' lifestyle has been changing for a number of years. The higher consumption of junk food and decreased physical activity has been linked not only to long-term health conditions but also with early cardiometabolic sequelae.

Aim: This study aimed to analyse the incidence of obesity, dyslipidemia, diabetes and hypertension in the juvenile population of Setúbal, Portugal, and compare it with a previous study conducted 17 years ago.

Methods: This study was conducted on randomly selected students, ranging years 7 to 9, from seven schools of the metropolitan area of Setúbal, Portugal during 2018. The youth's sociodemographics, their dietary and exercise routines were assessed using a validated questionnaire, with their parents' consent. Cholesterol, triglycerides and blood glucose level analyses were carried out, as well as anthropometric measurements. Analyses were performed with SPSS Statistics software. Pearson's correlation coefficient was used to assess the correlations. Afterwards, the data from this study was compared with another study carried out in 2003.

Results: Of the 343 participants enrolled in this study, 56% were female. The average age was 13,80 ± 1.24 years. The prevalence of overweight was 18,95% and obesity 14,58%. This represents an increase of 1.6 times and 2.7 times correspondingly, with respect to the data obtained in 2003. There was also an increase in the prevalence of hypercholesterolemia (12% vs.2,4%), hypertriglyceridemia (18,7% vs. 0,34%) and hypertension (10,8% Vs. none). Regarding physical activity, 53% of children reported practising physical exercise outside school (45% in 2003). 62% of the students mentioned practising some activity during the weekends for >60 min/day; 69,8% spend >2h/day watching tv during the week, increasing up to 74,5% during the weekends. When comparing physical activity with the active students, hypertriglyceridemia and hypertension has shown a statistical relationship. There was no significant relationship between being not active and sex, obesity or hypercholesterolemia. We found no significant relationship between food habits and hypertension, hypercholesterolemia or hypertriglyceridemia.

Conclusions: The incidence of overweight and obese teenagers, as also dyslipidemia and hypertension increased in the last decade alongside the increase of sedentary lifestyles as shown in this study. As such, it remains important to promote strategies focusing on teenagers and to engage in health policies to prevent obesity and other associated health conditions.

ID: 171/OP7: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, GASTROENTEROLOGY

Keywords: digestive comfort, partially hydrolysed protein, healthy infants, infant formula

The effects of partially hydrolysed whey protein on digestive comfort in healthy infants: (tertiary) outcomes from a double-blind, randomized, controlled trial

Hofman, Denise[1]; Kudla, Urszula[1]; Karaglani, Eva[2]; Thijs-Verhoeven, Inge[1]; Manios, Yannis[2]

[1]FrieslandCampina, Stationsplein 1, 3818 LE Amersfoort, the Netherlands; [2]Dept. Of Nutrition & Dietetics, School of Health Science & Education, Harokopio University, Athens, Greece

Background: Infant formulae containing partially hydrolysed whey protein (PhP) are typically used for a reduction of risk of developing cow's milk protein allergy (CMPA). More recently, such formulae are also promoted for healthy infants, under the assumption that accelerated digestion rates will benefit the overall digestive comfort. However, studies conducted to substantiate this claim often compare formulae that differ in more than just the protein type, making it challenging to draw specific conclusions on the impact of PhP on digestive comfort. The current study evaluates digestive comfort in healthy infants consuming either a partially hydrolysed formula (PHF) or a closely matched standard intact protein formula (IPF).

Methods: 163 healthy, formula-fed infants (aged 55–80 days) were enrolled in a double-blind, randomized, controlled trial. They were randomized to receive either the PHF (test group) or the IPF (control group) for three months, during which digestive comfort parameters (e.g., constipation, bloating, stool consistency and frequency) were assessed monthly using the Infant Gastrointestinal Symptoms Questionnaire (IGSQ) and Amsterdam Infant Stool Scale (AISS). Both formulae were produced at the same production facility. 142 infants completed the study (72 tests, 70 control). Digestive comfort parameters were analysed using independent t-tests and analyses of (co)variance (AN(C)OVA). Analyses of the AISS were adjusted for potential covariates (baseline anthropometry, sex, antibiotic use, illness (independent of formulae), smoking in the home environment, birth weight, maternal pre-pregnancy body mass index (BMI), father's current BMI, existence of gestational diabetes and whether this was treated, and formula intake). All analyses were performed for the PP population only.

Results: There was no difference in defecation frequency between groups. Consumption of the PHF resulted in larger ($p = .047$) and looser ($p < .001$) stools. Furthermore, consumption of the PHF was associated with green coloured stools, whereas IPF consumption led to more yellow coloured stools. Finally, infants on the PHF were reported to be gassier compared to those on IPF ($p < .001$). No significant differences were observed for any of the other IGSQ items.

Conclusions: The formulae compared in this study only differed with regards to protein type (PhP or intact). Therefore, observed differences in digestive comfort parameters can be attributed to protein type with a high degree of certainty; in healthy infants, PhP seems to affect stool consistency and not reported digestive comfort, when formulas are closely matched.

ID: 154/OP7: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GASTROENTEROLOGY, RHEUMATOLOGY

Keywords: IgA vasculitis, gastrointestinal involvement, renal involvement

Analysis of clinical and biochemical parameters and their association with the risk for renal disease in patients with IgA vasculitis and gastrointestinal involvement

Sestan, Mario[1]; Kifer, Nastasia[1]; Srsen, Sasa[2]; Ovuka, Aleksandar[3]; Batnozic Varga, Mateja[4]; Sapina, Matej[5]; Held, Martina[1]; Ban, Maja[1]; Kozmar, Ana[1]; Coric, Marijana[1]; Bulimbasic, Stela[1]; Crkvenac, Kristina[1]; Milosevic, Danko[1]; Frkovic, Marijan[1]; Gagro, Alenka[6]; Jelusic, Marija[1]

[1]University Hospital Centre Zagreb, University of Zagreb School of Medicine, Zagreb; [2]University Hospital Centre Split, University of Split School of Medicine, Split; [3]University Hospital Centre Rijeka, University of Rijeka School of Medicine, Rijeka; [4]University Hospital Centre Osijek, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek; [5]University Hospital Centre Osijek, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek, Faculty of Dental Medicine and Health, Osijek; [6]Children's Hospital Zagreb, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek, Zagreb, Croatia

Background: IgA vasculitis (IgAV) is the most frequent systemic vasculitis in childhood. Although the disease is most often self-limiting, more than 50% of children may develop gastrointestinal (GI) symptoms, while in about 10–20% of patients serious complications such as intussusception, bowel perforation, and massive bleeding may occur. The aim of this research was to analyze clinical and biochemical parameters in patients with IgAV and GI manifestations.

Methods: This retrospective study included children with IgAV reviewed in five Croatian University Centers in the period 2009 to 2019. Differences between categorical variables were examined using the $\chi 2$ and Fisher exact test, and among the numerical using the Mann Whitney U test.

Results: Out of 611 children, 281 (45.9%) had at least one GI manifestation. Among patients with GI symptoms there were 1.44 times more males ($p = 0.003$), higher proportion of patients came from the Mediterranean area (38% vs. 27%, $p = 0.007$), they had less prodromal infections before the appearance of purpura (59.8% vs. 70.9%, $p = 0.005$) and less respiratory infections (35.6% vs. 45.2%, $p < 0.001$). Patients with GI symptoms were 1.68 times more likely to develop renal symptoms, and if GI symptoms occurred before other symptoms of IgAV, this chance was 3.55 times higher. There was no difference in the involvement of the joints and central nervous system, whereas patients suffering from IgAV with GI symptoms were found to be significantly more likely to have rash extended on the trunk (61.9% vs. 48.5%, $p = 0.001$), and upper extremities (35.2% vs. 24.7%, $p = 0.006$), as well as a generalized rash (38.8% vs. 28.3%, $p = 0.008$). These patients also had statistically significant higher values of C-reactive protein, leukocyte count, erythrocytes and platelets, haemoglobin, hematocrit and D-dimer concentrations and lower levels of IgG and IgM. In our cohort 42 out of 281 children (14.9%) had the most severe GI manifestations with statistically significant higher values of 24-hour urine protein levels and D-dimer concentrations and lower total serum protein, albumin, IgG, IgM and C3 levels in comparison with children whose GI manifestations were less severe.

Conclusions: We detected a group of patients with IgAV and GI symptoms that differed in their demographic, clinical, and biochemical characteristics from patients without GI symptoms. This group of patients was found to be significantly more likely to develop the renal disease and thus cumulatively have a higher risk of acute and chronic complications of IgAV.

SUPPORT: Croatian Science Foundation project IP-2019-04-8822.

ID: 290/OP7: 7

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: NUTRITION & DIETS

Keywords: nutrition, families, children, low-income, food environments

Parental perspectives on the influence of food environments on food decisions among low-income parents with children

Ravikumar, Divya[1]; Spyreli, Eleni[2]; Woodside, Jayne[2]; Mckinley, Michelle[2]; Kelly, Colette[1]
[1]National University of Ireland Galway, Ireland; [2]Queen's University Belfast, Northern Ireland

Introduction: The importance of the family food environment in establishing healthy eating habits during childhood is well reported. Evidence shows that the household and external food environment influence dietary intake. Deprived areas are at a nutritional disadvantage due to the high prevalence of fast food outlets and convenience stores. Less is known about how food environments influence food-related behaviours for low-income families. Exploring the views of low-income families on environmental aspects that drive food-related decisions will allow a better understanding of ways to enable healthier choices. This rapid review aimed to synthesise

qualitative evidence on the parental perspectives of environmental factors that influence food planning, purchasing and meal preparation among low-income families with children.

Method: This rapid review included qualitative and mixed-methods peer-reviewed journal articles published after 2000 that explored the perspectives of low-income parents of their community food environment and how this impacted family food decisions. The following electronic databases were chosen for this review: Embase, Scopus and PsycINFO. Search strategies included seven concepts related to family, food, perceptions, influences, environment, socio-economic status and study type. Thematic analysis was employed, under the guidance of Thomas & Harden, 2008. The Standards of Reporting Qualitative Research were chosen to critically appraise the included papers.

Results: Fourteen full texts were included in the review based on the eligibility criteria and following quality appraisal. Included studies originated from the USA, Australia and the UK. Mothers perspectives were explored in all studies while eight studies also included fathers and one study included grandmothers. Food cost, specifically the cost of fresh food; economic disadvantage; and limited environmental food availability were key factors with a negative effect on families' dietary intake and quality. Other caregivers such as schools, childcare and family members could aid food provision to children but often hindered parents' ability to implement structure and healthy eating rules with their children. Parental beliefs about what constitutes "healthy" foods and the quantity and frequency of such foods determine food choices during shopping.

Conclusions: This qualitative evidence synthesis provides a novel insight into the challenges and opportunities that low-income parents face to feed their families. The findings have implications for public health, as they provide researchers and policymakers with important considerations in relation to creating healthier food environments to improve the dietary habits of children from families at a disadvantage.

Session

OP8: Oral Presentations (OP-8)

Time: **Friday, 4 December 2020**: **17:30—18:30**	*Location*: **Virtual**

Presentations

ID: 138/OP8: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, EMERGENCY PEDIATRICS

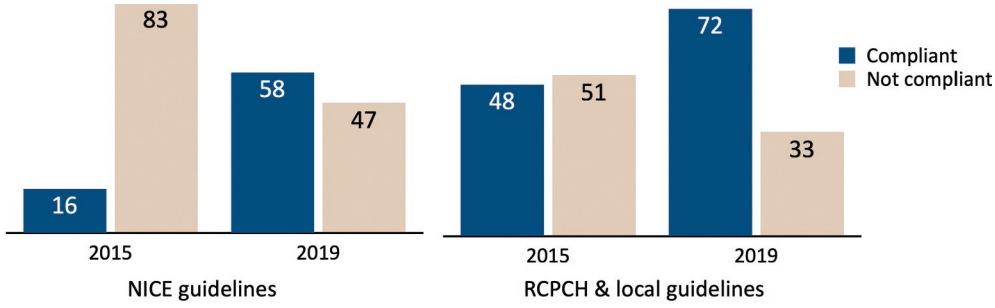
Keywords: pregnancy testing, abdominal pain, guideline

Audit: Review of pregnancy testing in girls age 12–16 presenting with abdominal pain, Royal Hospital for Children, Glasgow

Campbell, Charlotte
NHS Scotland, United Kingdom

Background: Pregnancy rates in teenage girls, whilst relatively low, represent an important and potentially vulnerable patient population. Recognition and awareness of pregnancy across all ages have important implications and are crucial to consider in those who are acutely unwell, having

Figure 1.



Graph | Comparison of compliance between 2015 and 2019 with NICE guidelines (left) and with RCPCH & local guidelines (right)

radiological investigation or undergoing medical/surgical intervention. The prospect of child protection issues in these situations must also be considered. This audit looked to clarify guidance for pregnancy testing in girls and assess compliance locally with The National Institute for Health and Care Excellence (NICE) and Royal College of Paediatrics and Child Health (RCPCH) guidelines, as well as after the introduction of a local guideline.

Methods: Data was retrospectively collected for girls aged 12–16 over a five-month period, between June and October 2015, presenting to the Emergency Department with abdominal pain. The scanned patient notes were reviewed online and data collected, excluding those not actually presenting with abdominal pain (incorrectly triaged) and those already known to be pregnant (redirected). It was noted whether the patients underwent enquiry about menarche, the possibility of pregnancy, whether pregnancy testing was performed and whether consent was documented. Following the introduction of a local guideline data for re-audit was collected for the same 5 month period in 2019.

Results: Data from 2015 looked at 104 patients, 99 of whom were included in analysis. Only 16 out of 99 (16%) were compliant with NICE guidelines, whilst 48 out of 99 (48%) were compliant with RCPCH guidelines. In 2019 we had data for 115 patients, 105 of whom were included. This cohort reflected practice following the introduction of a local guideline. There was increased compliance with NICE guidelines with 58 out of 105 (55%). We also saw an improvement for RCPCH and local guidelines, with 72 out of 105 (69%) compliance Figure 1.

Conclusions: Pregnancy testing in girls aged 16 years and under is crucial diagnostically and has clear implications for those undergoing investigation and procedures. There may also be vital considerations in a child protection context. We describe a previous lack of consistent and clear guidance with an initial audit demonstrating poor compliance. Following the introduction of a local guideline, we demonstrate a subsequent improvement in the proportion of those girls presenting with abdominal pain complying with guidelines. These promising results demonstrate a credible and valuable improvement in clinical practice following the implementation of a clear local guideline.

ID: 159/OP8: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: EMERGENCY PEDIATRICS

Keywords: paediatric emergency medicine, medical education, simulation training, medical training

Is high-fidelity training better in improving paediatric staff technical skills in facing pediatric emergencies?

Indraswari, Fithri[1,2]; Beattie, Thomas[1]
[1]University of Edinburgh, Scotland, United Kingdom; [2]Klinikum Fulda, Germany

Background: Students and medical staff are required to master various practical clinical techniques, including resuscitation and emergency care. Simulators with different technical features such as high-fidelity (HFS), medium-fidelity (MFS) and low fidelity (LFS) simulators can reproduce a wide variety of clinical conditions needed to allow skills to be learned and reinforced in non-patient settings. Whether HFS leads to a more significant improvement in trainees' technical skills in facing emergencies than MFS/LFS is open to discussion. This paper aims to enquire whether HFS is superior in improving paediatric staff technical skills in paediatric emergencies compared to LFS.

Method: A comparative study was conducted in the paediatric department of a teaching hospital. Paediatric staff were voluntary participants in either an HFS or an LFS training session between December 2018 and April 2019. Anonymous questionnaires completed before and after simulation training asked participants to rate their perceived technical skill in facing paediatric emergencies on a scale from 1–5, where 1 is a higher perceived skill.

Main Outcome Measure: Changes in staff perceived technical skills after HFS and LFS training.

Result: 60 paediatric staff (LFS n = 31; HFS n = 29) were involved. There was no significant difference in the mean pretest scores for technical skill (3.0 ± 0.9 and 3.1 ± 0.8 for HFS and LFS respectively; p = 0.7). The mean score of post-training confidence level showed a greater change in LFS group, (LFS 1.9, SD = 0.5; HFS 2.2, SD = 0.5; t(58) = 2.41, p = 0.02). Mean change in perceived technical skills scores was 1.1 ± 0.8 for LFS and 0.7 ± 0.6 for HFS. One-way ANOVA demonstrated a significant difference in technical skill changes before and after training in both groups while adjusting to the type of training (F (1,58) = 4.26; p = 0.04).

Discussion: This study involved a small number of participants from a single centre. Both HFS and LFS training showed a benefit in increasing participant technical skills. HFS showed lesser changes in the increase in perceived technical skills. Small numbers and staff mix could account for this.

Conclusion: As both modalities demonstrate improved performance LFS may be a viable alternative where cost is an issue. Further study with larger numbers could clarify this.

ID: 153/OP8: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: EMERGENCY PEDIATRICS

Keywords: pediatric emergency, low-acuity, non-urgent

Low-acuity pediatric emergency department visits in a Swiss university hospital: Proportion and associated factors

Jaboyedoff, Manon; Pellaton, Rachel; Suris, Joan-Carles; Gehri, Mario
Service of Pediatrics, Department Women-Mother-Child, Lausanne University Hospital and University of Lausanne, Switzerland

Background: A growing proportion of visits to pediatric emergency departments (PEDs) in Switzerland are non-urgent. PED visits for non-urgent complaints put a growing burden on the health care system and impact the quality of patient care. Little is known about their proportion

and associated factors in Switzerland. We investigated the proportion and factors associated with low-acuity consultations in the PED of Lausanne University Hospital, Switzerland.

Methods: We conducted a retrospective observational study in the PED of Lausanne University Hospital, the busiest PED of the region with over 30'000 visits per year. It provides care for pediatric medical and surgical conditions. We extracted standardized administrative and medical data from the clinical information system for all PED visits that occurred in 2018. We included visits of children aged 0 to 16 years. We classified PED visits into two categories: high-acuity and low-acuity visits. We defined low-acuity visits as a combination of triage 4 or 5 on the Australasian Triage Scale (ATS) with no radiologic study, no laboratory test performed, and the patient discharged home. If the same child consulted several times in a 24-hours time frame, we considered the visits as a unique one and used the most severe triage for analysis.

Results: We extracted data for 32'170 PED visits in 2018. After excluding visits of patients older than 16 years (23 visits) and visits with missing data (628 visits), we analyzed 31'519 PED visits.

The proportion of low-acuity visits was 61.84% (95% CI 61.30%-62.37%). Using multivariate logistic regression, low-acuity visits were associated with younger age (OR 0.93, 95% CI 0.93–0.94), a home distance less than 5 km (OR 1.18, 95% CI 1.12–1.25) and out of business hours (weekends: OR 1.78, 95% CI 1.12–1.23, nights: OR 1.12, 95% CI 1.07–1.17, holidays: OR 1.30, 95% CI 1.13–1.50). Patients consulting several times in a 24-hours time frame were more likely to consult for high-acuity reasons (OR 5.06, 95% CI 3.52–7.28).

Conclusion: Low-acuity visits are frequent in our PED. Convenience factors (proximity and outside business hours) and younger age are associated with a higher recourse to PED for low-acuity reasons. Attention should be paid to children brought to the PED several times in the same day as they might be more severe than expected. These results are key for public health authorities to take decisions regarding the allocation of resources and improvement of care.

ID: 133/OP8: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: EMERGENCY PEDIATRICS

Keywords: Compliance, CT scan, paediatric, neurosurgery

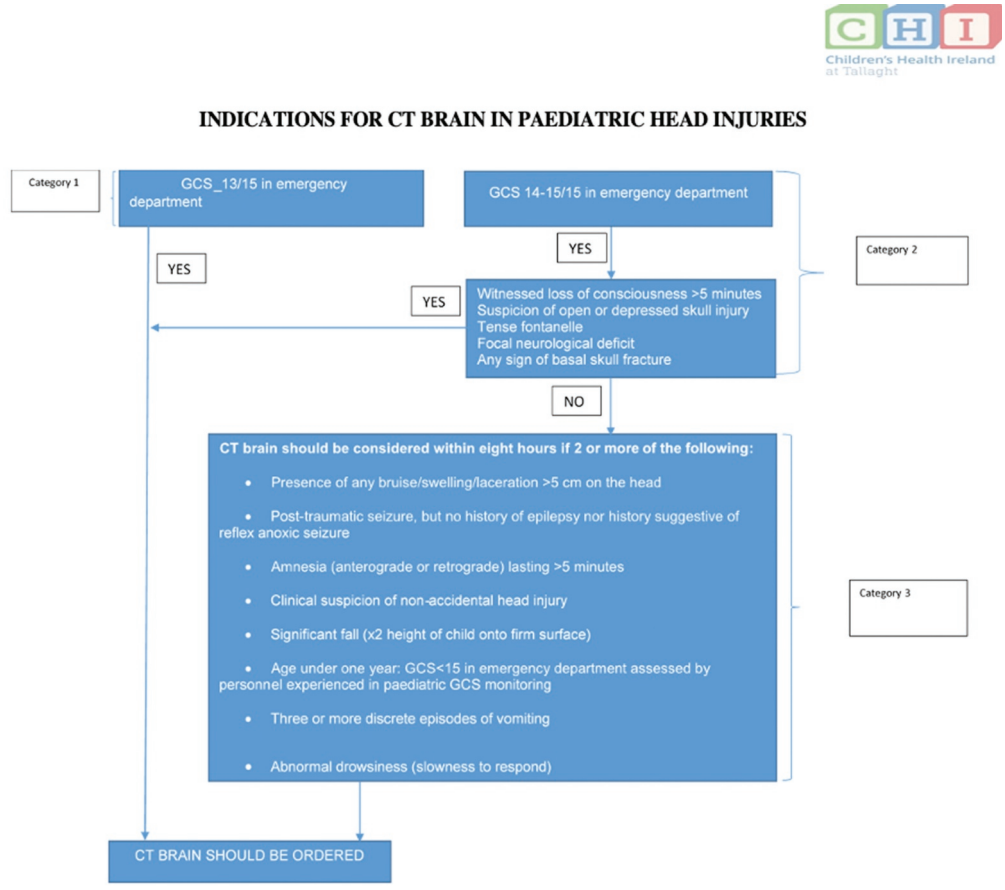
Audit of compliance with the indications of CT head for head trauma patients attending paediatric ED in Tallaght university hospital

Abdelhamid, Ahmed Abdelhamid Abdelgadir[1,2]; Bolger, Dr Turlough[2]; Ryan, Dr Martin[2]; Sweeney, Dr Brian[2]

[1]Naas General Hospital, Ireland; [2]Tallaght University Hospital, Ireland

Introduction: Traumatic brain injury is a leading cause of death and disability in children. As CT scans become readily available, it is of paramount importance that doctors should follow the guidelines for obtaining CT brain for head trauma. Our hospital developed its local guidelines regarding indications for CT brain in trauma patients. This audit aims to measure the compliance of paediatric Emergency Department (ED) doctors in Tallaght university hospital with these standard recommendations. This clinical audit was performed retrospectively and assessed all children with head trauma who have attended paediatric ED in Tallaght university hospital between 1 August 2019 and 1 October 2019 and admitted afterwards (n = 51 patients). These patients were classified into four categories (Figure 1) according to their clinical picture when they have presented and observed in the ED department.

Figure 1.



Method: Fifty-one patients were admitted due to concerns regarding head injury, and their charts were analysed. The mean age of presentation was less than one year, and 53% were males. 19/51 (37.2%) had an indication for CT brain, but 4/19(21%) had no scan requested. ¼ patient subsequently underwent a CT scan as an inpatient at 5 hours post-injury which showed depressed skull fracture and later transferred to neurosurgeons but no intervention needed.

Results: Of the 15 patients who had CT brain indicated and performed in ED, 8/15 (53.3%) had positive findings in their scans. Only one of them was transferred immediately to neurosurgeons and treated conservatively. Seven were referred later to neurosurgery OPD for follow up and no intervention required. There was 1/32 (3%) who had CT brain requested and done without any documented indication. He didn't fulfil the criteria as he had drowsiness and only two vomits. Compliance with the guideline for CT scans was 97% when the scan was not indicated but only 79% when the scan was indicated. Prolonged admission is used in this unit as an alternative to early CT scans in category 3. None of those who had their CT scan withheld or delayed required neurosurgical intervention. This audit indicates the need for more research within the category 3 group to more safely ration the use of CT scanning.

Conclusion: We recommend implementing a visual aid in the form of a poster as well as adding prompts in the CT requesting system which validate the CT request. The aim is to re-audit in a six month period.

ID: 220/OP8: 5

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS

Keywords: osteochondromatosis; c.462dupT mutation; Rib fractures

Hereditary multiple osteochondromatosis or a physical abuse—differential diagnosis

Faustino, Joana; Mendonça, Vanessa; Lopes, Altina; Vilarinho, Laura; Queirós, Gustavo; Paiva, Joana; Gargaté, Luis; Oom, Paulo

Hospital Beatriz Ângelo, Lisbon, Portugal

Introduction: Rib fractures require high energy trauma, being rarely accidental or caused by cardiopulmonary resuscitation manoeuvres. They are often just diagnosed posterior, already in the bone callus phase. In the absence of a plausible explanation or pathology organic as bone, metabolic or tumoral disease are considered highly specific for physical abuse.

Case Study: a 2-year-old male child with a history of suspected physical abuse came with his mother to the Emergency Department because of a chest deformation noted for the first time. On physical examination: atypical facies, adequate height-weight and psychomotor development; no mucous-cutaneous lesions; hollowed chest; concave deformity of the right thoracic grid, between the 4th and 7th ribs. Chest radiography revealed 2 lesions at 4th and 7th ribs and bone callus hypothesis was initially hypothesized, suggestive of osteochondromas. Skeletal radiographic imaging revealed multiple osteochondromas. Later, the mother identified the same lesions in herself and in another sibling which corroborates the imaging diagnosis. The genetic study identified a c.462dupT mutation, in heterozygote on exon 1 of EXT 1 gene, that has not been described to date.

Conclusions: The present case illustrates the importance of recognizing organic pathologies in the diagnosis differential of physical abuse. Multiple osteochondromatosis is a benign tumour pathology that increases susceptibility to pathological bone fractures that can mimic abuse. In the present case, no lesions suggestive of fracture were identified, but the co-existence of physical abuse in a child with bone chronic disease is always a possibility to consider. In fact, months later this child was admitted to our emergency room because of physical abuse.

ID: 270/OP8: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, EMERGENCY PEDIATRICS

Keywords: paracetamol, poison, emergency, toxicology

An audit of paracetamol ingestions in a tertiary paediatric emergency department

Carey, RA[1,2]; Durnin, S[1,2]

[1]Paediatric Emergency Department, CHI at Crumlin, Ireland; [2]Paediatric Emergency Department, CHI at Tallaght, Ireland

Introduction: Ingestions are a common presentation to the paediatric emergency department (ED). During the early stages of the COVID-19 pandemic, there was the perception among the staff of an increase in paracetamol ingestion presentations. Paracetamol ingestions range from accidental ingestions in small children to deliberate self-harm. The current guidance used in Irish paediatric EDs is to take blood samples at 4-hours post-ingestion for paracetamol levels, liver function tests, a coagulation screen and bicarbonate if the estimated ingestion is 75 mg/kg or

more (1). The aim of this audit was to demonstrate whether blood was being taken unnecessarily in children who did not meet the estimated ingestion threshold.

Method and Sample: Presentations were audited between 27/04/2020 to 29/06/2020 at Children's Health Ireland at Crumlin. All presentations with "ingestion", "Calpol" or "paracetamol" in the triage note were selected. 34 patients were excluded for ingestions that did not involve paracetamol. 21 patients that met the criteria remained.

Results: 21 patients in total presented with paracetamol ingestions. The average weight of a child presenting was 24.8 kg and the average dose ingested was 168.66 mg/kg. Altogether 3 patients (14%) presented with estimated ingestions of less than 75 mg/kg, and of these 2 patients had blood taken. One patient was administered activated charcoal in the ED. Three patients in total were admitted, one for the administration of N-Acetylcysteine and two for observation and safety concerns.

Conclusions: When children present to the ED, estimation on the maximum amount ingested is always calculated, often an overestimation. Of the audited sample, 3 patients did not meet the criteria for phlebotomy, but 2 had phlebotomy performed. In order to address inappropriate phlebotomy, these results have been highlighted to the department and will be included in clinical induction for NCHDs going forward. It would be pertinent to re-audit practices again in 6 months time to check for increased compliance.

ID: 261/OP8: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY

Keywords: Diabetes, Libre, Glucose, HbA1C, FGMS

Two years post-introduction of centrally-funded Flash Glucose Monitoring in Paediatric Type 1 Diabetes: A regional centre's experience

Carey, RA[1]; Costigan, CS[1]; Dunworth, N[1]; Norris, M[1]; O'Gorman, CS[1,2]; Neylon, OM[1,2]
[1]Department of Paediatrics, University Hospital Limerick, Ireland; [2]Graduate Entry Medical School, University of Limerick, Ireland

Background: The FreeStyleLibre Flash Glucose Monitoring System (FGMS) continuously measures the glucose concentration in the interstitial fluid. It was approved under the Community Drug Scheme in Ireland from 1 April 2018 for all children ≥4 years with Type 1 Diabetes (T1D) using intensive insulin regimens. We explored the effect of FGMS introduction on our paediatric clinic cohort, including engagement of patients with technology, compared to the rest of our patient cohort who did not opt to use FGMS.

Methods: Over a two year period, HbA1c at quarterly intervals from 3 months pre to 24 months post introduction of the FGMS were examined. Data was extracted from "Libreview".

Results: Of 235 patients, 108 patients (46%) commenced using FGMS; 58 (54%) male and 50 (46%) female. Thirty-two (30%) were using continuous subcutaneous insulin infusion (CSII) and 76 (70%) injectable regimes. Mean HbA1c in the cohort initially improved across the study period from 8.2 ± 1.1% at 3 months prior to 7.6 ± 0.9% at 9 months post-initiation, but had reverted to 8.4 ± 0.8% at 2 years(FGMS) Vs 8.2 ± 1.5% in the non-FGMS cohort (p = 0.4). Technology engagement increased, with 34 downloading data at 1 year and 52 (48%) at 2 years. Scans per day increased from 6.0 to 7.1 (p = 0.42) and percentage usage increased from 55% to 63% (p = 0.22)

Conclusions: Improvement was demonstrated initially in mean HbA1c over time, however, no difference was demonstrated in HbA1c of cohorts at 2 years post-initiation. Engagement with uploading data was initially low. This increased during "lockdown" although didn't translate to improved glycaemic control.

Session

OP9: Oral Presentations (OP-9)

Time: **Saturday, 5 December 2020**: **9:00—10:00**	*Location*: **Virtual**

Presentations

ID: 177/OP9: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: EMERGENCY PEDIATRICS

Keywords: Trauma, quad bikes, rural, ATVs

All-Terrain Vehicle Trauma in children, the devastating trends of preventable trauma

Connell, James Thomas[1,2,3]

[1]Department of Otolaryngology, Modbury Hospital, Adelaide, South Australia; [2]Women's and Children's Hospital, Adelaide, South Australia; [3]University of Adelaide, Adelaide, South Australia

Background: All-Terrain Vehicles (ATV's) or "Quad bikes" are a popular utility designed for transport and agriculture. As their utilization has increased, so too has morbidity and mortality. ATVs are now the leading cause of unintentional farm-related death in Australia. Children are significantly over-represented in mortality statistics. This trend is escalating despite unanimous advocacy against children operating ATVs.

Methods: The Women's and Children's Hospital in Adelaide is the primary tertiary institution for paediatric trauma in South and Central Australia. We undertook a 7-year cohort series examining all incidents of quad bike trauma treated between 2009–2015.

Results: 47 children sustained 111 injuries. Mean age was 10 years, 0 months. 5 children were below the age of five. 5 children sustained head injuries and 4 children had an ISS >15. Helmet use was 43.33% and adult supervision was 52.5%. The majority of cases occurred in rural regions (82.5%), on private property (91.1%) undertaking recreational activity (100%.)

Conclusions: Children are overrepresented in quad bike trauma statistics and the burden is rising. Poor compliance with safety recommendations, helmet use, training, inappropriate use of vehicles and lack of supervisions are all significant contributors. Promoting cultural change and education is imperative to curtail further tragedy.

ID: 125/OP9: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, HEALTH ECONOMICS & MANAGEMENT, COVID-19

Keywords: Covid, General Anaesthesia, Consent Forms, Informed Consent

Clinical audit: Obtaining consent for paediatric patients undergoing procedures under general anaesthesia in the Oral and Maxillofacial Surgery unit at a District General Hospital

Loh, Melissa[1]; Acharya, Sandeep[2]; Fleming, Katharine[2]
[1]Wirral University Teaching Hospital; [2]Countess of Chester Hospital

Background: Exodontia is one of the most common hospital procedures in children. Due to issues with compliance, treatment is sometimes carried out in paediatric patients under sedation or general anaesthesia (GA). GA has numerous risks and can even be fatal. It is important that paediatric patients are only undergoing GA when necessary, and that their parents/guardians have consented appropriately. Health inequalities exist across the United Kingdom. The water is not fluoridated in Chester, in the North West of England. This puts patients at greater risk of developing dental caries compared to areas with water fluoridation. Dental caries is a common reason for dental extractions in children. Obtaining valid informed consent is paramount in dentistry. One way to ensure that valid informed consent is obtained is via ensuring consent is obtained prior to the procedure date and then re-checking consent on the procedure date.

Method: National guidelines advise that consent forms are signed prior to the procedure date. A two-cycle audit was conducted at the Oral & Maxillofacial Surgery (OMFS) unit at the Countess of Chester Hospital. The standard was set that 100% of consent forms for paediatric patients undergoing procedures under GA were signed prior to the procedure date. The initial cycle of the audit was undertaken, and patient case notes were reviewed. The data was collected and analysed, and findings were presented at a departmental meeting. A second cycle was then completed.

Results: In the initial cycle, the case notes of 100 patients were reviewed, and consent forms for 99.0% (n = 99) of patients were signed prior to the procedure date. For the second cycle, only 22 patients' case notes were reviewed, and the percentage of consent forms signed prior to the procedure date dropped to 90.9% (n = 20). The 100% target was not met in either cycle.

Discussion: Dental extractions for paediatric patients are common in OMFS units. This audit demonstrated that the majority of paediatric patients were consented prior to their surgery date, however, the 100% target was not met. There was a large reduction in sample size for the second audit cycle. This reflects the impact of COVID-19. Non-urgent theatres and clinics were cancelled, and members of staff were given new roles as part of the Trust strategy to combat COVID-19. Clinicians should have awareness of national guidelines to ensure the process of obtaining valid informed consent is followed.

ID: 151/OP9: 3

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, DERMATOLOGY

Keywords: Anaphylaxis, Exanthem, Parvovirus B19, Pediatric rash

Parvovirus B19 infection with atypical anaphylaxis presentation in an immunocompetent asthmatic and eczematic child: Case report

Elshareif, Tamara Jamal[1]; Odeh, Abeer Omar[1]; Hassan, Manasik Kamil[1,2]
[1]Hamad Medical Cerner; [2]Weill- Cornell Medical College, Qatar

Introduction: We are reporting an atypical case presentation of human parvovirus B19, which is an uncommon finding with scarce similar literature. The presentation didn't include the

typical self-limiting "slapped cheek" facial rash, but rather it presented with initial bilateral subconjunctival haemorrhage and periorbital oedema. Along with diffuse erythematous urticarial rash starting on the face then extending to the trunk and limbs for 3 days. Disease intensity continued to increase, till the development of difficulty breathing and ending in an anaphylactic reaction.

Case Study: This was seen in a 12-year-old immunocompetent asthmatic and eczematic child, where the entire illness course was over 10 days, with 8 days of hospital admission. The child required treatment with IV corticosteroids and antihistamines. The diagnosis was reached through Blood PCR positive for Parvovirus B19.

ID: 200/OP9: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ALLERGY, IMMUNOLOGY & RESPIRATORY

Keywords: pneumonia, viruses, vaccine, hospital, x-rays, rhinovirus, RSV

Role of viral pathogens in hospitalized children with community-acquired pneumonia in Qatar

Darwish, Shereen; Hassan, Manasik K.; Ismail, Zeinab; Soliman, Aly; Varughese, Aji; Al-Naimi, Amal; Alhammadi, Ahmed

Hamad Medical Corporation, Qatar

Background: Community-acquired pneumonia (CAP) is the leading cause of childhood morbidity and mortality globally. The goals of this study were to determine the most common viruses associated with CAP in hospitalized children and to identify the risk factors associated with pediatric intensive care unit (PICU) admissions.

Methods: A cross-sectional single institutional retrospective study was performed at Hamad Medical Corporation, a major tertiary hospital in Qatar. It included children admitted with CAP from Dec 2017 to Dec 2019 and analyzed the demographic characteristics of the patients, their symptoms, complications, and lengths of hospital stay in relation to the viruses detected via molecular assays of nasal secretions.

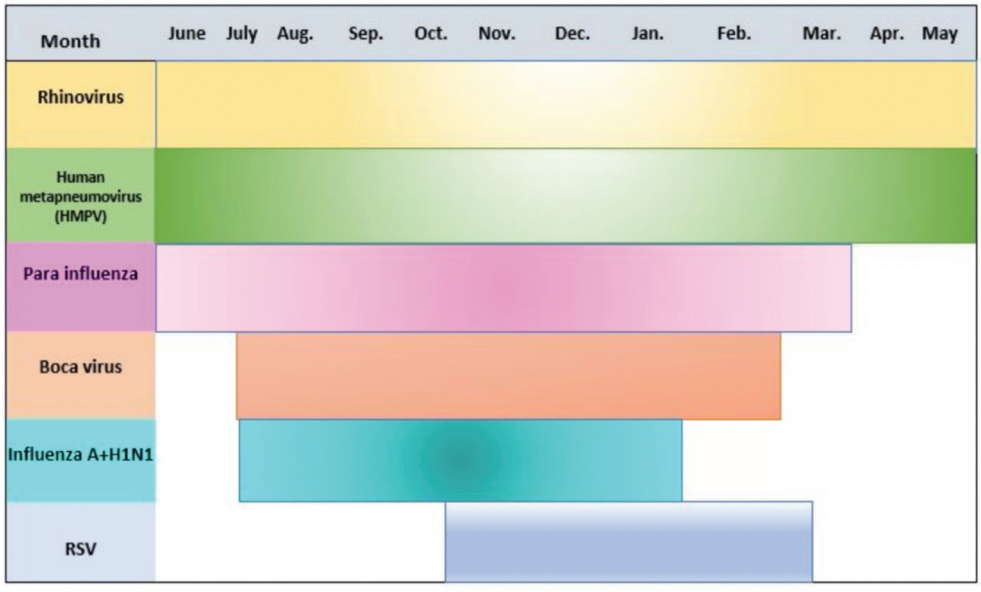
Results: A total of 260 children, hospitalized with CAP, between the ages of 3 months to 14 years with a mean age of 4 years were included. 234 of the patients had PCR nasal swabs done of which 198 (81.5%) tested positive for a virus. Single viruses were isolated in 137 patients whereas multiple viruses were isolated in 61 patients. The most common virus isolated was rhinovirus 78 (28%). Fever was the most common symptom which presented in 193 patients (97%) followed by cough in 190 patients (95%). The most common findings on chest x-rays (which were done on 98% of the patients) were infiltrates found in 92 patients (39%) followed by consolidation found in 82 patients (35%) (Figure 1 and Figure 2–200). Out of the 96 patients (48%) who needed respiratory support, a nasal cannula was the most used on 68 patients (70%). Antibiotics were used in 188 patients (94%) with a median hospital stay of 7.7 days among the hospitalized patients with CAP. The virus that was most commonly associated with PICU admissions (49 PICU admissions (20%) among 234 children who had a nasal swab) was H1N1 influenza particularly in children with cerebral palsy, history of prematurity, and asthma. Out of the 198 admitted patients, only 6 had previously received the flu vaccine.

Conclusion: Our study reveals that rhinovirus is the most common viral aetiology in hospitalized children with CAP regardless of seasonal variation. This finding contrasts with a previous report from WHO in which RSV was the most frequently isolated virus, especially during wintertime. H1N1

Figure 1. Results

Pathogens	Rhinovirus	RSV	HMPV	Boca	Para influenza	Influenza A	Mixed viruses
Variable/number	N= 78	N= 40	N= 29	N= 27	N= 25	N= 22	N= 139
Hospitalized cases, number (%)	42 (21%)	30(15%)	15 (7%)	7 (3%)	7 (3%)	13(6.5%)	61(30%)
Presence of Cough (100%)	42 (100)	26(86)	15 (100)	3 (45)	7 (100)	13 (100)	56 (91)
Fever	41 (99)	28 (93)	15 (100)	7 (100)	7 (100)	12 (92)	60 (99)
Tachypnea	20 (50)	19 (63)	15 (100)	7 (100)	7 (100)	10 (76)	45 (75)
Crackles	26 (51)	16 (30)	14 (93)	5 (71)	5 (71)	9 (69)	45 (75)
Nasal congestion	11 (26)	13 (43)	11 (73)	6 (85)	6 (85)	8 (61)	38 (60)
poor feeding	37 (88)	27 (90)	12 (80)	7 (100)	7 (100)	3 (23)	39 (63)
wheeze	13 (30)	14 (46)	4 (26)	7 (100)	3 (45)	2 (15)	19 (31)
pallor	3 (7)	3 (1)	3 (2)	5 (71)	2 (18)	1 (7)	2 (3)
Sore throat	0 (0)	2 (0.8)	1 (1)	0	0	1 (7)	4 (6)
otitis media	2 (4)	3 (1)	0	0	1 (1)	0	6 (9)
chest indrawn	11 (26)	13 (43)	13 (85)	0	5 (71)	6 (46)	29 (29)
pO2 <94%a	11 (26)	14 (46)	11 (73)	6 (85)	0	8 (61)	30 (30)
Chest X ray taken	42 (100)	29 (99)	15(100)	7 (100)	7 (100)	12 (92)	60 (99)
consolidation	10 (20)	15 (30)	9 (64)	2 (18)	3 (45)	9 (64)	19 (22)
hyperinflation	7 (14)	3 (1)	4 (28)	5 (71)	2 (18)	3 (21)	8 (9.3)
plural effusion	6 (12)	4 (1.5)	1 (1)		1 (1)	1 (7)	11 (12)
infiltrate	26 (53)	10 (33)	0		1 (1)	1 (7)	40 (46)
Mean hospital stay (day)	8 days	7 days	9.4days	7.4days	5.4days	12 days	6.7 days

Figure 2. Seasonal variations of the common single viruses



influenza virus also plays a major role in PICU admissions. Increased awareness of and adherence to the annual influenza vaccine may reduce the complications and morbidities associated with CAP in children.

ID: 172/OP9: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS

Keywords: partially hydrolysed protein, growth, healthy infants, infant formula, safety

The effects of partially hydrolysed whey protein on growth in healthy infants: a double-blind, randomized, controlled trial

Karaglani, Eva[1]; Thijs-Verhoeven, Inge[2]; Gros, Marjan[2]; Hofman, Denise[2]; Manios, Yannis[1]
[1]Dept. Of Nutrition & Dietetics, School of Health Science & Education, Harokopio University, Athens, Greece; [2]FrieslandCampina, Stationsplein 1, 3818 LE Amersfoort, the Netherlands

Background: Partially hydrolysed whey protein-based infant formulae (PHF) may reduce the risk of developing allergic manifestations during the first months of life when breastfeeding is not possible. From 2021 onwards, the use of protein hydrolysates in infant formulae will only be allowed if the composition of the PHF complies with Commission delegated Regulation (EC) 2016/1271 ánd is considered to be safe and suitable by the European Food Safety Authority (EFSA).

Aim: The purpose of this clinical trial was to confirm safety and suitability of a PHF by assessing the weight gain (primary) and other anthropometric indices (secondary) of infants exclusively consuming the aforementioned test formula in comparison to infants exclusively consuming a standard intact protein formula (IPF).

Methods: 163 healthy, exclusively formula-fed infants (aged 55–80 days) were enrolled in a double-blind, randomized, controlled trial. They were randomized to receive either the PHF (test group) or the IPF (control group) for three months, during which their growth and anthropometric indices were assessed monthly. Both formulae were produced at the same production facility. 142 infants completed the study (72 test, 70 control), while 21 infants (11 test, 10 control) discontinued the study. Primary and secondary outcomes were analysed using an analysis of covariance (ANCOVA) adjusted for the following potential confounding factors: baseline anthropometry, sex, antibiotic use, illness (independent of formula), smoking in the home environment, birth weight, maternal pre-pregnancy body mass index (BMI), father's current BMI, existence of gestational diabetes and whether this was treated, and average formula intake. All analyses were performed for both the PP and ITT populations.

Results: Statistical analyses revealed no differences in weight gain during the three-month intervention period between both groups ($p = 0.637$). With respect to the secondary anthropometric parameters (i.e. weight, length, head circumference, BMI and associated z-scores), no differences were observed between the two groups at any time point. Overall group z-scores were in the normal range based on WHO growth standards at all time points.

Conclusion: Consumption of the PHF resulted in similar growth outcomes as the standard IPF. Furthermore, overall observed group z-score indices were within the normal range of the WHO growth standards. Based on these results, it can be concluded that the tested infant formula with partially hydrolysed whey protein is safe and suitable to support normal growth in healthy and term infants.

ID: 202/OP9: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: INFECTIOUS DISEASES

Keywords: Neurocysticercosis, seizure

First epileptic seizure—guided by the land

Banganho, Denise; Henriques da Silva, Diana; Oliveira, Inês; Silva, Ana
Serviço de Pediatria, Hospital de São Bernardo, Centro Hospitalar de Setúbal, Portugal

Background: Neurocysticercosis (NCC) is a major cause of pediatric epilepsy in the tropics and the most common central nervous system parasitosis worldwide. NCC is rare in Europe, so its diagnosis requires a high degree of suspicion. In developed countries, it is mainly seen in immigrants from endemic areas. NCC has pleomorphic manifestations depending on the location, number and viability of the cysts.

Case Study: A previously healthy 4-year-old boy, natural from Cape Verde, presented in the emergency room after a first generalized tonic and clonic epileptic seizure during sleep. On examination, he was apyretic and showed no neurological abnormalities. Due to migration from an endemic area of NCC, we performed a cranial computed tomography that revealed a left parietal hypodense nodular lesional area surrounded by peripheral oedema with a reduction in the permeability of the regional cortical grooves and hypodense nodular lesions in left temporal and right parietal lobes, without regional oedema. Blood, cerebrospinal fluid and stool tests showed no abnormalities. EEG showed no epileptic activity. MRI disclosed a small nodular formation of 5 mm, with hyposignal in T1 and FLAIR, hypersignal in T2 in the left parietoocipital region, just-cortical, with an area of oedema showing peripheral annular gadolinium enhancement. Ophthalmologic and cardiac evaluations showed no alterations. Although the serological test by enzyme-linked immunoelectrotransfer blot (EITB) assay was negative and in cerebrospinal fluid parasite DNA detection was also negative, we made a presumptive diagnosis of NCC due to the country-of-origin, suggestive presentation and imaging results. He completed a two-week course of albendazole and dexamethasone with no complications.

Conclusion: NCC should be included in the differential diagnosis of patients with seizures and no other neurological signs or symptoms, especially if coming from endemic countries. Available diagnostic tools are not sufficiently accurate in some cases and as a consequence, a definitive diagnosis based on Del Brutto's criteria cannot always be reached.

ID: 248/OP9: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS, PUBLIC HEALTH

Keywords: inequality, health, dental, caries, fluoride

Are children at risk of dental caries receiving appropriate management? A review conducted at a General Dental Practice in the United Kingdom

Acharya, Sandeep
Woodchurch Dental Practice, Birkenhead, UK

Background: Health inequalities exist across the United Kingdom, and health is affected by factors including socioeconomic status and levels of deprivation. In the most deprived areas of England, children are more likely to suffer from dental caries. There are numerous risk factors for dental caries and other oral diseases. Research from the Adult Dental Health Survey (2009) found that in the North West of England, dentate patients are more likely to have plaque and calculus. Amounts of plaque and calculus act as indicators of quality of oral hygiene and poor oral hygiene increases the likelihood of developing an oral disease. "Delivering better oral health: an evidence-based toolkit for prevention" (DBOH) published in 2014 by Public Health England and the Department of Health, provides numerous recommendations for the prevention of oral disease. A review was undertaken at a General Dental Practice in Birkenhead, North West England, to investigate whether

paediatric patients were receiving appropriate preventative management for dental caries, in line with guidance published in DBOH.

Methods: A retrospective case note review was conducted on new patient examinations over a three-month period. All non-paediatric patients were excluded. A data collection table was used to record whether the caries risk of the paediatric patients was recorded, what the caries risk was, and whether topical fluoride varnish was applied. The results were analysed, and findings were then discussed at a practice meeting.

Results: There were 120 patients who attended for new patient examinations over the three-month period. Of these patients, 10% (n = 12) were children. All paediatric patients received a caries risk classification. Of these patients, 58.3% (n = 7) were classified as low risk, 16.7% (n = 2) were moderate risk and 25% (n = 3) were high risk for dental caries. One-hundred percent (n = 12) of paediatric patients received an application of topical fluoride varnish for the prevention of dental caries.

Discussion and Conclusions: This study shows that dentists at this General Dental Practice were compliant with DBOH guidelines. All paediatric patients received topical fluoride applications.

This is key as prevention is important to decrease the risk of paediatric patients developing dental caries. Focusing on prevention can also help tackle health inequalities that exist in the United Kingdom. Further review is necessary to ensure continued compliance with guidelines.

Session

OP10: Oral Presentations (OP-10)

Time: **Saturday, 5 December 2020**: **10:00—11:00**	*Location*: **Virtual**

Presentations

ID: 211/OP10: 1

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, RARE DISEASES, ENDOCRINOLOGY

Keywords: Adrenal insufficiency; Adrenoleukodystrophy; Demyelinating diseases; Peroxisomal disorders

Adrenoleukodystrophy—the clinical spectrum of a Portuguese tertiary hospital

Mosca, Sara[1]; de Carvalho Vaz, Ana[2]; Matos de Figueiredo, Catarina[3]; Garrido, Cristina[4]; Borges, Teresa[1]; Correia, Joana[5]

[1]Pediatric Endocrinology Unit, Department of Pediatrics, Centro Materno-Infantil do Norte, Centro Hospitalar Universitário do Porto, Portugal; [2]Department of Pediatric, Unidade Local de Saúde de Alta Minho, Viana do Castelo, Portugal; [3]Department of Pediatrics, Centro Hospitalar Entre Douro e Vouga, Santa Maria da Feira, Portugal; [4]Neuropediatrics Unit, Department of Pediatrics, Centro Materno-Infantil do Norte, Centro Hospitalar Universitário do Porto, Portugal; [5]Inherited Metabolic Disorders Unit, Department of Pediatrics, Centro Materno-Infantil do Norte, Centro Hospitalar Universitário do Porto, Portugal

Background: Adrenoleukodystrophy is a rare genetic disorder linked to the X chromosome (X-ALD) that affects primarily males. It results from mutations in the gene ABCD1, responsible for transporting very-long-chain fatty acids (VLCFA) into peroxisomes in order to promote their degradation by oxidation. It leads to adrenal insufficiency and axonal demyelination as a consequence of VLCFA accumulation in tissues and body fluids. The most common forms of presentation include learning and behavioural problems, cutaneous hyperpigmentation and/or muscle weakness. The clinical spectrum in males with X-ALD ranges from isolated adrenocortical insufficiency and slowly progressive myelopathy to cerebral demyelination (CALD). The main objective was to describe patients with different phenotypes of X-ALD currently followed at a tertiary Portuguese hospital.

Case Study: All four patients with X-ALD were male and the median (25th-75th percentile, P25-P75) age at the diagnosis was 5 (3–12.5) years. Nonetheless, in one patient, the initial manifestation (adrenal crisis) was presented five years earlier but the definitive diagnosis was only achieved with additional learning and behavioural problems development. Three patients were diagnosed after the family screening, although the oldest already presented hyperpigmentation. After complementary investigation, all had primary adrenal insufficiency and elevated levels of plasma VLCFA. Two variations of the disease were reported, adolescent CALD in one (25%) and three cases (75%) of primary adrenal insufficiency only. The genetic assessment presented a mutation in ABCD1 gene, which confirmed the X-ALD diagnosis in all patients. Currently, all patients undergo hydrocortisone treatment and the median (P25-P75) follow-up period is 6 (6–10) months.

Learning Points Discussion: The X-ALD is an uncommon neurodegenerative disease that requires early diagnosis for a better prognosis. The clinical presentation of ALD is highly variable and without an accurate diagnosis, it will continue to spread and the diagnosis will continue to remain unknown. Screening for X-ALD with a VLCFA panel should be strongly considered in male children with primary adrenal insufficiency, especially after excluding the most common causes or when learning difficulties are also present. Confirmation of a genetic diagnosis of X-ALD can be especially useful for a patient's family as genetic testing enables detection of pre-symptomatic female heterozygotes who can then be offered prenatal testing to avoid transmission of the disease to male offspring.

ID: 227/OP10: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY

Keywords: MMP-1, Leptin, IL-6, breastmilk

Breastmilk MMP-1, Leptin, IL-6 and fatty acid levels and their association with infant growth

Atan Sahin, Ozlem Naciye[1]; Ozpinar, Aysel[2]; Serdar, Muhittin[2]

[1]Acibadem University School of Medicine, Department of Pediatrics, Turkey; [2]Acibadem University School of Medicine, Department of Clinical biochemistry, Turkey

Background: Breastmilk cytokines exert diverse effects on different tissues. However, it remains largely unknown how breastmilk IL-6,MMP-1, leptin and fatty acid levels contribute to infant adiposity(1). MMP-2 activation in the hypothalamus has been found to cleave leptin receptors domain and impair leptin-mediated satiety signalling (2). Chronic low-grade inflammation has been linked to contributing to leptin resistance (3,4,5,6). In our recent study, we demonstrated that maternal omega use during gestation would modify breastmilk IL-6, MMP-1 levels which take part in metabolic programming(7). In this study, we aimed to find a possible association between breastmilk levels of IL-6,MMP-1, leptin, fatty acids and infant adiposity.

Methods: 41 lactating women and their healthy infants were involved in the study. Breast Milk Leptin, IL-6 and MMP −1 were measured by ELISA and breastmilk fatty acids were measured by

GC-FID. Infants growth parameters including 6-9-12-18-and 24 months weight, height and head circumference were documented from their files. Spearman and Pearson tests were used for correlation analysis.

Results: There was a significant correlation between breastmilk IL-6 and infant weight at two years old (r = −0,033, p < 0,05).

Conclusions: Infant adipose cells reach their maximum number around two years old. Accordingly targeting breastmilk IL-6 levels may significantly be a promising strategy for the prevention of future obesity, which needs to be studied further.

ID: 201/OP10: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY

Keywords: Type 1 diabetes, school, school staff

Evaluation of teacher´s knowledge about type 1 diabetes and usefulness of educational sessions

Banganho, Denise; Brito, Teresa; Teles, Hugo; Moreira, Biana; Pereira, Catarina; Parente, Susana; Freixo, José

Serviço de Pediatria, Hospital de São Bernardo, Centro Hospitalar de Setúbal, Portugal

Background: The increase in the incidence of type 1 diabetes (T1D) in pediatric age (3–4%/year) has led to an increase in the number of insulin-dependent children in school. Some school activities such as exams and physical activity are associated with an increased risk of acute complications requiring strict surveillance by school staff. Given the long period children remain in school, training of the school staff is extremely important for achieving good metabolic control, given the need for basic knowledge of the condition and some complex technical procedures.

Aim: The objective of this study was to evaluate the teacher's knowledge regarding T1D, identify the main difficulties and to carry out training sessions.

Methods: A questionnaire was done to assess the knowledge of T1D by the school staff. Based on the results obtained, several practical and theoretical training sessions were performed. At the end of the training sessions, the same test was applied again and results analyzed.

Results: Forty-seven teachers were tested, most of them from basic education (47%, n = 22) and mostly aged 40–50 years (45%, n = 21). The global average of grades in the 1st test was 38%. Although 36 teachers said they had students with T1D, the average grade verified was similar to the global average and only 36% of them said they knew how to administer insulin. About 42% of respondents considered T1D a chronic condition manifested by low blood glucose levels. Erroneous feeding was considered a precursor of T1D by 21% of respondents. About 30% of teachers considered that T1D children shouldn't eat the same meals as their colleagues. The identification of carbohydrates in meals was a difficulty found in 34% of the respondents. About 94% were unaware of the glycemia value considered as hypoglycemia, 63% were unaware of the symptoms associated with it and 43% of its correction scheme. Regarding physical exercise, 89% stated that high competition sport should not be practised by diabetic children. The lack of knowledge about sick days management was found in 18% of respondents. In the 2nd test, a significant increase in the classification of the tests was verified, with an average of 65% of correct answers.

Conclusions: Overall, we could see a marked improvement in the results on the 2nd test, concluding the training about DM had a very positive impact on teachers' knowledge about the disease. This intervention contributed to better support of students with DM in schools.

ID: 170/OP10: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ENDOCRINOLOGY

Keywords: FGF23, left ventricular hypertrophy, left ventricular ejection fraction, end-stage kidney disease, dialysis

High fibroblast growth factor 23 as a biomarker for severe cardiac impairment in children with chronic kidney disease: a single tertiary centre study

Sekali, Debora Roselita Karo[1]; Palupi-Baroto, Retno[2]; Hermawan, Kristia[2]; Murni, Indah Kartika[2]; Nurlita, Tiara[2]; Prihastuti, Yuli[2]; Ambarsari, Cahyani Gita[1]

[1]Department of Pediatrics, Faculty of Medicine Universitas Indonesia—Cipto Mangunkusumo Hospital, Jakarta, Indonesia, Indonesia; [2]Department of Child Health, Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada/Dr. Sardjito General Hospital, Yogyakarta, Indonesia

Background: Left ventricular hypertrophy is the most common cardiac abnormality in chronic kidney disease (CKD), especially in the pediatric population. The role of fibroblast growth factor 23 (FGF23) is being investigated in CKD-related cardiomyopathy. Previous studies found the increased FGF23 correlates with the decreasing of estimated glomerular filtration rate (eGFR). This study aimed to identify the role of FGF23 in assessing left ventricular hypertrophy (LVH), left ventricular mass index (LVMI), relative wall thickness (RWT), systolic dysfunction, and diastolic dysfunction in children with CKD.

Methods: We conducted a cross-sectional study that involved children aged 2 to 18 years old with CKD stage 2 to 5D in Dr Sardjito General Hospital, Yogyakarta, Indonesia. Level of FGF23 was measured using immunometric enzyme-linked immunosorbent assay. LVMI, RWT, and left ventricular ejection fraction (LVEF) were assessed with echocardiography. Receiver-operating characteristic (ROC) analysis was conducted to assess the diagnostic performance of FGF23 in detecting LVH with impaired contractility.

Results: A total of 43 children with CKD stage 2 to 5D were included, of whom the prevalence of LVH was 95.35%. The AUC of FGF23 as a biomarker for LVH with either impaired systolic or diastolic was 0.87 (95%CI 0.73–0.1), with the cutoff level was 1413 RU/mL: sensitivity 100%, specificity 75.6%. The AUC of FGF23 to assess systolic dysfunction was 0.82 (95% CI 0.64–1; p = 0.02), the optimal cutoff point was 881.92 RU/ml (sensitivity 80%, specificity 60%). The mean concentration of FGF23 increased with the decreasing estimated glomerular filtration, the increasing LVMI, and the increasing RWT, although the systolic and diastolic function were preserved.

Conclusions: FGF23 might be used as an early biomarker to detect cardiac changes in pediatric CKD patients. Additionally, FGF23 has a good diagnostic value of impaired systolic function among children with CKD.

ID: 208/OP10: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ENDOCRINOLOGY, PUBLIC HEALTH

Keywords: obesity, physical activity, school

Increasing Physical Activity and improving obesity rates among children and adolescents at the school: Results from PESCA program´s second year.

Zárate Osuna, Fernando[1,2]; Ramón Krauel, Marta[5]; Martin de Carpi, Javier[3]; Schröder, Helmut[4]; G. Zapico, Augusto[6]; Aznar Laín, Susana[7]; González-Gross, Marcela[6,8]

[1]Quirónsalud Sur and Quirónsalud Toledo Hospitals. Pediatric Department, Spain; [2]Head Coordinator, PESCA program.; [3]Head Pediatric Nutrition, Hepatology and Gastroenterology Department, Hospital Sant Joan De Déu, Barcelona, Spain; [4]Research Networking Center In Epidemiology & Public Health (CIBERESP); [5]Head Pediatric Endocrinology Department, Hospital Sant Joan de Déu. Barcelona; [6]ImFine Research Group, Universidad Politécnica de Madrid; [7]PAFS Research Group, Universidad de Castilla la Mancha; [8]Scientific Manager Exercise is Medicine Spain

Background: Physical Activity (PA) and Nutrition Habits are the two most important factors we can change in order to stop and reverse the pandemic children obesity, globally. Acting on these factors in a transversal and coordinated way involving school, family and physicians, seems to be far more efficient than to work individually in each field. The PESCA program is working in Spain from 2018 providing diagnosis and assessment and introducing tools to improve PA levels and healthy nutrition habits.

Objectives: Main aims of the PESCA program are to ensure diagnosis and to decrease the prevalence of both obesity and overweight rates working through annual individualized recommendations and changes according to each child condition, in a school-based protocol. The target we present now is the measurement of our program outcomes in those children and adolescents who have followed our protocol these two years.

Materials and Methods: Our five-step annual protocol includes: (1) Questionnaire on the child's and family's cardiovascular health data, (2) anthropometric measurements (BMI), assessment of body composition and physical fitness by (3) Bioimpedance and (4) hand dynamometer. We also include (5) physical examination. Once it is completed, each child has his own diagnosis and recommendations on cardiovascular health, focussing on PA and healthy nutrition advice for both school and home times. At the end of the second year, we have completed 1136 protocols in three schools from Madrid and Toledo (618 in the first-year sample and 518 in the second) Figure 1.

Figure 1.

Results: 378 children and adolescents (189 girls, 3 to 16 aged) went through the program twice with a year time lapse in-between. In the first year, the averaged answered sport time was 3 hours and 25 minutes weekly, and we found a prevalence for overweight and obesity of 20.11% and 7.14%, respectively (IOTF standard definition). One year later, the weekly declared sport time was 4 hours and 7 minutes and the prevalence for overweight and obesity decreased to 15.34% and 5.82%, among the same sample. We have observed an improvement of up to 20.11% of the declared weekly sports time and a decrease of prevalence rates for overweight and obesity of 23.72% and 18.49%, respectively.

Conclusions: In our sample, the PESCA program follow up, based on the collaboration of schools, families and physicians working together on prevention, diagnosis and management of obesity, have shown hopeful outcomes from one to another year.

ID: 210/OP10: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, RARE DISEASES, ENDOCRINOLOGY

Keywords: Adrenal Crisis, Endocrinology, Hyperpigmentation, Panhypopituitarism, Pediatrics

Pediatric adrenal insufficiency: thirty years experience at a Portuguese hospital

Mosca, Sara[1]; da Silva Santos, Tiago[2]; Mendes, Catarina[1]; Ribeiro, Luís[1]; Freitas, Joana[1]; Oliveira, Maria João[1]; Borges, Teresa[1]

[1]Pediatric Endocrinology Unit, Department of Pediatrics, Centro Materno-Infantil do Norte, Centro Hospitalar Universitário do Porto, Portugal; [2]Department of Endocrinology, Centro Hospitalar Universitário do Porto, Porto, Portugal

Background: Adrenal insufficiency (AI) is a life-threatening condition caused by impaired secretion of the adrenal glucocorticoid and mineralocorticoid hormones. The forms of presentation differ according to the child's age, but it usually presents nonspecific and insidious symptoms. Classic biochemical signs include hyponatremia, hyperkalemia, hypoglycemia, and ketonemia. The purpose of this study was to evaluate and characterize patients with AI followed in a pediatric endocrinology unit of a tertiary care hospital, specifying its manifestations, aetiology, management and follow-up.

Methods: Retrospective analysis of the clinical records of all patients with adrenal insufficiency followed at the Pediatric Endocrinology Unit in a tertiary care Portuguese hospital over the last 30 years. The following data were gathered for all patients by date of birth, gestational age, family history, age at the first manifestation, age at etiological diagnosis, and clinical presentation (symptoms, signs and laboratory evaluation). We also reviewed information on cognitive/neurological development and school progress.

Results: Twenty-six patients with AI were included; 69% were male, with a median (25th-75th percentile, P25-P75) age of 1 (0.5–36) month at the first presentation and 4.3 (1 month—5 years) years at etiological diagnosis. The diagnostic categories revealed Panhypopituitarism (42%), followed by Congenital adrenal hyperplasia (27%), X-linked Adrenoleukodystrophy (15%), X-linked Adrenal congenital hypoplasia (8%), Addison disease (4%), and one other case with an undetermined aetiology (4%). The most frequent manifestations were vomiting/abdominal pain (87%), weight loss (83%) and asthenia (67%). Upon presentation, 72% of the patients presented with acidosis, hyponatremia (68%) and hypoglycemia (58%). Of those with a clinical indication to perform a cerebral magnetic resonance imaging, almost all (12 out of 14 patients) had abnormal features, namely ectopic neurohypophysis and pituitary hypoplasia. Every patient is being treated with hydrocortisone and 42% are also on fludrocortisone. They were followed for a median (P25-75) period of 4 (1–17) years and approximately 75% continue to be followed at this pediatric

endocrinology unit. Of those patients, 50% presented a delay/compromise when considering neurologic and psychomotor development and academic performance.

Conclusions: Despite medical advances, the diagnosis and management of AI remain a challenge, particularly in children, and clinicians must have a high index of suspicion. Raising awareness and knowledge about the disease, in medical teams and population, about the disease is of crucial importance, as early identification of AI can prevent the potentially lethal outcome, which may result from severe cardiovascular and hemodynamic insufficiency.

ID: 238/OP10: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY

Keywords: Hypoparathyroidism

Hypoparathyroidism in pediatric age: a review of the last 20 years

Banganho, Denise[1]; Cristina, Gago[2]; Brígida, Robalo[3]; Carla, Pereira[3]; Lurdes, Sampaio[3]
[1]Serviço de Pediatria, Hospital de São Bernardo, Centro Hospitalar de Setúbal, Portugal; [2]Serviço de Pediatra, Hospital de Cascais, Portugal; [3]Unidade de Endocrinologia Pediátrica, Serviço de Pediatria, Departamento de Pediatria, Hospital de Santa Maria—Centro Hospitalar de Lisboa Norte, EPE

Background: Hypoparathyroidism is a rare disease characterized by low or no production of parathyroid hormone (PTH) resulting in low calcium and increased phosphate blood. Symptoms are caused by hypocalcemia and include tingling, muscle cramps and seizures. The most common etiologies of the disease are genetic, idiopathic and autoimmune. Conventional treatment includes activated vitamin D and/or calcium supplements.

Aim: Characterize patients with hypoparathyroidism referred to a Pediatric Endocrinology Unit, according to clinical presentation, aetiology, and treatment.

Methods: Retrospective observational study based on clinical records of patients followed at a Pediatric Endocrinology unit for the last 20 years

Results: 11 children were included, 45% male, with a median age at diagnosis of 1,5 years (range from 22 days to 17 years). About 35% of patients were referred from the pediatric emergency department and 18% from ambulatory (one evacuated from Cabo Verde). There was one prenatal diagnosis in a patient with a first-degree relative with DiGeorge syndrome. No consanguinity was found among parents. Clinical presentation was heterogeneous, but mostly with neurological symptoms. In 45% of cases, seizures were the presenting symptom. 18% of the patients were asymptomatic and hypocalcemia and hyperphosphatemia were laboratory findings. In one of these patients, there was a polymalformative syndrome in study, in another a tooth enamel anomaly. No cataracts were identified. At diagnosis, the minimum calcium level was 4.4 mg/dL and ionized calcium 0.66 mmol/L. The maximum phosphate level was 10.5 mg/dL and PTH was lower than 2.5 pg/mL in 36% of patients. Upon presentation, there was no alteration in renal or thyroid function. In 55% of patients, DiGeorge syndrome was diagnosed. In 83% of them, a cardiopathy was identified. In 36% of the patients, the aetiology was unknown. In 73% of patients, calcium gluconate was used and/or in 63% of cases calcium carbonate was preferred. On follow-up there were two cases of nephrocalcinosis; in 73% of patients a developmental delay was identified, and one death occurred, related to this chronic condition.

Conclusions: Hypoparathyroidism is a rare disease and in pediatric age is related mainly with genetic conditions. There is no acquired hypoparathyroidism in this series. Because of the constant need of therapeutic adjustments related to growth, without oral formulations appropriate to

pediatric age it was an entity difficult to manage. Nevertheless, the ongoing expanding investigation respecting unknown etiologies and more efficacious therapy seems very promising.

Session

OP11: Oral Presentations (OP-11)

Time: **Saturday, 5 December 2020**: **9:00—10:00**	*Location*: **Virtual**

Presentations

ID: 130/OP11: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PSYCHIATRY, NEONATOLOGY

Keywords: Neonatal Unit, Parental Wellbeing, Psychological Distress, PTSD, Parental Stress

Assessing psychological wellbeing in parents of infants admitted to the neonatal unit—a pilot study

Harriet O'Mara[1], Margaret O'Rourke[2], Maryanne Ryan[2], Vicki Livingstone[2], Geraldine Boylan[2,3], Eugene Dempsey[2,3]

[1]University College Cork, Ireland; [2]INFANT Research Centre, Cork City, Ireland; [3]Department of Paediatrics and Neonatology, Cork University Maternity Hospital, Cork, Ireland

Background: Admission to the Neonatal Unit (NNU) is a stressful experience for any parent. Psychological distress, including symptoms of Post-traumatic Stress Disorder (PTSD), have short and long-term consequences for both the parent and infant. Identifying those at risk of developing PTSD, and understanding the contributing factors, will help build interventions and improve psychological wellbeing.

Aim: To assess the psychological wellbeing of parents of infants admitted to the NNU

Method: A prospective cohort study was designed in which 174 parents (51 fathers, 122 mothers), with an infant admitted to the NNU, completed a questionnaire. This included: socio-demographic factors, psychological and physical wellbeing (quality of life, sleep, diet and alcohol consumption), the Perinatal-Posttraumatic Stress Disorder Questionnaire (PPQ) and Parental Stressor Scale: NICU (PSS: NICU).

Results: Only 8% (n=14) of parents had PPQ scores greater than 19 and were considered high risk for developing clinically significant PTSD. Mothers had significantly higher PPQ scores ($p = 0.002$) compared to fathers. Mean parental stress, travel time to the NNU, total number of behavioural, psychological and physical symptoms were all positively correlated with PPQ scores. Parents who reported poor quality life, diet and sleep had significantly greater post-traumatic symptomatology. Of these, overall parental stress ($p < 0.001$), total behaviours ($p < 0.002$), travel time to NNU ($p = 0.04$) and self-rated quality of diet were significant risk factors for greater post-traumatic symptomatology.

Conclusions: Significant psychological distress was identified amongst both mothers and fathers of infants admitted to the NNU, irrespective of socio-demographic factors and gestational age. Parental stress experienced in the NNU, increased stress-related behaviours and increased travel

time to the NNU were significant risk factors for clinically significant PPQ. This suggests that interventions should focus on reducing parental stress associated with the NNU, and facilitating parents who may have increased stress due to living further from the NNU

ID: 191/OP11: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: NEONATOLOGY

Keywords: Bilious vomiting, Neonates, Surgery, Radiology

Bilious Vomiting in Neonates- do we recognise it and what does it mean?

Mauree, Priya Renuka; Athiraman, Naveen; Hosie, Gareth; Mcdonald, Leigh
Great North Children's Hospital, United Kingdom

Introduction: Bilious vomiting in a neonate can be a sign of intestinal obstruction. The literature reports that around 30–40% of bilious vomiting in neonates is due to intestinal obstruction. The main differentials include duodenal atresia, midgut malrotation and volvulus, jejunoileal obstruction, meconium plug and infection like necrotising enterocolitis and ileus secondary to infection. Bilious vomiting, therefore, warrants urgent surgical review and intervention. In the UK, the neonate requires a transfer to the tertiary unit with surgical facilities for review and further management. This would also require the neonatal transport team and a surgical bed at the tertiary centre.

Aim: To identify the total number of neonates who required transit radiological investigations at our tertiary hospital after presenting with bilious vomiting and the proportion of infants requiring surgical intervention. To analyse the staff's understanding of bilious vomiting.

Methods: Every infant <3 months who had a transit radiological investigation (ie Barium swallows and follow-through, water-soluble swallows and follow-through, barium enema or water-soluble

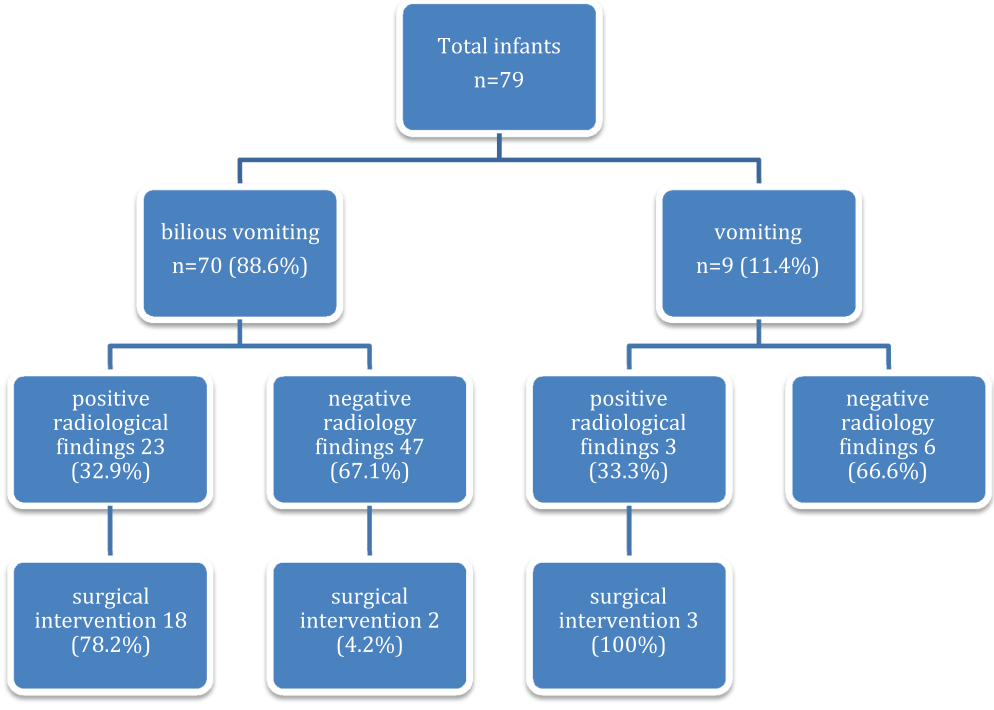


Figure 1. Infants presenting with bilious vomiting and presence of positive radiology findings, as well as requirement for surgical intervention.

enema) were identified from the radiology database for a period of 6 years (2010–2016). Clinical data were collected from patient notes and discharge letters. The analysis was on Microsoft excel. A short survey was sent to all staff working in paediatric surgery, paediatrics, neonates and obstetrics at GNCH (Great North Children Hospital).

Results: (Figure 1–191): A total of 79 infants were identified, 39 infants were transferred in from peripheral hospitals. 23 (32.9%) infants with bilious vomiting had positive radiological findings, of which 78.2% required surgical intervention. 4% required surgery in the group who had negative radiological findings. A total of 274 responses were obtained from the survey. 59% was the highest positive response in identifying bile.

Conclusions: About one-third of infants with bilious vomiting required surgical intervention which is similar to literature around the subject. Hence, infants with bilious vomiting need an urgent review and need to be transferred as time-critical from peripheral units. The survey showed that around 40% of staff showed a lack of awareness of how bile looks like. The survey results showed that there is a requirement for further training and teaching on bilious vomiting.

ID: 217/OP11: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: NEONATOLOGY

Keywords: preterm, protein, clinical trial, fortifier

Growth of preterm infants receiving a new protein fortifier by two individualized fortification regimens according to blood urea nitrogen or weight: a randomized trial in France

Picaud, Jean-Charles; Chen, Yipu; Hartweg, Mickael; Hays, Nicholas; Buffin, Rachel

Nestle, Switzerland

Background: To improve the nutritional management of preterm infants, a new extensively-hydrolyzed protein-only fortifier (PF) was developed to be used in conjunction with the standard human milk fortifier (HMF). The study objective was to evaluate weight gain of preterm infants receiving the PF under two individualized HM fortification regimens according to blood urea nitrogen (BUN) or body weight.

Methods: Clinically stable preterm infants 23–32 weeks gestational age with birth weight(BW) ≤ 1500 g and tolerating feeds of 150–160 mL/kg/day were enrolled from a neonatal unit in France. During study days(D)1–5, infants received feeds fortified with a standard HMF. On D5, these infants were randomized to receive BUN- or weight-driven adjustable protein fortification with PF, in addition to standard HMF, for ≥21 days until discharge. The primary aim was to demonstrate non-inferiority (NI margin = −2.5 g/d) of weight gain in the BUN-driven vs. weight-driven group. Secondary aims were to compare weight, length and head circumference (HC) gains in all subjects during PF+HMF period (D6-27) to those during HMF-only period (D1-5), and also against a historical control group [1] receiving only standard HMF during a similar time period (D7-21), adjusting for sex, gestational age, multiple births and delivery mode.

Results: Of 68 infants enrolled, 11.8% were small-for-gestational-age (SGA) and 50% were extremely-low-birth-weight (ELBW; <1000 g). Adjusted mean weight gain was 1.3 g/d greater in BUN- vs. weight-driven group; lower limit of 95%CI(−1.2 g/d) exceeded non-inferiority margin (p = 0.0029). After normalizing to Fenton median, weight gain in HMF+PF period was numerically greater than that in HMF-only period, and the effect was more pronounced and marginally significant in ELBW infants during the first week of protein fortification (4.6[−0.06,9.23]g/d, p = 0.053 in (Table 1–217). Weight gain (but not length or HC gain) during PF+HMF period was significantly higher than that of HMF-alone historical control (4.7[1.55,7.81]g/d, p = 0.0037; 2.4

Table 1. Weight gain (g/day) across different periods of human milk fortification in all infants receiving adjustable protein fortification regimens and stratified by birthweigh category

	HMF-only (Day 1-5)	HMF+PF (Day 6-13)	Comparison between Day 6-13 vs. Day 1-5		HMF+PF (Day 6-27)	Comparison between Day 6-27 vs. Day 1-5	
			Treatment effect (95% CI)	P value		Treatment effect (95% CI)	P value
Standardized weight gain† in all infants	-3.5 (11.74)	-0.3 (7.83)	3.18 (-0.12, 6.48)	0.059	-1.5 (5.66)	1.99 (-0.95, 4.92)	0.18
<1000g	-6 (11.94)	-1.5 (8.12)	4.59 (-0.06, 9.23)	0.053	-3.9 (4.96)	2.15 (-2.01, 6.31)	0.31
≥1000g	-0.9 (11.11)	0.8 (7.49)	1.72 (-3, 6.44)	0.468	1 (5.34)	1.57 (-2.66, 5.8)	0.46

Means(sd) presented unless otherwise noted; HMF: human milk fortifier, PF: protein fortifier

†Weight gain is normalized to the Fenton median child and mean weight gain values indicate the differences from Fenton median.

References:

1) Rigo, J., Hascoet, J. M., Billeaud, C., Picaud, J. C., Mosca, F., Rubio, A., . . . Spalinger, J. (2017). Growth and Nutritional Biomarkers of Preterm Infants Fed a New Powdered Human Milk Fortifier: A Randomized Trial. J Pediatr Gastroenterol Nutr, 65(4), e83-e93.
2) Fenton, T. R., Nasser, R., Eliasziw, M., Kim, J. H., Bilan, D., & Sauve, R. (2013). Validating the weight gain of preterm infants between the reference growth curve of the fetus and the term infant. BMC Pediatr, 13, 92.

[0.47,4.33]g/kg/d, p = .015). Almost all (98%) of infants reached optimal weight gain of 18 g/kg/d. Gains in length (1.1 ± 0.26 cm/week) and HC (1.1 ± 0.3 cm/week) during PF+HMF period met the recommended growth goal of 1 cm/week [2]. Mean serum urea levels (4.2–5.4 mmol/L) remained within normal limits (3–6 mmol/L) throughout the study. Incidence of GI symptoms (i.e., vomiting, liquid stools and gastric residuals) and GI-related adverse events was low and similar before and after protein fortification.

Conclusions: Adjustable protein fortification regimens according to either BUN or weight promoted similar weight gain patterns in preterm infants. Individualized human milk fortification with new protein fortifiers is safe, well-tolerated, and helps preterm infants to meet the recommended optimal growth targets, especially in ELBW infants during the early postnatal period.

ID: 161/OP11: 4

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, NEONATOLOGY

Keywords: thromboembolism, neonatal, diabetes, infection

Spontaneous neonatal humeral artery thromboembolism: A Case Report

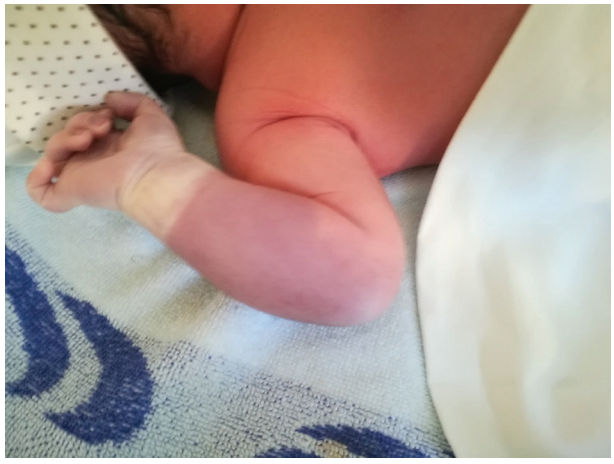
Faustino, Joana; Carvalho, Ana Araújo; Ferreira, Sara Tavares; Kjollerstrom, Paula

Hospital Dona Estefânia, Portugal

Background: Neonatal spontaneous arterial thromboembolism is uncommon and therefore data on risk factors, diagnostic strategies, therapeutic interventions and follow-up are scarce. However, it seems to be associated with high mortality and morbidity.

Case Study: A male neonate was born at 38 weeks gestational age, by eutocic delivery at a level II perinatal hospital, weighing 3195 g; Pregnancy complicated by 3rd trimester gestational diabetes,

Figure 1.



metformin-treated. At birth, right upper limb cyanosis, pale hand, non-palpable pulse and unmeasurable peripheral oxygen saturation were noticed. An arterial thrombotic event was suspected, and the neonate was transferred to a Level III paediatric centre, where anticoagulation was initially started with unfractionated heparin, followed by low molecular weight heparin (LMWH) adjusted to anti-factor Xa levels. Doppler sonography revealed normal flow in the right arm arteries down to the elbow, an echogenic thrombus with 22 mm x 3 mm in the deep humeral artery and absent arterial flow downstream. At third postnatal day, early-onset neonatal sepsis with thrombocytopenia (50,000/uL) was diagnosed, LMWH was maintained and therapy with ampicillin, gentamicin and flucloxacillin was started, with no adverse events. There was a progressive normalization of clinical and imaging features in the upper limb. After discharge, the infant was kept on LMWH for 4 months with a complete resolution on follow-up evaluation. Screening for innate prothrombotic diseases and cardiac or brain anomalies was negative Figure 1.

Learning Points Discussion: There is an increased risk of thromboembolic events in the neonatal period both due to maternal risk factors and relative immaturity of the neonatal haemostatic system. The most common maternal risk factors are infections, preeclampsia and diabetes, the latter being the only risk found in this case. Thromboembolic events associated with vascular catheterization are frequently reported, but few spontaneous neonatal thromboembolism cases have been published. In spite of no consensual guidelines, anticoagulation is the usual therapeutic approach for occlusive thrombi in the neonate. In this case, Doppler sonography was useful for the diagnosis and therapeutic follow-up. LMWH was preferred to unfractionated heparin due to lower hemorrhagic risk and dose adjusted according to anti-factor Xa levels. Treatment and follow-up in a tertiary reference centre are recommended.

ID: 280/OP11: 5

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: ENDOCRINOLOGY, NEONATOLOGY

Keywords: thyroid hormone resistance

A neonatal case of thyroid hormone resistance

Shing, Hoi Lun[1]; Siu, Wan Yung[1]; Rao, Saadia Kamran[1]; Turner, Andrea[2]
[1]Colchester Hospital, United Kingdom; [2]RCPCH

Introduction: Thyroid hormone resistance (RTH) is a rare condition that can present in the neonatal period where target tissues have an impaired sensitivity to thyroid hormones (TH). It is due to a defect in either T4 transport into the cell, T4 metabolism into T3, or TH action. These defects lead to an unusual picture of elevated T3 and free T4 (fT4) and unsuppressed thyroid-stimulating hormone (TSH). Incidence is around 1 in 40,000 live births. Most described cases have an autosomal dominant inheritance. 85% have TH action defect due to TH □-receptor gene mutation. Signs and symptoms depend on the underlying defect and the target tissues affected, producing a varied mix of hyperthyroid and hypothyroid manifestations. Treatment options include TH analogues, TH, beta-blockers and anti-thyroid medications.

Case Study: In this case report, we describe a term female infant with a known family history of RTH who had a markedly raised TSH and an elevated fT4 in the first few weeks of her life. Further monitoring revealed that since then her TSH had continued to rise, and her fT4 almost tripled the normal level by day 23 of life. Monitoring of her thyroid markers in the first few months revealed an erratic pattern of her TSH, fT4 and T3 levels. She is closely monitored in regular clinic reviews for hyperthyroid and hypothyroid clinical manifestations. Her sister who is 3 years older was the first in the family to be diagnosed with RTH, when abnormal laboratory thyroid markers were picked up on a blood test a few years prior. Further investigations for her RTH revealed that she has a heterozygous mutation in TR beta—c.1286 G > A(p.Arg429GIn). Her father was the second to be diagnosed in the family, also owning the exact same gene mutation.

Conclusion: Due to the widely variable clinical presentation and non-typical trend of laboratory thyroid markers in neonates and children with RTH, diagnosis can be difficult if the clinician is not familiar with it. Thus, this entity should be considered when one encounters a patient with elevated serum fT4, unsuppressed TSH and decreased serum T4/T3 ratio; if suspected, diagnosis can be aided by levothyroxine administration followed by an assessment of TSH response and thyroid hormones levels.

Session

Oral Presentations (OP-12)

Time: **Saturday, 5 December 2020**: **10:00—11:00**	*Location*: **Virtual**

Presentations

ID: 155/OP12: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: DERMATOLOGY, RHEUMATOLOGY

Keywords: IgA vasculitis, Henoch-Schonlein purpura, skin involvement

Analysis of prevalence and severity of skin involvement in children with IgA vasculitis and its association with other clinical and biochemical parameters

Srsen, Sasa[1]; Sapina, Matej[2]; Sestan, Mario[3]; Batnozic Varga, Mateja[4]; Kifer, Nastasia[3]; Ovuka, Aleksandar[5]; Held, Martina[3]; Ban, Maja[3]; Kozmar, Ana[3]; Coric, Marijana[3]; Bulimbasic, Stela[3]; Crkvenac, Kristina[3]; Milosevic, Danko[3]; Frkovic, Marijan[3]; Gagro, Alenka[6]; Jelusic, Marija[3]

[1]University Hospital Centre Split, University of Split School of Medicine, Split; [2]University Hospital Centre Osijek, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek, Faculty of Dental Medicine and Health, Osijek; [3]University Hospital Centre Zagreb, University of Zagreb School of Medicine, Zagreb; [4]University Hospital Centre Osijek, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek; [5]University Hospital Centre Rijeka, University of Rijeka School of Medicine,

Rijeka; [6]Children's Hospital Zagreb, Josip Juraj Strossmayer University of Osijek, Medical Faculty Osijek, Zagreb, Croatia

Background: Henoch-Schonlein purpura or IgA vasculitis (IgAV) is the most common childhood vasculitis which is characterized by nonthrombocytopenic purpura of the skin, gastrointestinal, renal and joint involvement. Skin symptoms can be localized on legs, affecting the glutes, or rarely presented atypically, affecting the head and neck area. In the most severe cases, ulcerations and necroses can be seen. The aim of this research was to evaluate the prevalence and severity of skin involvement in patients with childhood IgAV, and its relationship with other clinical and biochemical characteristics.

Methods: In this retrospective study patients with IgAV referred to five tertiary teaching hospitals between 2009 and 2019 were included in the study. The severity and distribution of skin symptoms were classified into four categories: localized only to legs, extended to the gluteal region, generalized, and severe skin symptoms with ulcerations and necrosis.

Results: 611 patients, of which 320 boys and 291 girls with a median age of 6.42 (4.42–8.92) years were included in the study. All patients had skin involvements. In 205 (33.72%) patients, only legs were affected, in 207 (34.05%) the gluteal region was affected besides the legs, in 181 (29.77%) the rash was generalized, and 15 patients (2.47%) had the most severe skin symptoms which included ulcerations and necroses. Patients with generalized (27.68%) and severe skin (28.57%) involvement had almost twice as many relapses compared to patients with legs (16.08%), legs and gluteal (16.1%) affection ($p = 0.011$). Patients with more severe skin symptoms had significantly more gastrointestinal symptoms (generalized: 53.59%, necroses and ulcerations: 66.67%, legs only: 36.1%, legs and glutes: 47.83%; $p = 0.002$), joint involvements (generalized, necroses and ulcerations: 29.08%, legs only: 16.59%, legs and glutes: 21.27%, $p = 0.01$), renal involvement (generalized: 28.18%, necroses and ulcerations: 46.67%, legs only: 21.46%, legs and glutes: 21.46%; $p < 0.001$). Regarding the treatment, patients with more severe skin involvement needed more corticosteroids (generalized: 52.78%, necroses and ulcerations: 93.33%, legs only: 21.11%, legs and glutes: 34.15%; $p < 0.001$), and immunosuppressants (generalized: 2.22%, necroses and ulcerations: 20%, legs only: 1.97%, legs and glutes: 1.97%; $p = 0.017$).

Conclusion: The prevalence of generalized skin symptoms, as well as the most severe forms in childhood IgAV is much less than the classical findings. However, the more severe the skin symptoms are, the more severe the course of the disease is, and aggressive treatment will be needed.

SUPPORT: Croatian Science Foundation project IP-2019-04-8822.

ID: 144/OP12: 2

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: HEALTH ECONOMICS & MANAGEMENT

Keywords: EMR I-PASS handover, ACGME-I residency program

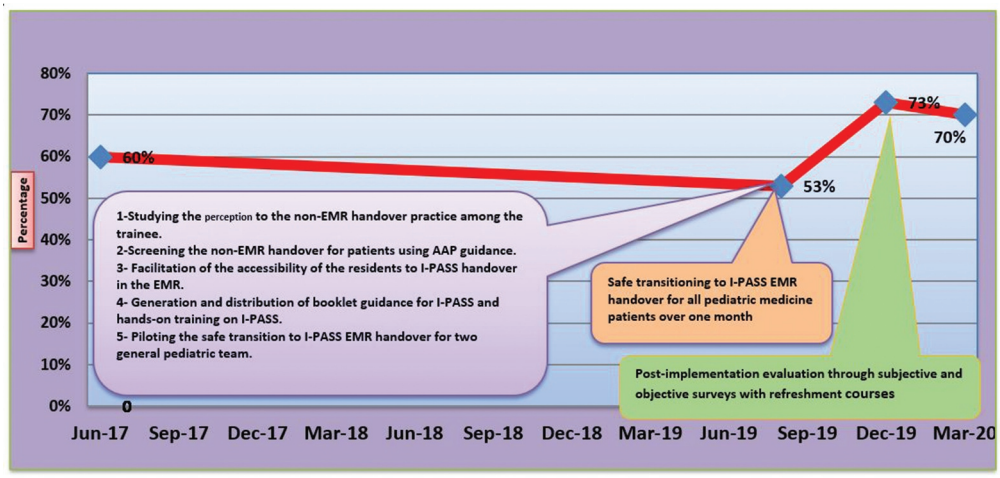
Electronic medical record (EMR) I-PASS based handover establishment: A method to improve the handoff process in an ACGME-I residency program

Imam, Abubakr[2]; Eltayeb, Ahmed[1]; Al hajjaji, Mohamed[2]; Hassan, Manasik[1]

[1]Hamad Medical corporation; [2]SIDRA medicine

Background: EMR has revolutionized the way medical care providers interact with the patients and their medical records. This in itself has provided another challenge; how to provide an effective and

Figure 1.



yet comprehensive tool for the handover of these patients. I-PASS arises as a useful tool that can be used to improve the accuracy of the handoff information with special focus on the anticipated problems and the contingency planning for these patients.

Aim: We aimed at transferring > 90 % of the pediatric inpatients' written handover from non-electronic method to an electronic one over 2 month's period using I-PASS format with a goal to achieve > 60 % of the elements in the AAP guidance for written handover.

Method: A cross-sectional intervention study among the pediatric training program at Sidra Medicine started in June 2019 using subjective and objective measures. It included multiple phases starting with studying the perception of the trainees for non-EMR to the EMR handover, then the actual transfer of the handover into EMR based I-PASS using PDSA cycles. All the records were screened before and after using IPASS handover using the 15 elements of AAP guidance for written handover. Post-implementation data were obtained.

Results: We were able to achieve 100% of the pediatric inpatients' written handover from non-electronic method to an electronic one over a 2 month period. The average completion of the 15 elements AAP guidance of handover in phase 1 was 56% which improved after piloting in 2 pediatric teams to 65%. In phase 2, new trainees joined the program, the average completion of the elements dropped down to 53%, which improved after the refreshment course of hands-on training to 73% and 70% (Figure 1–144). There were 4 elements that were deficient across the whole project: diet, recent vital sign, activity and code status with an average of 20%, 10 %, 3% and 3% respectively.

Conclusions: Our project shows that implanting EMR handover using IPASS can be achieved safely over 2 month-period with appropriate planning and follow up monitoring. It represents an excellent and safe tool to decrease human error in the hospital setting and ensure patients safety. Future plans include more training for the juniors and the newly joined trainee using different methods like electronic learning modules. Frequent courses are needed to improve the AAP elements of handover completion.

ID: 122/OP12: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: HEALTH ECONOMICS & MANAGEMENT

Keywords: Human resources (HR) management, 360—degree feedback, Organizational Ethics, Public Hospital

Human Resources practices in a Public Pediatric Clinic: a pilot study

Tsitsani, Pelagia; Lazaridi, Eleni; Gouni, Dimitra; Katsaras, George Nikolaos; Oikonomou, Evaggelos; Kyparissi, Giannoula

Pediatric Department, General Hospital of Pella-Hospital Unit of Edessa, Greece.

Background: Human resources (HR) management emphasizes developing procedures fundamental for creating a bond between the organization and the employees, aiming for productivity. Although HR practices are inherent in the private sector, they are often considered superfluous inside public departments. “360 Degree Feedback” is an HR managerial process in which employees receive confidential, anonymous feedback from the people who work around them.

Method and Aim: Aim of this study was to run a pilot program of implementing HR managerial techniques in a 20-bed Pediatric Department of a Greek Public Hospital, serving an area of 200,000 population, which provides Healthcare for 10,000 children annually. The Chief Consultant Pediatrician with postgraduate studies in HR, limited this pilot study to the Medical Personnel to obtain qualitative results, planning to expand to the Nursing Staff in a second phase, as well as the patients′caregivers in a third phase. A 360—degree feedback (multi-source feedback) for the participating pediatricians was gathered, containing twenty-five (25) open questions regarding active collaboration, mutual respect, role and duty distribution, as well as effective coordination in critical pediatric emergencies. Six (6) Consultants and five (5) residents participated in the study.

Results: Empirical data from the natural setting of the Clinic (the multisource feedback reports, as well as observation and discussion) were analyzed in the manner of qualitative research. The plan was to focus on behaviour and correspondence between members of the pediatric team, rather than checking their scientific knowledge or adequacy. Positive ratings from subordinates tend to correlate with favourable ratings from supervisors. Colleagues establishing friendly relationships work more effectively together and have better patients’ outcomes. Residents experiencing austerity from their consultants managed to express it through the feedback and every participant finally self- assessed. The overall experience was considered “team bonding”.

Conclusions: Human Resources tools, such as “ad hoc” questionnaires may prove of significant value in constructing Organizational Ethics, thus working towards a common goal. Multisource feedback can be used as an instrument to trigger further discussion between peers, as well as from “bottom-up” to “upwards” and vice versa. Chief Consultants in Public Clinics should take initiative to develop HR practices, leading to a cohesive work environment and eventually benefit the patients.

ID: 247/OP12: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: Canine, maxillary, orthodontic, dental, assessment

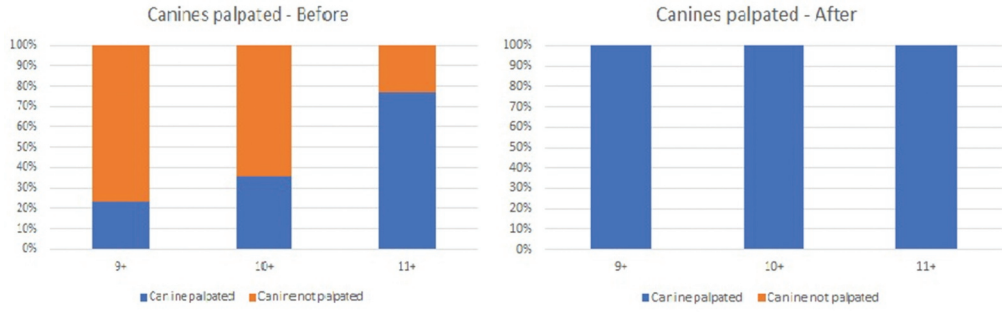
An orthodontic assessment of pediatric patients in primary care

Lee, Yung Wei Jarred; O’Brien, Paul

Royal Liverpool University Dental Hospital, United Kingdom

Background: Maxillary canines are often not palpated at an early stage in primary practice and malocclusions are often detected when paediatric patients are in the late mixed dentition. These cases should be identified at an early stage so that appropriate measures can be put in place to address the issues effectively. The aim of this clinical audit was to review the effectiveness of a

Figure 1.



newly implemented protocol with a focus on the palpation of canines at the age of 9 onwards to ensure appropriate special investigations and follow-ups were made.

Method: We audited 80 patients aged between 9–12 from September 2018 to February 2019. Data collected from the clinical records included assessment of maxillary canines, any further investigations have taken, and follow-ups made. Patients who had erupted maxillary canines were excluded. Approval was sought from the practice manager and principal to conduct a retrospective and prospective analysis of patient records.

Results: Records show 55% of patients had their canines palpated before the implementation of the protocol, and 100% of canines were palpated after implementation of the protocol. We also noticed a 13% increase in follow-ups recorded in patients after the implementation of the protocol Figure 1.

Conclusions: Upon implementation of the protocol, audited patients had a thorough orthodontic assessment in regards to palpation of canines and appropriate follow-up and special investigations were taken. This highlights the success of the protocol resulting in appropriate assessment and palpation of canines in patients aged 9 onwards to ensure a thorough assessment and examination of patients from an early age.

ID: 246/OP12: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, ADOLESCENT MEDICINE

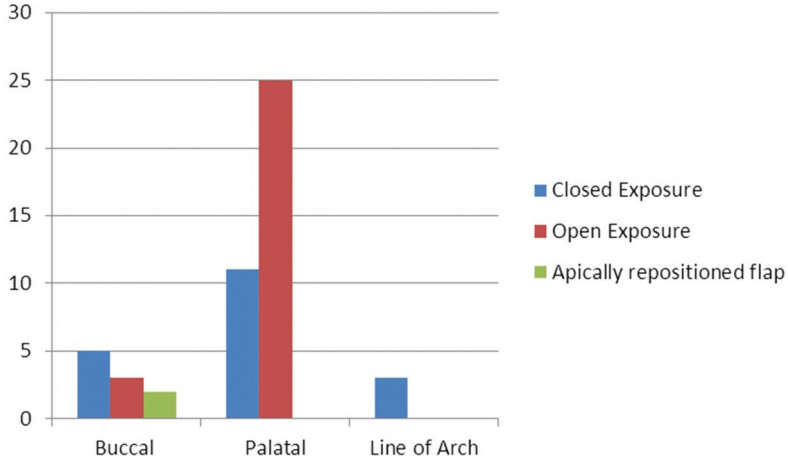
Keywords: Canine, maxillary, exposure, surgery, orthodontic

Surgical management of impacted maxillary canines at Liverpool University Dental Hospital

Lee, Yung Wei Jarred; Matadar, Ibrahim; Lord, Tim
Royal Liverpool University Dental Hospital, United Kingdom

Background: Maxillary canines are normally palpated from the age of 9 onwards to ensure that the canine bulge is felt indicating that the canine is present. However, occasionally the maxillary canine fails to erupt. Under these circumstances, the patient is often referred to secondary care for treatment and/or surgical management. Due to the age of the patient and nature of procedure required, surgical management of impacted maxillary canines is often done under general anaesthetic (GA). The purpose of the audit was to assess the effectiveness of the surgical management of impacted maxillary canines treated at the Liverpool University Dental Hospital (LUDH). The aim of this clinical audit is to explore the various treatment outcomes in impacted canines treated by open/closed surgical exposure at the Liverpool University Dental Hospital. A further aim was to determine the relationship between surgical technique and ankylosis as well as the various

Figure 1.



outcomes of the impacted canine compared to published literature. Standards were set against published literature that reports the failure of open and closed exposures to be between 5–10% showing no significant difference between the procedures.

Methods: Patients are audited from January 2015 to December 2017. Patients who have not completed their orthodontic treatment were excluded from this study. Microsoft Excel was used to record patient data including age, gender, position of canine, grade of impaction, grade of staff, whether a repeat procedure was required. We also assessed total treatment duration, outcomes of the canines and the presence of any complications Figure 1.

Results: There were 49 patients identified at LUDH who underwent open or closed exposure who had completed orthodontic treatment. Of these patients, 6.1% required repeated procedures due to lost gold chains. From the repeat procedures, 66.7% were carried out under local anaesthetic (LA) and 33.3% required a second general anaesthetic. From the 49 patients who completed treatment, 28.6% had surgery under LA, 67.3% under GA and 4.1% under intravenous sedation. Out of all the procedures, 30.6% were closed exposures, 65.3% were open exposures with a bonded gold chain, and 4.1% required apically repositioned flaps. Of all the canines treated, 20.4% were buccally impacted, 6.1% in the line of the arch and 73.5% were palatally impacted. 4.1% of the canines had aesthetic deformities while 2% of canines became discoloured after completion of treatment.

Conclusion: The success rate of all forms of treatment modalities was 93% at LUDH, which was consistent with previously reported figures

ID: 255/OP12: 6

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: PUBLIC HEALTH

Keywords: Adolescents; Chronic Health Conditions; School experience; Life satisfaction

Disability and chronic health conditions and school experiences in 19 European countries

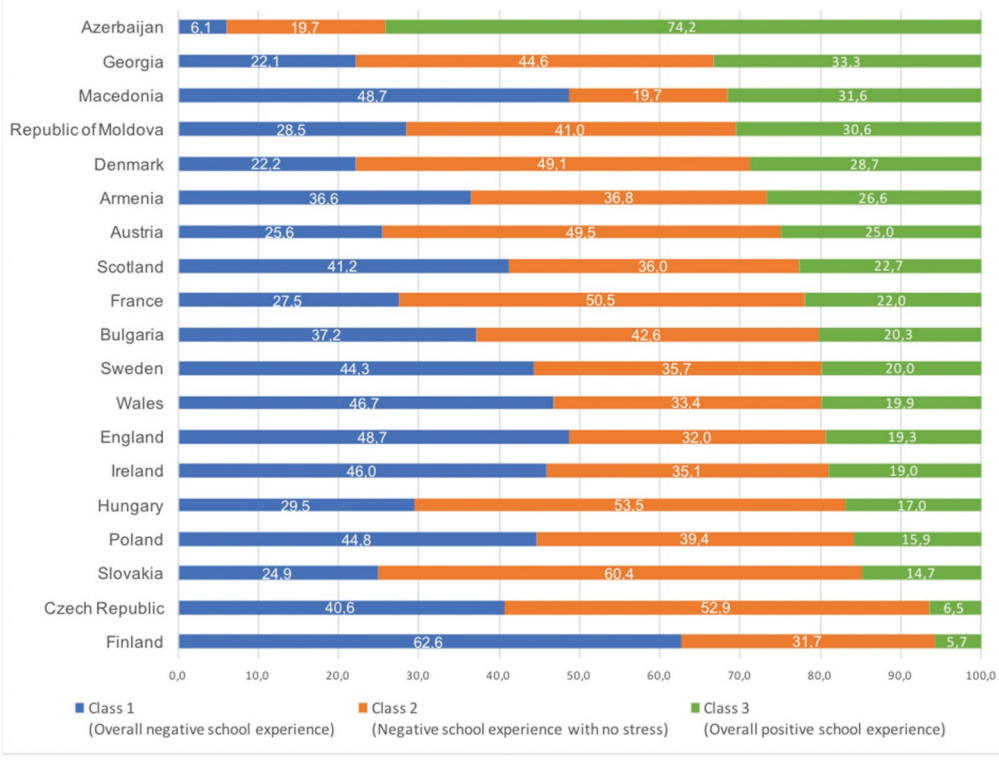
Sentenac, Mariane[1]; Santos, Teresa[2]; Augustine, Lilly[3]; Due, Pernille[4]; Gavin, Aoife[5]; Małkowska-Szkutnia, Agnieszka[6]; Michelsen, Susan[4]; Movsesyan, Yeva[7]; Ng, Kwok[8]; Baška, Tibor[9]; Godeau, Emmanuelle[10]

[1]Université de Paris, CRESS, Obstetrical Perinatal and Pediatric Epidemiology Research Team, EPOPé, INSERM, INRA, F-75,004 Paris, France; [2]Universidade Europeia, Lisboa—Portugal Universidade Católica Portuguesa, Instituto de Ciências da Saúde (CIIS), Lisboa—Portugal Instituto de Saúde Ambiental (ISAMB), Faculdade de Medicina, Universidade de Lisboa, Lisboa—Portugal; [3]CHILD, school of learning and communication, Jönköping University, Sweden.; [4]National Institute of Public Health, Copenhagen, Denmark; [5]Health Promotion Research Centre, Discipline of Health Promotion, School of Health Sciences, University Road, NUI Galway, Ireland.; [6]University of Warsaw, Poland; [7]Arabkir Medical Center-Institute of Child and Adolescent Health, Yerevan, Armenia; [8]School of Educational Sciences and Psychology, University of Eastern Finland, Joensuu, Finland; Physical Activity for Health Research Cluster, Department of Physical Education and Sport Sciences, University of Limerick, Limerick, Ireland; [9]Comenius University in Bratislava, Slovakia; [10]French School of Public Health, EHESP—Rennes—Brittany—France

Background: Inclusive education is crucial for all learners' economic and social participation in society. However, educational practices and school experiences are highly diverse and poorly documented across countries. This study aims to: 1) describe the prevalence of disability and chronic health conditions (DCC) by country; 2) identify patterns of school experience among students with DCC across countries; and 3) investigate the association of student's school experience profiles with life satisfaction, in several European countries.

Methods: Data were collected using a self-reported questionnaire, derived from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey, a cross-national school-based survey among 11-, 13- and 15-year-olds. In 19 EU countries, items on DCC were asked. The school experience was assessed using four binary variables: low school satisfaction, schoolwork pressure, low teacher acceptance, and bullying victimisation. Life satisfaction was assessed using the Cantril

Figure 1.



Note: Countries are ordred by the percentage of the class 1

Example of interpretation: in Azerbaijan, the prevalence of the subgroup of students with CC having an "overall negative school experience" is 6,1%

ladder (scores 0–5; 6–10). A latent class analysis (LCA) was conducted to identify latent subgroups of students with DCC with varying school experiences. RRs with 95%CI for school experience subgroups associated with low life satisfaction were estimated using a weighted generalized linear regression model, adjusted for gender, age and country.

Results: The overall sample included 104 812 students. Prevalence of DCC varied from 8.1% (Armenia) to 28.3% (Finland). The LCA conducted among students with DCC (n = 17,379) yielded to identify three subgroups of students with distinct school experience patterns labelled: "overall negative school experience" (37%), "overall positive school experience" (23%), and "negative school experience with no stress" (40%, with students more likely to report low teacher acceptance, low school satisfaction but no school pressure). The distribution of subgroups varied across countries (Figure 1–255). Overall, compared to students experiencing "overall positive school experience", the risk of low life satisfaction was higher for students with a "negative school experience with no stress" (RR = 1.9; 95%CI 1.4–2.5) and even higher for those with an "overall negative school experience" (RR = 2.9; 95%CI 2.3–3.9).

Conclusions: The present study identified different patterns of negative school experience among students with DCC in 19 contrasted European countries, and its association with low life satisfaction. Results highlight the relevance of school experiences for life satisfaction, thus, reinforcing the need for inclusive practices and policies to address psychosocial concerns of students with DCC in the school environment. Variations in the prevalence of DCC students, their school experiences and their wellbeing stress the importance of further cross-national research to understand such differences.

ID: 253/OP12: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: HBSC, Life Satisfaction, Family, Social Media

The moderating effect of family support on the relationship between adolescent wellbeing and problematic social media use

Coyle, Jennifer; Nic Gabhainn, Saoirse; Kelly, Colette
National University of Ireland Galway, Ireland

Background: Social media use is widespread across all groups in society, including adolescents. This generation of adolescents has been raised in the "Digital Era" and spend more time online, specifically using social media, than any other population cohort. Social media use offers many benefits such as connecting people and enhancing certain forms of communication. However problematic social media use is hallmarked by dependence on social media, and is conceptualised to fall under the umbrella term "Internet addiction", along with behaviours such as excessive online gaming and gambling. Previous evidence has demonstrated a negative association between life satisfaction and problematic social media use. Life satisfaction is a core component of subjective wellbeing, which in turn is an important indicator of psychological wellbeing and a key objective of health promotion and improvement with adolescent groups. Interpersonal relationships can protect wellbeing or augment the harmful effects of behaviour. It is clear that a lack of social relationships, with peers or adults, is an important risk for young people's mental wellbeing. However, the extent to which positive family relationships could moderate the potentially negative impact of problematic social media use on life satisfaction has not previously been explored.

Methods: These analyses were based on data collected from 10 17-year-olds in the Health Behaviour in School-Aged Children (HBSC) 2018 study in Ireland (n = 8,501). Hierarchical regression

models were applied to test for associations with life satisfaction, including the covariates gender, age, social class and family affluence.

Results: The mean life satisfaction score was M = 7.36 (SD = 1.89), and 20.7% of its variability was explained in the final regression model. Analyses demonstrated significant prediction of life satisfaction by both problematic social media use, and family support. There was a significant moderating effect of family support on the relationship between problematic social media use and life satisfaction. The impact of problematic social media use on life satisfaction was stronger, and more negative when family support was low.

Conclusions: A supportive family may therefore modify the impact of behavioural factors, such as problematic social media use, on life satisfaction in adolescence. Implications of these findings for health promotion practice are considered within the socioecological model of health. The potential protective effect of family support deserves further emphasis on intervention design and adolescent health policy.

Session

OP14: Oral Presentations (OP-14)

Time: **Friday, 4 December 2020**: **15:00—16:00**	*Location*: **Virtual**

Presentations

ID: 140/OP14: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: NEONATOLOGY

Keywords: Mortality rate, VLBW, resourced limited setting

Hospital outcome of VLBW infants admitted in a tertiary hospital in the Eastern Cape, South Africa.

Michaelis, Isabel Alexandra[1]; Jordaan, Esme[2]; Mazinu, Mikateku[2]
[1]Walter Sisulu University, South Africa; [2]Medical Research Council, South Africa

Background: Neonatal mortality is worldwide a major contributor to the number of deaths in children under 5 years of age. Preterm babies and babies born with a very low, or extremely low birth weight are especially at risk of not surviving the first month of life, even more so if they are born in a setting with limited resources. The primary objective of this study was the overall mortality rate of babies with a birth weight of less than 1501 g in a neonatal unit at a tertiary hospital in the Eastern Cape, one of the most underprivileged areas in South Africa. Furthermore, different maternal and baby-related risk factors for mortality were analysed.

Methods: This is a prospective cohort study which included babies born at or admitted to the neonatal wards of the hospital within their first 24 hours of life and with a birth weight below 1501 g between December 2017 and November 2018.

Results: 173 infants were admitted to the neonatal department with a birth weight below 1501 g. The overall survival rate of very low birth weight babies to hospital discharge was 68%. Only 46,5 % of babies born with a birth weight below 1001 g survived their hospital stay. This is lower than in

other tertiary, better-resourced hospitals in other parts in South Africa. The main predictor for survival was higher gestational age and higher birth weight. Need for ventilator support and sepsis increased mortality risk significantly. Babies born to a mother with gestational hypertension had a 2-fold increased chance of survival.

Conclusion: This is the first study looking at survival of very low birth weight babies in the underprivileged part of the Eastern Cape of South Africa. Compared to better-resourced public hospitals in the country the survival rate, especially for infants born with extremely low birth weight, remains unacceptably low. More needs to be done to prevent preterm and low birth weight births, but also the facilities caring for these most vulnerable persons must be equipped and staffed accordingly.

ID: 203/OP14: 2

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GASTROENTEROLOGY, NEONATOLOGY, PUBLIC HEALTH

Keywords: neonatology, congenital anomalies, paediatric surgery, gastrointestinal tract

Management and outcomes of gastrointestinal congenital anomalies in low-, middle-, and high-income countries: A multi-centre, international, prospective cohort study

Yalcinkaya, Ali[1]; Sonmez, Kaan[2]; Karabulut, Ramazan[2]; Turkyilmaz, Zafer[2]; Seref, Kivanc[2]; Altin, Merve[2]; Aykut, Merve[1]; Akan, Mehmet Eren[1]; Erdem, Melisa[1]; Ergenekon, Ebru[3]; Turkyilmaz, Canan[3]; Keles, Elif[3]; Canozer, Ali[1]; Yeniay, Asli Ozturk[1]; Eren, Elif[1]; Aydin, Emrah[4]; Ademuyiwa, Adesoji O[5]; Ameh, Emmanuel[6]; Davies, Justine[7]; Lakhoo, Kokila[8]; Poenaru, Dan[9]; Ade-Ajayi, Niyi[10]; Sevdalis, Nick[11]; Leather, Andrew[12]; Wright, Naomi[12]; ., Global PaedSurg Research Collaboration[13]

[1]Gazi University School of Medicine, Ankara, Turkey.; [2]Paediatric Surgery Department, Gazi University School of Medicine, Ankara, Turkey.; [3]Department of Paediatric Neonatology, Gazi University School of Medicine, Ankara, Turkey.; [4]Paediatric Surgery Department, Koç University School of Medicine, Istanbul, Turkey.; [5]Paediatric Surgery Unit, College of Medicine, University of Lagos and Lagos University Teaching Hospital, Lagos, Nigeria.; [6]Paediatric Surgery Department, National Hospital, Abuja, Nigeria.; [7]Institute of Applied Health Research, University of Birmingham, Birmingham, UK.; [8]University of Oxford, Oxford, UK.; [9]McGill University, Montreal, Canada.; [10]Paediatric Surgery Department, King's College Hospital, London, UK.; [11]Centre for Implementation Science, King's College London, UK.; [12]King's Centre for Global Health and Health Partnerships, School for Population Health and Environmental Science, King's College London, UK.; [13]Participating institutions from across the globe.

Background: Congenital anomalies (CAs) are the 5th leading cause of death in children under 5 years globally. Without emergency surgical care, many gastrointestinal CAs are incompatible with life. We compared, for the first time, management and outcomes of a selection of common gastrointestinal CAs in low-, middle- and high-income countries (LICs, MICs and HICs) globally.

Methods: Children's surgical care providers across the globe were invited to participate in the study and collect clinical data prospectively on consecutive patients presenting primarily with seven CAs (Table 1 203) over a minimum of one month between October 2018—April 2019. The primary outcome was all-cause in-hospital mortality. Univariate analysis was used to identify factors associated with mortality ($p \leq 0.01$), which were then analysed using multivariate logistic regression, presented as (adjusted odds ratio, p-value). All participating centres had study approval.

Results: 1445 collaborators from 272 hospitals (11 LICs, 171 MICs, 90 HICs) in 74 countries contributed data. 3841 patients with 3967 study conditions were included. The following were associated with mortality: country income status (0.35, $p < 0.001$, Table 1), induced vaginal versus spontaneous delivery (0.42, $p = 0.024$), weight at presentation (0.61, $p < 0.001$), unavailability of ventilation when required (3.74, $p = 0.009$), unavailability of parenteral nutrition when required

Table 1.

		Mortality [95% Confidence Interval]		
	N	**LICs**	**MICs**	**HICs**
Gastroschisis	451	**90.0%**[87.2-92.8]	**32.1%**[27.8-36.4]	**1.4%**[0.3-2.5]
Oesophageal atresia	560	**85.7%**[82.8-88.6]	**29.4%**[25.6-33.1]	**7.1%**[5.0-9.2]
Congenital diaphragmatic hernia	447	-	**38.3%**[33.7-42.8]	**14.2%**[11.0-17.4]
Intestinal atresia	678	**60.0%**[56.3-63.7]	**21.3%**[18.2-24.4]	**3.3%**[2.0-4.7]
Anorectal malformation	990	**20.0%**[17.5-22.5]	**12.1%**[10.0-14.1]	**1.7%**[0.9-2.5]
Hirschsprung's Disease	517	**11.8%**[9.0-14.5]	**6.6%**[4.5-8.8]	**1.9%**[0.7-3.0]
Exomphalos (omphalocele)	324	**28.6%**[23.7-33.5]	**20.4%**[16.0-24.8]	**17.1%**[13.0-21.2]

(2.95, p = 0.001), sepsis on arrival (1.99, p < 0.001), additional CA (1.63, p = 0.001), surgical site infection (1.62, p = 0.034), unavailability of a Surgical Safety Checklist (1.25, p = 0.014).

Conclusion: Significant disparities in mortality exist for common gastrointestinal CAs globally. Rapid action is required through a coalition of global stakeholders to eradicate these inequalities.

ID: 254/OP14: 3

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: EMERGENCY PEDIATRICS

Keywords: testicular torsion, cremasteric reflex, children

Testicular torsion in children with positive cremasteric reflex: a case report

Aswin, Amalia[1]; Pratiwi, Ayu Nurliyana[2]; Indrawan, Muhammad Aris[1]; Yudistira, Aditya Rahman Rosean[1]; Soebhali, Boyke[3]

[1]Faculty of Medicine, Mulawarman University, Samarinda, Indonesia; [2]General Practitioner at Abdul Rivai Hospital, Berau, Indonesia; [3]Department of Urology, Abdul Wahab Sjahranie Hospital/ Mulawarman University, Samarinda, Indonesia

Background: Testicular torsion is the most common cause of acute scrotal pain in children. It is considered an emergency, as a delay of diagnosis will cause irreversible testicular damage as the results of blockage in testicular blood flow. The cremasteric reflex has been reported to be absent in 100% of cases of testicular torsion. The absence of the reflex is indicative of testicular torsion, especially in the pediatric population.

Case Study: A 13-year-old boy was admitted to the emergency department with acute pain on the scrotum. The symptom started six hours prior to arrival, the pain was sharp and severely aching without radiation, and accompanied by nausea and vomiting. There was no history of trauma over the scrotum, inguinal region, or a history of urinary tract infection. His right side of the scrotum was in normal findings. His left side of the scrotum showed elevated left testis and pressure pain with no sign of inflammation. The phren test was negative, and the cremasteric reflex was positive. The examination of the penis showed no abnormal discharges through the urethra. The diagnosis of testicular torsion was given. After an emergency surgery under general anaesthesia with left orchidectomy and right orchidopexy was performed, his symptoms were much improved.

Learning Points Discussion: We hereby report on a case of testicular torsion in children with positive cremasteric reflex. Physical examination plays an important role in the diagnosis of testicular torsion. However, the cremasteric muscle and reflex are altered in certain disease states

such as boys with cryptorchidism as well as myelomeningocele. The presence of the cremasteric reflex is somewhat variable even among normal boys. Therefore, the diagnostic test of the presence of cremasteric reflex to rule out testicular torsion that is used in the emergency department should be avoided because it will lead to misdiagnosis and delay the time of surgery that is related to the percentage of testicular recovery and salvage.

ID: 299/OP14: 4

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: EMERGENCY PEDIATRICS

Keywords: Cardiopulmonary arrest, cardiopulmonary resuscitation

Cardiopulmonary arrest in the pediatric population—A Portuguese perspective

Reis, Joana Soares[1]; Pinheiro, Marta[2]; Lisboa, Lurdes[3]; João, Marta[3]; Oliveira, Maria José[3]; Mota, Teresa[3]; Ribeiro, Augusto[3]

[1]Pediatric Departments, Centro Hospitalar de Vila Nova de Gaia/Espinho, Portugal; [2]Pediatrics Department, Centro Hospitalar de São João; [3]Pediatric Intensive Care Unit, Pediatrics Department, Centro Hospitalar de São João

Background: Cardiopulmonary arrest (CA) in children is rare and distinct from adult cardiac arrest. Children have increased cerebral blood flow and higher metabolic needs and early onset of effective high-quality CPR can improve survival and neurological prognosis.

Methods: A retrospective descriptive study that included all children younger than 19 years of age with out-of-hospital CA (OH-CA) admitted to the emergency room or in-hospital CA (IH-CA) in a level III hospital between January 2017 and August 2020. The objective was to evaluate and compare patient demographics, neurological outcomes and survival to hospital discharge in OH-CA and IH-CA.

Results: There were 37 children with CA in the total sample. Mean age was 5.4 years (range, 0–16 years); 62.2% of patients were male, and 43.2% were younger than 1 year of age. OH-CA occurred in 17 patients, the IH-CA group included 20 patients. Regarding the OH-CA group, initial rhythms were asystole or bradycardia (52.9%), pulseless electrical activity (11.8%), ventricular fibrillation or ventricular tachycardia (11.8%) and indeterminate (ND) in 23.5% of cases. The initial cause of arrests was unknown in 58.8% of cases, respiratory in 29.4% and sudden collapse in 11.8% of cases. The mean time to initiate cardiopulmonary resuscitation (CPR) was 3.9 minutes (sd 9.8) and the mean CPR duration was 18.8 minutes (sd 28.1). In the IH-CA group, most patients (80%) had chronic conditions. Primary disease associated with CA was, respectively, infection, a progression of chronic illness, post-surgical, trauma and metabolic cause in 50%, 20%, 20%, 5% and 5% of cases. The pathophysiologic process of IH-CA was cardiac in 65% of cases followed by cardiorespiratory (15%), respiratory (10%) and ND in 10% of cases. Asystole or bradycardia was the most frequent rhythm (65%) followed by pulseless electrical activity (15%) and ventricular fibrillation (5%), n = 3 ND. Immediate CPR was performed in 85% of children. Probability of subsequent CA was lower in the OH-PCA group (p = 0.027) as was a circulatory shock (p = 0.425), no response to CPR (p = 1.000) or duration of mechanical ventilation (p = 0.497). Global survival to hospital discharge was 56.8% without significant differences between the OH-PCA and IH-PCA group (52.9% vs. 60%, p = 0.666). Relevant neurological impairment at 1 year of CA was more frequent in IH-CA group (p = 0.175).

Conclusion: Global survival rate (56.8%) was higher than described in the literature. Bradycardia or asystole was the most frequent rhythm both in OH-CA and IH-CA. OH-CPA showed more favourable outcomes than IH-CPA which may reflect a biased population with fewer comorbidities.

ID: 283/OP14: 5

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: GENERAL PEDIATRICS, RARE DISEASES

Keywords: Trisomy, dental, oral health, paediatric, dentistry.

The dental and oral implications of Trisomy 21 in paediatric patients: An overview.

Dale, Clarissa Lily Tamsin; Barry, Siobhan
University Dental Hospital of Manchester, United Kingdom

Background: Down Syndrome is the most common genetic disorder affecting 1 in 1000 babies born in the UK. It is commonly caused by an extra chromosome 21, resulting from a non-disjunction abnormality known as trisomy 21. Patients typically have a distinctive appearance characterised by a flattened facial profile, upward slanting eyes and underdevelopment of the mid-third of the face. This is accompanied by a variety of associated medical and oral complications. Whilst all affected children will have some measure of learning disability, each child is unique and will present with their own personality and range of abilities. Paediatric patients with trisomy 21 commonly experience a range of oral problems including delayed speech development, functional difficulties, periodontal disease, malocclusions and dental anomalies. It is therefore essential to treat each child as an individual whilst being aware of possible problems arising, to optimise a successful dental outcome.

Objective: To provide an overview of the associated dental and oral implications in Trisomy 21.

Methods: This is a review of the literature.

Learning Points & Discussion: Patients with Trisomy 21 experience delayed eruption of teeth and hypodontia. Teeth may be structurally weaker with hypocalcification and hypoplastic defects or show signs of microdontia. Periodontitis is common and may be very destructive due to a combination of factors including poor oral hygiene and an altered host response. Caries risk has been shown to be low due in part to an altered salivary buffering capacity and a spaced dentition. Many of these children also present with tooth wear and malocclusions due to an altered eruption pattern and maxillary hypoplasia. Treatment of these conditions may be further compounded by the need to manage possible medical comorbidities. Dental practitioners must therefore encourage families to engage in a realistic preventative dental programme early to foster good habits and engender confidence and trust. They must tailor treatment to the child, being acutely aware of the level of mental disability, so as not to patronise or cause anxiety. The dental practitioner should strive to provide the same standard of dental care to Trisomy 21 patients that others receive. Carers should be encouraged to see the importance of good oral health as an essential part of the overall good health of their child. With this approach, these children can enjoy better oral health, which in turn can lead to greater self-esteem and happiness.

Session

OP15: Oral Presentations (OP-15)

Time: **Friday, 4 December 2020**: **16:30—17:30**	*Location*: **Virtual**

Presentations

ID: 250/OP15: 1

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: NEUROLOGY

Keywords: status dystonicus, dystonia, rhabdomyolysis, creatinine kinase

Status Dystonicus presenting with rhabdomyolysis

Dutta, Manidipa; Collins, Lizaveta; Hadoura, Amr; Rao, Saadia
Colchester Hospital, East Suffolk and North Essex NHS Foundation Trust, United Kingdom

Background: Status dystonicus is a rare condition with significant morbidity, which is currently under recognised and undertreated.

Case Study: We present 9-year-old boy with dystonic cerebral palsy with tracheostomy and PEG who presented with status dystonicus with rhabdomyolysis and hypernatremic dehydration. He presented with fever, irritability and increasing agitation and dystonia for the last 2 weeks with signs of chest infection. He had Na 154 mmol/L and Creatinine Kinase >22,000 U/ l, Creatinine 73□mol/L. He was treated with IV antibiotics and hyperhydration (150% maintenance: 100% maintenance IV +50% PEG feeds). His CK started slowly decreasing and was 8969 U/L, Na-139 mmol/L and creatinine −39□mol/Lon Day 5. Due to his increasing dystonia and pain, he was trailed on a combination of Clonidine and Chloral hydrate. As his dystonia worsened, he was started on diazepam which helped. He was then slowly weaned off diazepam and trihexyphenidyl was introduced. In 3 weeks his CK dropped to 287 U/L and his dystonia is currently managed with trihexyphenidyl and chloral hydrate.

Conclusion and Learning Points: In children with pre-existing dystonia, sepsis /intercurrent illness -mainly gastroenteritis and dehydration can lead to status dystonicus. Management should be tailored individually according to the complications. It is essential to liaise with tertiary neurology centres early on to help with the management. The main treatment for status dystonicus is good hydration, sedation, pain and dystonia control. Creatinine kinase and urinary functions are important monitoring tools for management

ID: 249/OP15: 2

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS

Keywords: hyponatremia, hyperkalamia, urosepsis, electrolyte imbalance

Urosepsis presenting with asymptomatic hyponatremia—A case report

Dutta, Manidipa; Collins, Lizaveta; Tillett, Angela; Rao, Saadia
Colchester Hospital, East Suffolk and North Essex NHS foundation trust, United Kingdom

Background: Hyponatremia is one of the most common electrolyte disorders in hospitalized children. The underlying mechanisms are poorly understood and potentially multifactorial, making management difficult

Case Study: 15-week old male, presented with irritability since 2 weeks and decreasing weight, from 75th to 2nd centile. Born at 41 weeks by normal vaginal delivery, normal antenatal scans and exclusively breastfed. NO history of fever, vomiting or seizures. On examination, he was irritable on and off, good suck and tone, mottling over lower limbs, central CRT −3 seconds, peripheral CRT-

4 sec. The remaining examination was normal with normal-appearing male genitalia. Blood gas showed a partially compensating metabolic acidosis (ph-7.22 H2co3-13.7, BE −14.3)with severe hyponatremia (sodium (Na) −103 mmol/L),potassium −6.3 mmol/L. Urine microscopy showed >400 WBC with heavy coliform growth. Other investigations including random cortisol, urine electrolytes, serum and urine osmolality, FSH, LSH, CRP were normal. A provisional diagnosis of Urosepsis was made. He was treated with 2 × 10 ml/kg normal saline bolus, salbutamol nebulisation to correct his hyperkalemia and IV antibiotics. His initial low BP corrected after the bolus. TO correct his severe hyponatremia full maintenance Intravenous fluids of 0.9% NaCl was started making sure that Na does not increase by >8 mmol/day or 0.33 mmol/hr.In next 12 hrs his Na increased by 16 mmol/L to 119 mmol/L, HCO3-15.8, BE −11.1, urine output-4.5 ml/kg/hr.

Upon consultation with the tertiary Renal team, due to persistent low bicarbonate, he was given half soda bicarbonate (NaHCO3) correction over 4 hours with NaHCO3 1.26% due to its low sodium content. Maintenance fluid was then changed to 0.45% NaCl to further slow his sodium rise.

Ultrasound Kidneys showed grossly dilated and tortuous ureters bilaterally with moderate left hydronephrosis. He was catheterised on suspicion of PUV (posterior urethral valve) to monitor his urine output. In the next 12 hrs, his sodium slowly increased by 8 mmol/L to 127 mmol/L, HCo3-19.3, BE −6.4. He was then transferred over to the tertiary renal centre for further management of his Vesico ureteral reflux. He slowly improved over a period of time and his electrolytes returned back to normal.

Conclusion and Learning Points: Hyponatremia and hyperkalemia in infancy can be tricky for a diagnosis. Always rule out Congenital adrenal hyperplasia. If the child has asymptomatic but severe hyponatremia always think of urosepsis and investigate likewise. Ultrasound abdomen can be helpful in giving a clue. Correct Management of the electrolyte imbalance is also essential here.

ID: 310/OP15: 3

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY

Keywords: Graves' Disease, Neonatal Hyperthyroidism, TRAb

Neonates born to mothers with autoimmune hyperthyroidism—an experience of a university pediatric hospital

Belo, Inês[1]; Vilarinho, Filipa[2]; Simão, Inês[3]; Galhardo, Júlia[1]; Limbert, Catarina[1]; Lopes, Lurdes[1]
[1]Hospital Dona Estefânia, CHULC, Portugal; [2]Hospital Distrital de Santarém; [3]Centro Hospitalar do Médio Tejo

Background: Neonates born to mothers with Graves' disease (GD) are at risk for developing neonatal hyperthyroidism due to the transplacental passage of maternal anti-thyrotropin receptor stimulant antibodies (TRAb). Although it is a rare and usually transient disorder, neonatal hyperthyroidism is associated with significant morbidity and mortality. We aimed to review the clinical and laboratorial evolution of the neonates born to mothers with GD.

Methods: Retrospective and descriptive study evaluated outpatient medical records of newborns born to mothers with GD referred to our Centre from 2008 to the present. We collected demographic data, maternal disease and treatment during pregnancy, along with delivery, diagnosis, clinical evolution and treatment of the newborn.

Results: A total of 15 newborns (13 males) were observed. In 9 cases (60%) the TRAb were measured and were positive in 7 (78%) of them. Eleven mothers (73%) were treated during

pregnancy either with antithyroid drugs [9 women (82%)] or levothyroxine [2 women (8%)]. The TRAb in cord blood were determined in 3 neonates and were positive in 2 cases who were both asymptomatic. During the neonatal period, the evaluation of the TRAb was positive in 7 cases (47%). Five newborns (33%) showed laboratory signs of hyperthyroidism (low TSH and high FT4) but 3 of them were asymptomatic, allowing for a follow up in ambulatory care. The other 2 newborns needed to be hospitalised for symptomatic neonatal thyrotoxicosis; both had positive TRAb. In the first case, maternal TRAb title during pregnancy was highly positive; her newborn developed severe clinical symptoms requiring hospitalisation in intensive care; he was treated with antithyroid drugs, propranolol and Lugol's solution to achieve resolution of the symptoms. The second case, with less severe disease, was hospitalised in a neonatal ward and treated with antithyroid drugs; the TRAb titles during pregnancy were unknown.

Discussion: Given the severity of fetal and neonatal hyperthyroidism, pregnant women with a history of autoimmune hyperthyroidism either actual or subject to definite treatment, should be screened for the presence of TRAb. At delivery, if the TRAb is positive or unknown, the neonate is considered of high risk and close monitoring should be performed. The title of TRAb during pregnancy and in the newborn appears to correlate with the development of neonatal hyperthyroidism. This study shows the importance of early screening and the correct management of neonates born to mothers with GD.

ID: 267/OP15: 4

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS, EMERGENCY PEDIATRICS

Keywords: Diet, Nutrition, Iron Deficiency Anaemia

Dangerous diets! Culture and unconscious harm

O'Donnell, Gillian Louise; Martin, Therese; Mahony, Michael; Murphy, Anne-Marie
Department of Paediatrics, University Hospital Limerick, Ireland, Ireland

Background & Aim:

Introduction and Aim: Our aim is to report a case series of 2 unrelated toddlers who presented to our Paediatric Emergency Department (PED) this Autumn in an acute manner with significant medical issues related to unusual diets imparted on them by their parents. We describe the clinical presentations, investigations, treatment and outcomes in our cohort.

Case Study: Case 1: An almost three-year-old previously well girl presented following an unresponsive episode at home. She had a blood glucose reading of 2.9 mmol/L and responded to honey. Endocrine and metabolic investigations were normal. She is of Slovakian descent. Her mother had "removed carbohydrates" from her diet during the preceding 6 weeks, and fed her a diet of " protein and vegetables. "A Naturopath" commenced her 6-year-old sister on this diet as "treatment" for recurrent Candida infections which he had attributed to " too much sugar in her food". For convenience, her mother put both children on the same meal plans. Following the dietetics review, a normal diet was reintroduced. She has remained well since. Case 2: The second patient was a 2 year and 3 months ethnically Irish girl, presenting with lethargy and pallor for 1 week. Laboratory investigations revealed a haemoglobin of 4.2 g/dl (Reference range 10–15), findings consistent with a diagnosis of dietary iron deficiency anaemia. This was her second such presentation within 12 months. She had a diet rich in cow's milk. Interestingly her father is a "dairy farmer" and a "firm believer" in the "benefits of Cow's milk" for himself and his family. She responded well to oral iron supplementation on her first presentation and intravenous on her second; "Milk baby of olden times".

Learning Points Discussion: Our cases highlight the serious effects that abnormal diets have on otherwise healthy children. Is this an emerging phenomenon in our community needing further attention in order to prevent detrimental sequelae?

ID: 306/OP15: 5

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: ENDOCRINOLOGY, NEONATOLOGY, PUBLIC HEALTH

Keywords: neonatal hypoglycemia, outcomes, early infancy, death, hospitalization

Neonatal hypoglycemia tripled the risk of early infant death and or hospitalization in post-conflict northern Uganda: a community-based cohort study

Odongkara, Beatrice[1,2,3]; Tylleskar, Thorkild[3]; Achora, Vincentina[1,2]; Mukunya, David[2]; Ndeezi, Grace[2]; Tumwine, James K[2]; Nankabirwa, Victoria[2]

[1]Gulu University; [2]Makerere University; [3]University of Bergen

Background: Neonatal hypoglycemia is the most common endocrine abnormality in children, and it is associated with increased morbidity such as neurodevelopmental abnormalities, and mortality. The burden and outcomes of neonatal hypoglycemia in rural communities in sub-Saharan Africa is unknown.

Objective: To determine the short-term outcomes (hospitalization and or death) of neonatal hypoglycemia in the first 50 days of life in Lira district, Northern Uganda.

Methods: This was a community-based cohort study nested in a cluster randomized controlled trial, designed to promote health facility births and newborn care practices in Lira district, Northern Uganda. Mothers were followed-up from 28 weeks of gestation to delivery and their newborns followed 50 days postnatal. Random blood glucose was measured using On Call® Plus glucometer (ACON Laboratories, Inc., 10,125 Mesa Road, San Diego, California, USA). Hypoglycemia was defined as random blood sugar <47 mg/dl. To determine the association between neonatal hypoglycemia and hospitalization and or death, we fit a generalized estimating equation model for the Poisson family, with a log link, taking clustering into account, and assuming an exchangeable correlation.

Results: We examined 1416 participants whose mean age was 3.1 days ((SD) 2.1) and the mean weight was 3.2 kg (SD 0.5). The mean neonatal blood glucose level was 81.6 mg/dl (SD 16.8). The median blood glucose was 81 (IQR 70.2, 93.6). The prevalence of a blood glucose concentration less than 47 mg/dl was 2.2% (31/1416): 95%CI 1.2%, 3.9%. The risk of hospitalization and/or death among neonates with blood glucose less than 47 mg/dl was 3.4 times that of neonates with blood glucose above 47 mg/dl but below 125 mg/dl (Adjusted Risk Ratio (ARR) 3.4: 95% CI 1.4–8.2).

Conclusion: However, neonates who suffered from neonatal hypoglycemia were more likely to be hospitalized and or die. We encourage targeted screening and management of neonatal hypoglycemia among neonates.

ID: 271/OP15: 6

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: RARE DISEASES, NEONATOLOGY, EMERGENCY PEDIATRICS

Keywords: Congenital junctional ectopic tachycardia, cardiology, paediatrics, neonatology, ivabradine

Congenital junctional ectopic tachycardia in the local paediatric emergency department: a case report

Memon, Danyal; Larkin, Elizabeth; Varghese, Mathew
Our Lady of Lourdes Hospital, Drogheda, Ireland

Background: Congenital junctional ectopic tachycardia (CJET) is a rare but serious tachyarrhythmia which presents in the early neonatal or infancy stage. It carries a high rate of morbidity and mortality and is often incessant and refractory to common first-line treatment options.

Case Study: Presentation Summary: We present a case of a 14-day old neonate who presented to the local Paediatric Emergency Department with a fast heartbeat and 1 day of poor feeding reported by her parents. She had a persistent tachycardia at 300 beats per minute, which was not responsive to multiple cardioversion attempts with Adenosine and Amiodarone. She was transferred to the tertiary Paediatric Cardiology centre, where a trial of Ivabradine and Propranolol successfully cardioverted her to normal sinus rhythm. A diagnosis of CJET was subsequently made by the Paediatric Cardiologist for this neonate.

Learning Points Discussion: CJET is a rare but potentially serious clinical presentation, often presenting with a sudden and short history in otherwise healthy neonates. Significant clinical sequelae include severe cardiac failure, ventricular fibrillation, complete heart block, and tachycardia-induced cardiomyopathy. It is typically refractory to common first-line agents used in supraventricular tachycardia management, but control may be achieved with different medication regimes such as Ivabradine and Propranolol as in this reported case. Definitive management may involve catheter ablation at a later stage.

Session

OP16: Oral Presentations (OP-16)

Time: **Friday, 4 December 2020**: **17:30—18:30**	*Location*: **Virtual**

Presentations

ID: 260/OP16: 1

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: GENERAL PEDIATRICS, EMERGENCY PEDIATRICS, COVID-19

Keywords: Covid-19, Head, Admission.

Management of head injuries in under 2s: assessing the implementation of a clinical guideline during the covid-19 pandemic

Rooney, Darragh Eamonn; Cahill, Sally Jane; Fitzgerald, Michael
Department of Paediatrics, University Hospital Limerick, Ireland

Introduction: Head injury is a common presentation to the Paediatric Emergency Department (PED). Responding to the Covid-19 pandemic, practice guidelines in University Hospital Limerick changed so that children under 2 years were assessed directly by the Paediatric Medical Emergency Team, reflecting the NICE head injury assessment guidelines.

Aims: To determine the prevalence of head injury presentations in the under 2s cohort to the PED between April and June 2020 and to compare this with the same period in 2019. To assess admission rates, the number of neuroimaging studies, and the significance of the newly implemented guideline.

Methods: A retrospective audit of presentations of head injury (<2 years of age) to the PED was completed. The three months surveyed corresponded with a change in service provisions in PED due to the Covid-19 pandemic and compared to the same period in 2019. Data was compiled assessing presentation, admission and neuroimaging rates.

Results: Between April-July 2020, there were 53 presentations with a total of 21 admissions (39.6%), and 4 (7.5%) requiring neuroimaging. Frequency of admission by age was as follows; 0–6 months (100%), 6–12 months (66.6%), 12–18 months (20%), 18–24 months (9%). In 2019 there were 46 presentations, 4 admissions (8.7%) and 1 requiring neuroimaging (2.17%). Admissions by age group were as follows: 0–6 months (50%), 6–12 months (0%), 12–18 months (25%), 18–24 months (25%).

Conclusion: We have shown that the change in service provision for PED during the Covid-19 pandemic has increased our rates of admission, due to the introduction of a local guideline for head injuries under 2 years, in keeping with NICE Guidelines. We feel that this has improved patient safety and reduced the risk of adverse events. The care of patients under Paediatrics vs Surgical Teams prior to Covid-19 must also be considered as an influencing factor.

ID: 284/OP16: 2

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: GENERAL PEDIATRICS, INFECTIOUS DISEASES, PUBLIC HEALTH

Keywords: viral pandemics, sequelae in post-pandemic survivors

Physical illnesses in the aftermath of viral pandemics; a literature review

Negmi, Ahmed[1]; O' Donnell, Gillian[1]; Martin, Therese[1]; O' Gorman, Clodagh[1,2]; Murphy, Anne-Marie[1]
[1]Paediatrics, University Hospital Limerick, Ireland; [2]Graduate Entry Medical School (GEMS), University of Limerick, Ireland

Background and Objective: The unexpected emergence of COVID-19 which has globally spread in a short period, has led us to believe that this pandemic may rival those of 1957, 1968, 2009 and even the most severe of 1918. Although the development of modern medicine has aided in the acute management and improved prevention of infections, patterns of sequela in pandemic survivors continue to be recognized. The prevalence of physical manifestations amongst survivors extends beyond the resolution phase, impacting the quality of life. Recognizing similar patterns in historical viral pandemics and the associated ongoing sequelae highlight the need for improved awareness, infection control, prevention and response.

Method: In this review, we reflect on current literature involving viral historical pandemics and its aftermath on long-term physical morbidities amongst survivors. Past outbreaks studied encompass the Spanish, Asian, Hong Kong, and Swine flu.

Result: Previous literature highlight physical morbidities in post-viral pandemic survivors that clinically present in the nervous and cardiopulmonary systems. Despite overcoming the acute viral illnesses, neurological manifestations such as seizures, acute necrotizing encephalopathy, encephalitis, Guillain-Barré syndrome and Reye's syndrome were the most commonly recognized amongst survivors. Past pandemics also influence survivor mortality through cardiopulmonary

complications presenting as asthma, bronchiectasis, chronic rheumatic heart disease, myocarditis, and coronary heart disease. The physical sequela of these infectious diseases studied was found to last several months to years post-resolution.

Discussion and Conclusion: This literature review recognizes historical patterns in complications arising from the unforeseen evolution of viral pandemics and provides an overview of the relationship that exists between them and the ensuing evolution of physical sequelae amongst survivors. Limited by the available literature and the current occurrence of COVID-19, this report strengthens the imperative need for additional studies in this area to ensure improvements on infection control and prevention are attained in preparation for the next pandemic.

ID: 259/OP16: 3

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, ALLERGY, IMMUNOLOGY & RESPIRATORY, EMERGENCY PEDIATRICS

Keywords: Viral, Wheeze.

Viral induced wheeze, an unusual treatment approach.

Rooney, Darragh Eamonn; Linnane, Barry
Department of Paediatrics, University Hospital Limerick, Ireland

Background and Aims: Viral induced wheeze is a common cause for presentation to the Paediatric Emergency Department, particularly in children under two years of age. Treatment regimens focus on supportive therapy. This case report aims to highlight an unusual treatment approach.

Methods: A retrospective chart review was conducted.

Case Study: A 2 years and 10 months old boy who presented to ED with a two-day history of coryzal symptoms, a dry cough, tachypnoea, moderately increased work of breathing and wheezing. He has had multiple previous admissions since 8 months of age, all following a similar pattern. Treatment involves a trial of salbutamol and hypertonic saline nebulisers combined with high flow oxygen to maintain saturations above 94%. An individual treatment algorithm has been designed for him with a low threshold for progression to Paediatric HDU and the use of non-invasive ventilation (NIV) with CPAP and, if needed, progression to BiPAP. He has a history of deteriorating rapidly and dramatically. CT investigation has shown some sub-segmental atelectasis and flexible bronchoscope displayed normal airway anatomy with no mechanical cause found.

Conclusion: Viral induced wheeze is a common paediatric presentation, particularly in children attending crèche and school. The standard treatment of oxygen, nebulised hypertonic saline and salbutamol has little effect on this patient and he can rapidly progress to marked respiratory distress. He has had significant investigation for a mechanical cause and has had little improvement with trials of prednisolone or magnesium sulphate. His case presentation has led to a change in practice and the installation of a Trilogy ventilator in the Paediatric HDU in UHL. His parents are trained to recognise signs of impending respiratory distress and will attend to ED with an NIV mask that fits him. The use of acute NIV in respiratory distress for this challenging cohort of children shows promise.

ID: 264/OP16: 4

Type 3—Oral Presentation: Case Report (description of case/s with useful learnings for clinicians)

Topics: GENERAL PEDIATRICS, NUTRITION & DIETS, GASTROENTEROLOGY

Keywords: Congenital heart disease, breast/chest feeding

Breast/chest feeding support to babies with congenital heart disease

Colmenares, Mariana
Asociación de Consultores en Lactancia Materna ACCLAM, Mexico

Introduction: Breastfeeding can sometimes be challenging for some families even when the baby and mother are healthy. The Immunological and nutritional benefits provided by breast milk must be considered when feeding any baby, it is by far the best start for babies that have any other disease where they can tend to suffer from multiple respiratory infections and other medical complications putting babies health, wellbeing and lives at risk. When there is a baby with a congenital cardiac disease we can face a lack of evidence and homogenous practices regarding breastfeeding. Many mothers feel helpless and many surgeons and cardiologists are not convinced that breastfeeding is better and easier for the infant with congenital heart disease. They are uncomfortable with not knowing the volume the baby consumes and are not used to observing oxygen saturation and heart rate when the baby Is feeding at the breast.

Challenges: Current challenges in treating patients with chronic conditions include the prioritization of breastfeeding, identification of the most effective nutritional interventions, and the prevention or recovery of acquired growth failure. Children with congenital heart disease who breastfeed have better growth, shorter hospital stays, and higher oxygen saturations than children with congenital heart disease who receive formula.

Conclusion: It is necessary to support these families with evidence-based information to promote and support breastfeeding to all mothers and babies. Create programs to meet the needs of these vulnerable babies and train surgical and pediatric staff of the neonatal surgery unit so they can support and facilitate multidisciplinary work.

ID: 277/OP16: 5

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: ENDOCRINOLOGY, PUBLIC HEALTH

Keywords: medically compromised, diabetes, dental

Paediatric dental implications of type 1 diabetes mellitus

Alawsi, Fahad; Barry, Siobhan
Manchester University NHS Foundation Trust, United Kingdom

Background and Objectives: Diabetes mellitus (DM) represents a group of metabolic diseases that are characterised by hyperglycaemia due to a total, or relative, lack of insulin secretion and insulin resistance or both. Type 1 DM is also known “insulin-dependent” DM, because of an absolute requirement for exogenous insulin supplementation. This is most common amongst children and young adults, with the first presentation commonly below the age of 20 years. Type 1 DM results from the autoimmune destruction of pancreatic β-cells, resulting in the inability of the body to produce insulin in response to glycaemic stimuli. Dentists work daily with diagnosed and undiagnosed DM children and need to be prepared to manage relevant implications.

Case Study and Methods: We reviewed key aspects of DM Type 1 in the paediatric dental patient and highlighted aspects of their conditions and management most relevant to the dental and head and neck practitioner.

Learning Points and Discussion: DM may cause significant mortality and morbidity through microvascular and macrovascular damage. This is often progressive dependent upon glycaemic control, duration of the condition or the sub-type of diabetes. Microvascular damage frequently leads to greater morbidity, with associated peripheral and autonomic neuropathy, nephropathy, retinopathy and cataracts. Macrovascular damage is the main driver of increased mortality with a higher risk of atherosclerotic and thrombotic pathology such as myocardial infarcts, peripheral vascular disease and stroke. Wound healing may be significantly impaired and infection rates increased in the diabetic patient with a microvascular disease or poor glycaemic control. Oral complications include: xerostomia, burning mouth and/or tongue, candida infection, altered taste, progressive periodontal disease, dental caries, acetone breath, oral neuropathies, parotid enlargement, sialosis and delayed wound healing. Well-controlled DM is not a contraindication for orthodontic treatment, however, orthodontic treatment should be avoided in patients with poorly controlled DM as they are more likely to suffer from periodontal involvement. Diabetic-related microangiopathy can affect the peripheral vascular supply, resulting in unexplained toothache, tenderness to percussion or potentially loss of vitality. Patients should be advised to eat a usual meal and take their medication as usual prior to their appointments and the practitioner should always be vigilant to hypoglycaemic medical emergencies and respond appropriately.

ID: 265/OP16: 6

Type 2—Oral Presentation: Literature review or guideline review (evaluation of important topics)

Topics: GENERAL PEDIATRICS, NEONATOLOGY, EMERGENCY PEDIATRICS

Keywords: weight, breastfeeding, insufficient glandular tissue

Lactation failure from insufficient glandular development: risk factors, signs and support

Colmenares, Mariana

Asociación de Consultores en Lactancia Materna ACCLAM, Mexico

Introduction: Breastfeeding is the normative way to feed babies all over the world. We have access to tons of scientific evidence that supports it. Advocates of breastfeeding such as health care professionals that protect, promote and support the breast/chest feeding dyad can struggle sometimes with women or babies who cannot breastfeed as the World Health Organization suggests. Mothers with low milk supply are often supported by family, friends and health care with well-meaning advice and remedies to help them do their best. Women who have insufficient glandular tissue (IGT) struggle with their milk supply, despite good breastfeeding management. Is common to see families with this issue in the second or third lactation failure without really understanding what might be going wrong. These babies can have dehydration in the neonatal period, hypernatremia or even death without anybody that could help with a correct diagnosis or help with achievable goals that can benefit both, mother and baby.

Discussion: It is of great importance to help with an accurate diagnosis that can benefit also psychologically and choose to continue breastfeeding with breast/ chest supplementation.

ID: 307/OP16: 7

Type 1—Oral Presentation: Clinical audit, Prospective survey, Clinical Study

Topics: INFECTIOUS DISEASES

Keywords: respiratory tract, viral infections, children

Clinical characteristics of children infected with respiratory pathogens during the pre-pandemic era

Kılıç, Ömer
Eskisehir Osmangazi University Faculty of Medicine, Turkey

Background: Respiratory tract infections are an important cause of morbidity and mortality in developing countries. Knowing the cause of the infection is important for planning treatment and isolation measures. It can also help limit unnecessary antibiotic use.

Methods: This was a retrospective study which took place between December 2018 and February 2020 among pediatric hospitalized patients with a positive multiplex PCR test for respiratory pathogens (BioFire®, FilmArray® Respiratory 2 Panel PCR Panel; United States). Detailed clinical and demographic findings were evaluated from medical records.

Results: A total of 245 children (143 boys and 102 girls) aged between 1 month to 18 years (median age: 35 months) were included. Among the patients, 136 (55.5%) had an underlying condition. Among the 258 tests performed, 212 were positive for one virus, 42 were positive for two viruses, and four were positive for three viruses. The frequencies of viruses were as follows: Rhinovirus/enterovirus 28.3% (n = 87), influenza A 25.3% (n = 78; 60 of the H1-2009), influenza B 5.9% (n = 18), RSV 14.9% (n = 46), coronavirus 7.5% (n = 23; HKU1 in six cases, NL63 in 5 cases, 229E in 5 cases, and OC43 in 7 cases), adenovirus 6.8% (n = 21), parainfluenza virus 5.9% (n = 18), and human metapneumovirus 3.2% (n = 10). Coronaviruses were the 4th leading cause of positive tests in children, 12 of them were alone, 11 of them were coinfected with other viruses. Six children with coronavirus (HKU1, NL63, 229E, OC43) required admission to the intensive care unit, and four of them had an underlying condition.

Conclusions: Respiratory viruses are important causes for hospitalization in children, especially in those with underlying conditions. Rapid molecular tests are used for the aim to identify viral causes. In the pre-pandemic era, coronaviruses were the fourth leading causes of hospitalization among children due to respiratory viruses, and approximately one-fourth of them required intensive care.

Session

PT1: Poster Presentations (PT-1)

Time: **Thursday, 3 December 2020**: **11:00—12:00**	*Location*: **Virtual**

Presentations

ID: 216/PT1: 1

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Fragile X syndrome; developmental delay;

A case report of Fragile X syndrome

Pimenta, Sofia Alexandra Morais; Ferreira, Adriana; Soares, Joana; Sousa, Eulália; Soares, Sara; Machado, Leonilde

Department of Pediatrics, Centro Hospitalar Tâmega e Sousa, Portugal

Background: Fragile X syndrome (FXS) is an X-linked disorder and the most common inherited cause of intellectual disability. Males are usually more affected than females. The syndrome is usually not diagnosed until 8–9 years of age since the clinical manifestations of FXS are greatly attenuated in childhood (minor dysmorphic features and developmental delay). Characteristic features during adolescence are an elongated face, prominent jaw, large ears, macroorchidism, and a range of behavioural anomalies and cognitive deficits. The diagnosis of FXS is confirmed by molecular genetic testing of the FMR1 gene.

Case Study: The authors report a case of a 15-year old caucasian girl followed in a Pediatric outpatient clinic due to autism spectrum disorder. She was the second daughter of healthy non-consanguineous parents. From her familiar history stand out her brother with learning difficulties and a cousin with developmental delay and an autism spectrum disorder. Mother and aunt had a premature ovarian failure. The girl presented a global development delay since her first months of life, moderated cognitive impairment and behaviour problems. Cerebral MRI, CGH-array and karyotype previously performed were normal. On physical examination, she had a macrocephaly, long face with protruding ears and a prominent jaw. She was referred to Genetic consultation for further evaluation. The molecular genetic study showed a full mutation of the FMR1 gene (more than 200 repetitions of the CGG triplet) which was consistent with the diagnosis of fragile X syndrome.

Discussion: Usually, females show milder characteristics than males with the syndrome, so the diagnosis could be difficult. The early recognition of this FXS by the pediatrician and health care providers is of tremendous importance to an early multidisciplinary approach. Management of FXS may include special education, speech, occupational and sensory integration training in order to improve the patient and family lives.

ID: 134/PT1: 2

Type 4—poster presentation

Topics: GENERAL PEDIATRICS, EMERGENCY PEDIATRICS

Keywords: Major Incident, MI, MI protocol, PEM

Analysis of understanding and response to a Major Incident at Royal Hospital for Children, Glasgow

Campbell, Charlotte; Stirling, Joanne; Pearce, Hilary
Greater Glasgow & Clyde, NaHS Scotland, United Kingdom

Background: A Major Incident (MI) can be defined as any event where the impact cannot be handled within the routine service arrangement. During June and July 2020 there were two occasions on which the MI protocol was activated at the Royal Hospital for Children, Glasgow. Reflecting on these events this audit looked to gauge awareness and preparedness for future incidents.

Methods: An online survey was distributed to medical staff working within General Paediatrics and the Emergency Department (ED). Data collected included role awareness of the protocol, where to report to in the event of an MI, anticipated role during an MI, what happens after an MI stands down and whether it would be useful to have further training.

Results: Responses from 33 medical staff were collated from a broad range of roles. Overall only half (16 of 33) of respondents were aware of the protocol and where to find it. Furthermore, only 10 identified the correct meeting point of the “Hospital at Night” base; 11 opted for ED; 1 opted for

the outpatient area; 10 were unsure where to report to. In terms of anticipated roles, the senior decision-makers (Paediatric ST6-8 and Consultants) frequently mentioned leadership and management roles with involvement in coordinating patient flow and discharges. More junior staff primarily anticipated working with familiar roles and tasks (blood, intravenous access, prescriptions) and assisting in ED, even if usually based elsewhere. After an MI stands down 55% (18 of 33) mentioned a debrief as the next step. A further 10 responded with a variant of "unsure" or omitted a response. The remaining 5 suggested standing down the MI and resuming normal duties. All participants (100%) answered "yes" when asked if further teaching and training in this area would be useful.

Conclusions: Our results demonstrate a lack of awareness as well as a crucial and desired role for further training in the event of an MI being declared. Taking on board this feedback we have delivered ongoing and formalised inclusion of guidance in the induction programme for new medical staff joining the Paediatric department. Outside the scope of this audit, there are considerations for potential "knock-on" effects for both inpatient and outpatient groups. In addition, as with all difficult situations, it is vital to consider self-care and wellbeing and ensure all staff have the opportunity for reflection and adequate support both during and after an MI.

ID: 209/PT1: 3

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Facial pain, trigeminal neuralgia, TMJ pain

Case Series: Differential diagnosis of unilateral facial pain

Foles, Ana Isabel; Afonso, Anaísa; Moreira, Biana; Brito, Teresa; Veiga, Estela; Oliveira Freixo, José
Serviço de Pediatria, Centro Hospitalar de Setúbal, Portugal

Background: The diagnosis of patients with facial pain can prove to be challenging. The most common causes are post-traumatic, neuralgias, dental pathology, sinusitis and temporomandibular joint (TMJ) syndrome. Pediatric trigeminal neuralgia is a rare condition.

Case Study 1: 16-years-old female, presented with recurrent paroxysms of unilateral electric-shock-like facial pain, aggravated by speaking and mastication movements. Associated with intermittent lower-face asymmetry and lachrymation. No fever or inflammatory signs. Physical examination showed pain distribution in the V2 and V3 territory of the trigeminal nerve and a malar trigger point. Facial asymmetry was caused by a painful contracture, facial paresis was excluded. No active or healing herpetic lesions were observed. The remaining exam was normal. Cranial CT and laboratory analysis were normal. The main diagnostic hypothesis was trigeminal neuralgia. Cranial and neck MRI excluded any structural lesions, such as central nervous system lesions or compression of the trigeminal nerve root. The patient was treated with Carbamazepine for 5 weeks with complete pain remission.

Case Study 2: 11-years-old female, with multiple admissions to the emergency department for unilateral constant facial pain with variable intensity, which seemed to aggravate by mastication movements and tooth hygiene. No history of fever. Physical examination showed pain and tactile hypoesthesia that appear to locate at the level of V1, V2 and V3 of the left trigeminal nerve, no segmental paresis on the face. Both TMJ palpation and mouth opening against resistance was painful. The patient also showed cervical pain on palpation, without irradiation to the face, apparently caused by a muscle contracture from adopting an antalgic position. No inflammatory signs on the face. The main diagnostic hypothesis was a TMJ disorder. Laboratory results were normal. The patient was initially treated with Carbamazepine and Gabapentin. Clinical improvement started after treatment with a muscle relaxant. Cranial and TMJ-MRI revealed nonspecific

trabecular edema of the left mandibular condyle, hypothesizing an early-stage joint inflammatory process. Later, the patient revealed a recurrent ankle pain with inflammatory signs and began follow-up in the pediatric rheumatology department.

Learning Points Discussion: The main symptom in the presented cases was unilateral facial pain, without any known infectious focus. In both cases the pain appeared to respect the innervation territory of the trigeminal nerve, however only in the first case, the characteristics of the pain were consistent with trigeminal neuralgia. These case series should be a reminder of the importance of an extensive and careful anamnesis and a thorough physical examination.

ID: 215/PT1: 4

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, INFECTIOUS DISEASES

Keywords: CRP ESR Osteo-articular infections complication

CRP versus ESR in predicting the type of paediatric osteoarticular infection and the likelihood of complications

Hamid, Eiman; Elkalaf, Mohamed; Elzain, Maisaa; Shehzad, Saira; Al-Kharraz, Khalid; Khan, Shabina
Hamad Medical Corporation, Qatar

Introduction: Osteo-articular infections (OA) remain a major cause of morbidity in children. CRP is preferred to ESR as it is more sensitive in diagnosing OA and declines more rapidly upon treatment. We wanted to determine if CRP would also be better at predicting the type of OA and the presence of complications compared to ESR.

Methods: A retrospective study was conducted in 3 paediatric units across the country for children between 1 month to 14 years with a discharge diagnosis of OA between June 2016 to May 2018. Data regarding demographics, clinical presentation, blood culture results, acute phase reactants, type of infection, treatment and complications were analysed using statistical tools.

Results: A total of 65 patients met the inclusion criteria, with a male to female ratio of 1.6:1. The mean age was 5.7 years. The classification and number of different OA are outlined in table 1. 24.6% had a positive blood culture with staphylococcus aureus and group B streptococcus being the most common. More than half (58.5%) needed surgical intervention. OA complications including septic shock, deep vein thrombosis, the osteoarticular collection were present in 20% of the patients. 43.8% of blood culture-positive patients had complications vs 13% of those who had a negative blood culture. (P-value = 0.02) The mean CRP and ESR in patients with different kinds of OA are outlined in table 1. The overall p-value for mean CRP is 0.026 in differentiating OA sub-types with combined infection of both bone and joint having a higher mean CRP than other types. The mean CRP in patients with complications was 134.5 mg/dl compared to 82.85 in those without

Table 1.

Mean value of CRP and ESR in different osteo-articualr infections

acute phase reactant	Type of osteo-articular infection	Number of patients	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum	overall p value
Admission CRP in mg/dl	acute osteomyelitis	23	78.83	65.918	13.745	50.32	107.33	5	248	
	acute septic arthritis	22	94.82	55.629	11.860	70.15	119.48	7	194	
	Combined osteomyelitis and septic arthritis	12	142.42	95.788	27.652	81.56	203.28	32	316	
	chronic osteomyelitis	4	7.00	8.000	4.000	-5.73	19.73	3	19	
	sub-acute osteomyelitis	4	105.25	141.848	70.924	-120.46	330.96	9	316	
	Total	65	93.18	77.686	9.636	73.94	112.43	3	316	0.026
Admission ESR in mm/hr	acute osteomyelitis	23	31.65	27.028	5.636	19.96	43.34	2	95	
	acute septic arthritis	19	49.68	40.454	9.281	30.19	69.18	2	140	
	Combined osteomyelitis and septic arthritis	11	42.00	31.064	9.366	21.13	62.87	3	110	
	chronic osteomyelitis	3	25.00	22.000	12.702	-29.65	79.65	3	47	
	sub-acute osteomyelitis	3	26.00	24.062	13.892	-33.77	85.77	3	51	
	Total	59	38.76	32.670	4.253	30.25	47.28	2	140	0.374

complications. (p-value 0.095). For ESR, this difference was 45.1 mm/hr (with complications) vs 37.2 (without complications), p-value 0.458. Further analysis revealed a CRP cut off of 90 mg/dl had a 61% sensitivity in detecting complications with the specificity of 58%, Area under the curve (AUC) 0.66 (CI = 0.481–0.844). A CRP of less than 35 mg/dl had a sensitivity of 85%. This means that a CRP less than 35 mg/dl was unlikely to be associated with complications. ESR was not found to be a reliable predictor for complications with AUC = 0.561 (CI 0.36–0.76).

Conclusions: CRP was superior to ESR in detecting patients with combined septic arthritis and osteomyelitis and predicting patients who need to be closely monitored for complications. Moreover, chronic osteomyelitis patients may not manifest with a high CRP.

ID: 190/PT1: 5

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: ASD

High functioning students with autistic spectrum disorder (ASD) are they missed diagnosed? Impact of autistic spectrum disorder awareness program among teachers in Qatar

Kamal, Madeeha[1]; Yahya, Marva[3]; Al-Shibili, Schahla[3]; Al-Hajjaji, Mohamed[1]; Al-Kohji, Sadriya[4]; Ali, Samer[2]; Hassan, Manasik[3]

[1]Sidra Medicine, Qatar; [2]Qatar University, Qatar; [3]Hamad Medical Corporation, Qatar; [4]PHCC, Qatar

Introduction: Autism or autism spectrum disorder (ASD) defined as persistent deficits in social communication and social interaction across multiple contexts with restricted repetitive patterns of behaviour, interests, or activities. Symptoms must be present in the early developmental period and causing clinically significant impairment in social, occupational or other important areas of current functioning with no explanation by intellectual disability (intellectual developmental disorder) or global developmental delay.

Objective: The goal of this project was to educate the parents and teachers about ASD (definitions, symptoms and signs and diagnostic criteria), as well as educate the primary school teachers and social workers about the importance of diagnosing ASD in children and its impact on children's

Table 1.

Pre survey				Post survey		
Autistic spectrum disorder (ASD) is an inherited disorder (run in the family)	No 52%	Yes 25.7%	I am not sure 20.7 %	Autistic spectrum disorder (ASD) is an inherited disorder (run in the family)	No 85%	Yes 8.6%
Autistic spectrum disorder is an mental disorder	Yes 42%	No 33.6%	I am not sure 22%	Autistic spectrum disorder is an mental disorder	No 85.7%	Yes 8%
Autistic spectrum disorder is an developmental disorder	Yes 52 %	No 25 %	I am not sure 21%	Autistic spectrum disorder is an developmental disorder	Yes 90%	No 4%
Autistic spectrum disorder is caused by poor parenting	No 50%	Yes 31%	I am not sure 17%	Autistic spectrum disorder is caused by poor parenting	No 86 %	Yes 7.1 %
Autistic spectrum disorder caused by excessive screen time	Yes 61%	No 20%	I am not sure 16%	Autistic spectrum disorder caused by excessive screen time	Yes 85%	No 9 %
Autistic spectrum disorder start to appear below 3 years	Yes 60%	No 15.7%	I am not sure 23%	Autistic spectrum disorder start to appear below 3 years	Yes 87%	No 6.4%
Child with autistic spectrum disorder has poor communication skills and cannot express him self	Yes 85%	No 2.9%	I am not sure 11.4%	Child with autistic spectrum disorder has poor communication skills and cannot express him self	Yes 88.6%	No 5 %
Children with ASD don't respond to their name frequently	Yes 70%	NO 11.4 %	I am not sure 18%	Children with ASD don't respond to their name frequently	Yes 90%	No 5.5 %
Children with ASD facing difficulty with making friends	Yes 78%	No 8.6%	I am not sure 12 %	Children with ASD facing difficulty with making friends	Yes 90%	No 3.6%

Table 2.

Pre survey				Post survey		
Children with ASD will have speech delay	Yes 72%	No 4.3%	I am not sure 15%	Children with ASD will have speech delay	Yes 89%	No 5 %
Children with ASD have repetitive gestures	Yes 73.5%	No 4.3%	I am not sure 13.6%	Children with ASD have repetitive gestures	Yes 86%	No 7.1 %
Children with ASD prefer to play alone	Yes 107	No 5.7 %	I am not sure 9.3%	Children with ASD prefer to play alone	Yes 90%	No 3.6%
General interests of children with ASD are restricted	Yes 61%	No 10.7%	I am not sure 19.4 %	General interests of children with ASD are restricted	Yes 91%	No 3%
Children with ASD maintains minimal eye contact with others	Yes 70%	No 5%	I am not sure 15.7%	Children with ASD maintains minimal eye contact with others	Yes 86%	No 7.1%
General eating habits of Children with ASD are normal	No 33.6%	Yes 32%	I am not sure 25%	General eating habits of Children with ASD are normal	Yes 89.3% Are abnormal	No 4.3%
Sleeping time is less in Children with ASD	Yes 36.4%	NO 15.7%	I am not sure 38%	Sleeping time is less in Children with ASD	Yes 90%	No 3%
Children with ASD is rigid to change	Yes 60%	No 5%	I am not sure 25.7%	Children with ASD is rigid to change	Yes 90%	No 3.5%
Children with ASD throws frequent bouts of anger	Yes 67%	No 5%	I am not sure 20%	Children with ASD throws frequent bouts of anger	Yes 90%	No 3 %

Table 3.

Pre survey				Post survey		
How to deal with an autistic child	need attention from family and the whole community 61%	I am not sure 15%	Regular like other children 10 7.1%	How to deal with child with ASD	Yes 90% need from every one	No 3.6%
Children with ASD can attend to	normal stream school with integration program 43%	special program with special program for them 25.7%	I am not sure 10.7%	Which school children with ASD can attend	Yes 90% Special program with them	No 3.6%
Teacher and parents working with Children with ASD need	need special training 82.1%	I am not sure 7.9%		Training for teacher and parents dealing with children with ASD	Yes 90% Special training	No 3.6%
children with ASD can by identified	all of the above 58.6%	By doctor 20%	parents 5.7%	How we can identify children with ASD	Yes 89.3% All of the above	No 4.3%
Management of autistic children	multidisciplinary team 72.1%	medication and behavior therapy 10%	medication 5.7%	How to manage children with ASD	Yes 90.7% multidisciplinary team	No 3%
How to deal with an autistic child	need attention from family and the whole community 61%	I am not sure 15%	Regular like other children 7.1%	How to deal with child with ASD	Yes 90% need from every one	No 3.6%
Children with ASD can attend to	normal stream school with integration program 43%	special program with special program for them 25.7%	I am not sure 10.7%	Which school children with ASD can attend	Yes 90% Special program with	No 3.6%
Teacher and parents working with Children with ASD need	need special training 82.1%	I am not sure 7.9%		Training for teacher and parents dealing with children with ASD	Yes 90% Special training	No 3.6%
children with ASD can by identified	all of the above 58.6%	By doctor 20%	parents 5.7%	How we can identify children with ASD	Yes 89.3% All of the above	No 4.3%

education and when to seek medical advice during the awareness month of autism. Method Collaborative work was done between Hamad Medical Corporation, Primary Healthcare Institution and the Ministry of Education in April 2019 (international autism awareness month). The program was organized targeting the primary and intermediate Qatari governmental schools; most of them have a special needs program for children with autism and learning disabilities (integrated education program at school). Eight schools enrolled in this workshop, primary and middle schools for boys and girls with 170 attendees. The program consisted of interactive sessions and pre and post-survey concerning ASD information and the Pediatrician gave the Didactic lectures. Pre and post-session surveys were distributed to the attendees. It includes a wide range of questions to explore their knowledge in autism, its signs and symptoms, how to deal with an autistic child in school and home Table 1, Table 2 and Table 3.

Results: Total of 170 filled the survey • Teachers were (75.7 %) • Social worker /nurses (10%) • Mother (4.3 %) • Qataris attended was 35 % Results showed that 90% of the attendees reflected positively on this workshop There was a significant increase in knowledge about children with Autistic spectrum disorder and how to deal with them as well as proper referral for diagnosis and intervention (full result in the tables)

Conclusions: This workshop shed the light on important yet underdiagnosed disease among school-age children, the teachers and school personnel felt comfortable in detecting these children and working with them. The future goal is to establish a national autistic spectrum disorder awareness program among parents and teachers in all schools targeting primary, middle and secondary schools in Qatar, aiming to address the need of early identification of ASD for intervention.

ID: 148/PT1: 6

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, HEALTH ECONOMICS & MANAGEMENT, ADOLESCENT MEDICINE

Keywords: HPV infection, HPV vaccine, cervical cancer, knowledge, awareness

Knowledge of Human Papillomavirus (HPV) infection and vaccination among a group of adolescent school children in a suburb of Sri Lanka

Rodrigo, Ginige Dushmanthi Ishani; Ushara, Chani; Vyshnavy, V; Malalagama, Chamanthi; Wijesinghe, Raveen; Jayasekera, Hasith; Priyadarshanie, Nirmala

General Sir John Kotelawala Defence University

Introduction: Human Papillomavirus (HPV) is the most prevalent sexually transmitted infection worldwide and is responsible for 99% of cervical cancer among Sri Lankan women. The HPV vaccine was introduced to the National Immunisation Programme of Sri Lanka targeting adolescent school girls in 2017. Increasing the knowledge and awareness regarding HPV infection and vaccination among the target population will increase the acceptance of the vaccine programme.

Objectives: To assess the knowledge and awareness regarding HPV infection and vaccination among adolescent school children

Material and Methods: A descriptive cross-sectional study was conducted among adolescent school children aged 14–16 years studying in selected government schools in Kesbewa Educational Division in Sri Lanka. Stratified random sampling was used to select a representative sample of adolescents of both genders from 4 types of government schools. Pre-tested, self-administered questionnaires were used to collect data. A scoring system was developed to categorise knowledge and awareness. SPSS version 23 was used for analysis.

Results: 450 adolescent school children aged 14–16 years (270 male;180 female) from Type 1A and 1B (20%), Type 1C (60%) and Type 2 (20%) schools completed the study. Only 139 (30.9%) have heard about HPV infection. Mean knowledge score was 6.10 ± 4.332 (range 0–18), with 113 (81.3%) categorised as having poor knowledge. 137 (30.4%) had heard about the HPV vaccine, the main source of information being mass media. The mean awareness score was 3.12 ± 2.997 (range of 0–11). The majority (63.6%) expressed an interest to receive further education on HPV infection and vaccination. A statistically significant association was observed between adolescents' knowledge of HPV infection and vaccination with their school grade and occupation of parents ($p = 0.000$, 95% CI).

Conclusions: The overall knowledge of HPV infection and vaccination among adolescents in the population studied was poor, but most expressed an interest to learn more.

Recommendation: A well-designed, systematic health education and health promotion programme to improve knowledge regarding HPV infection and vaccination among adolescents need to be implemented in Sri Lanka. Health care workers, the public health system and relevant government authorities should collaboratively address the gap of knowledge and awareness regarding HPV infection and vaccination among adolescents to enhance the knowledge and awareness among youth.

ID: 199/PT1: 7

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, INFECTIOUS DISEASES

Keywords: methicillin-resistant staphylococcus aureus, osteomyelitis, septic arthritis

Methicillin-resistant Staphylococcus aureus septic arthritis and osteomyelitis in a previously healthy 15-year-old boy

Ferreira, Adriana[1]; Sousa, Eulália[1]; Monteiro Pereira, Joana[2]; Gouveia, David[2]; Monteiro, Cláudia[1]; Ruas, Rogério[3]; Machado, Ângela[1]

[1]Pediatrics Department, Centro Hospitalar do Tâmega e Sousa, Portugal; [2]Orthopaedics Department, Centro Hospitalar do Tâmega e Sousa, Portugal; [3]Infectious Diseases Department, Centro Hospitalar do Tâmega e Sousa, Portugal

Background: Staphylococcus aureus is the major cause of septic arthritis and osteomyelitis in children. Over the last years, the prevalence of Methicillin-Resistant Staphylococcus aureus (MRSA) has increased worldwide. However, there is limited data about the prevalence in Portuguese children.

Case Study: We describe a case of a 15-year-old-boy, previously healthy, who came to the emergency department complaining of fever and left knee pain. Physical examination revealed a warm and slightly swollen knee with painful and limited flection. Portal of entry was not identified. Laboratory findings included leukocytosis, high C-reactive protein and erythrocyte sedimentation rate. Ultrasound and computed tomography of the knee were inconclusive. As clinical and laboratory findings were worsening it was decided to drain and perform joint lavage by arthrotomy and initiate intravenous flucloxacillin. Five days after admission, magnetic resonance showed osteomyelitis and abscess of the distal part of the femur. The patient was submitted to abscess drainage and debride devitalized tissue, and bone drill. Blood and fluid joint cultures isolated MRSA, so the antimicrobial therapy was changed to intravenous vancomycin and maintained for two weeks. The patient was discharged with oral Trimethoprim/Sulfamethoxazole. Gradual improvement of symptoms and knee function was observed.

Conclusions: The classic risk factors for MRSA infection are not always present as shown in this case report. Several reports indicate that these infections in healthy children are increasing worldwide, however regional variations exist. Therefore, local epidemiological studies are required to determine the rate of community-acquired MRSA in order to adjust empirical therapy if needed.

ID: 114/PT1: 8

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: safety huddle, patient safety, communication, situational awareness, escalation

Night safety huddles implementation in a tertiary Paediatric ward

Ravindran, Rajashree; Appleby, Gayle; Honsel, Maik; Jogia, Drupti

St George's University Hospital NHS Trust, London, United Kingdom

Background: Huddles are central to improving communication and facilitating situational awareness in clinical teams. Day safety huddles were successfully embedded in a tertiary paediatric ward in a large teaching hospital in March 2018. Staff feedback highlighted the importance of night huddles to ensure patient safety at all times. Hence, night huddles were introduced in March 2019.

Aims: The aims of the night huddle project were: To ensure paediatric huddle occurs every night shift so that patient safety issues are communicated to clinical teams and appropriate escalation plans made. To evaluate participant feedback.

Methods: A formal night huddle process was set up including time, venue and duration (10 minutes). The huddle was attended by nurses in charge of three children's wards (3) and paediatric doctors (3). Huddle criteria were adapted from the Royal College of Paediatrics and child health (UK) SAFE (Situational awareness for everyone) recommendations. The process was communicated to paediatric team members at handover and by emails. Audit data was collected from the sheet used to record daily huddles from March to December 2019.

Results: The audit showed that after three months, the night huddle culture was embedded. From June 2019, the recorded huddles ranged from 24–30 per month. The average duration of the huddle was between 9–14 minutes per month. As expected, the most frequently discussed criteria were sick patients (835). This was followed by expected admissions (369), family concerns (205), patients triggering suspected sepsis (185), early morning discharges (170), staffing issues (161) and PICU stepdown patients requiring review (85). Feedback was gathered from 16 doctors and 6 ward nurses in charge. 100% (6) of nurses felt huddles helped to escalate parental concerns to the medical team. 91% (20) of participants felt they are an effective tool to communicate patient safety concerns and early escalation of sick patients. 86% (19) of participants found it easy to attend night huddles despite the busyness of the wards. Only 50% (11) of participants felt the night huddles were performed in a time-effective manner Figure 1.

Conclusions: Safety huddles improve communication and team working which enhance patient safety. Night huddles have now become a standard practice for paediatric staff in our department. Following participant feedback, huddle training has been included in the paediatric doctor's induction programme to ensure they are performed in a standard time-effective manner Figure 2.

Figure 1.

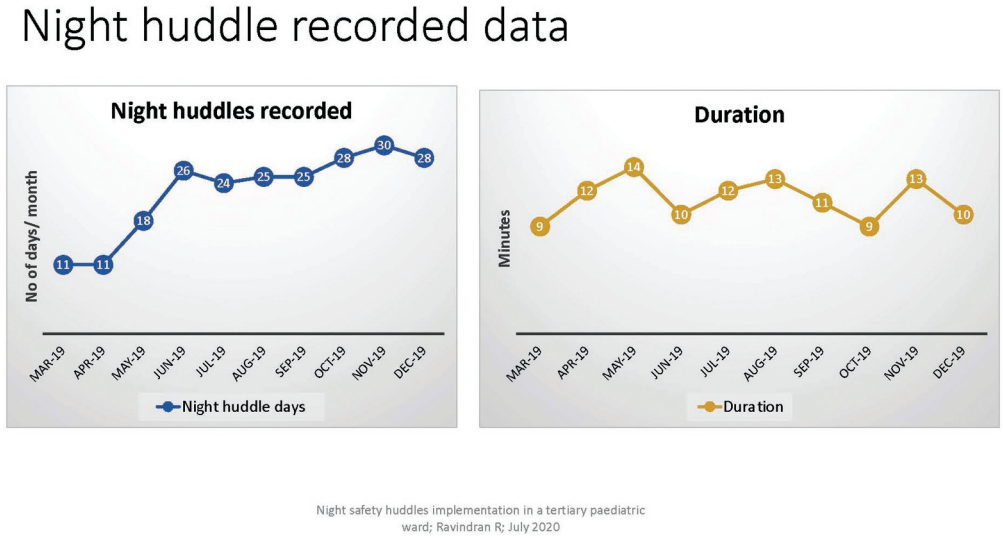
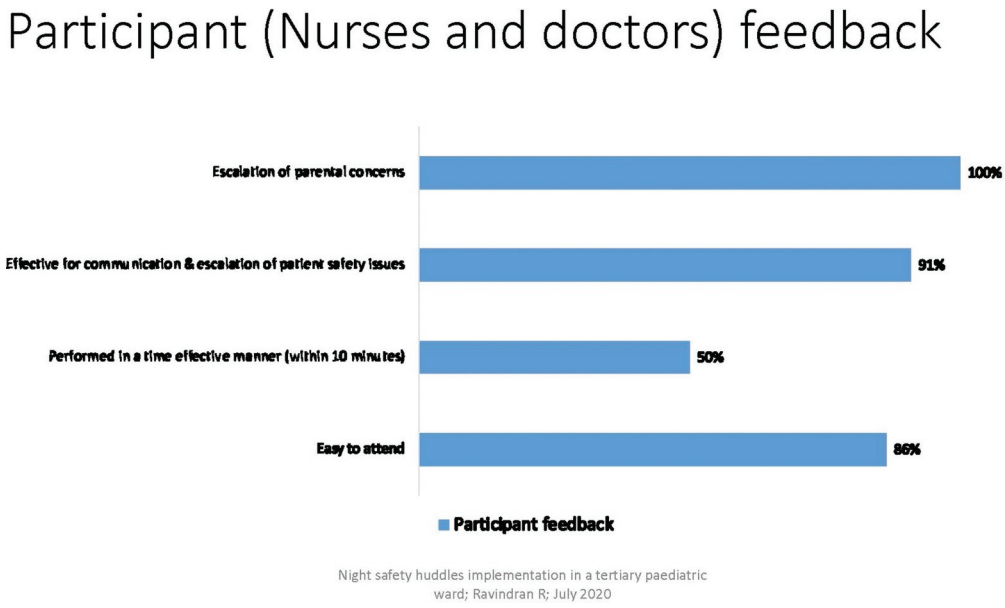


Figure 2.



ID: 185/PT1: 9

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: linear growth, vesicoureteral reflux

The effect of High-grade versus Low-grade vesicoureteral reflux (VUR) on linear growth and weight gain in infants and young children.

Elsiddig, Sohair; Soliman, Ashraf; Nassar, Suzan; Abusamaan, Sandra
Hamad Medical Corporation, Qatar

Introduction: Variable studies addressed the growth retarding effect of VUR and urinary tract infection (UTI) in children. We studied the effect of high-grade VUR (H-VUR) versus low-grade VUR (L-VUR) on linear growth and daily weight gain in children younger than 5 years of age.

Methods: Growth parameter (Weight, length/height, Height standard deviation (HtSDS), BMI standard deviation BMISDS and weight gain per day (WGD) were retrospectively studied in 42 children with various grades of VUR. Children were classified into two groups based on VUR grade. Low-grade (L-VUR) grade 1and 2 (N = 22) versus High-grade (H-VUR) grade 3, 4 and 5. (N = 20). Those children were presented with atypical or recurrent UTI and were further investigated based on local UTI Guidelines. Growth parameters were followed for 18 months Table 1.

Results: Forty-two children were studied (67% female). Sixty-two % presented with Atypical UTI and 38% had recurrent UTI. Children with H-VUR and L-VUR group; had normal growth parameters and continued to have normal HtSDS and BMISDS at the end of the follow-up period(18 months). The daily weight gain (WGD) during the study period did not differ between the H-VUR group (10.84 ± 4.40 gram/day) and L-VUR group (10.93 ± 5.51 gram/day). At end of the follow period, H-VUR group had normal HtSDS (−0.46 ± 1.07) with delta HTSDS (−0.1 ± 1), BMISDS (0.62 ± 1.12), delta BMISDS (0.63 ± 1.41) P-value (0.005), WGD was significantly higher than the standard WGD (P-value = 0.000). L-VUR group had normal HtSDS (0.26 ± 1.14) with delta HTSDS (0.04 ± 1.21), BMISDS (0.32 ± 0.96), delta BMISDS (0.07 ± 1.02). WGD was significantly higher than the standard WGD (P-

Table 1.

		Age1 (mo.)	HTSD1	BMISD1	Age2 (mo.)	HTSD2	BMISD2	WGD	#SWG	Delta WGD	Delta HtSDS	Delta BMISDS
H-VUR	Mean	7.07	-0.33	-0.07	24	-0.45	**0.619***	**10.83***	6.73	4.11	-0.10	0.63
N=20	SD	9.58	1.51	1.45	12.5	1.0	1.125	4.40	1.33	3.82	1.08	1.40
L-VUR	Mean	7.01	0.22	0.25	23.0	0.26	0.31	**10.92***	10.93	3.82	0.03	0.06
N=22	SD	8.576	1.287	1.129	12.5	1.14	0.96	5.50	5.51	4.03	1.21	1.01

#SWG: Age and sex match standard WGD

*P-value: significant during the study period between age one and two

value = 0.000). The number of UTI during the study period was correlated significantly with the degree of VUR (= r = 0.32, p = 0.02)

Conclusions: Children with H-VUR and L-VUR maintained normal linear growth and BMISDS during the period of the study and they exceeded the average weight gain per day.

Session

PT2: Poster Presentations (PT-2)

Time: **Thursday, 3 December 2020**: **12:00—13:00**	*Location*: **Virtual**

Presentations

ID: 231/PT2: 1

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: HBSC, adolescents, sleep duration, psycho-emotional state

Insufficient sleep duration and negative emotional states among adolescents in Latvia

Klavina-Makrecka, Solvita[1]; Villerusa, Anita[1,2]; Gobina, Inese[1,2]; Pudule, Iveta[3]; Velika, Biruta[3]; Grinberga, Daiga[3]

[1]Riga Stradiņš University, Latvia; [2]Institute of Public Health, Riga Stradiņš University; [3]Centre for Disease Prevention and Control

Background: Sufficient sleep duration is an important domain of adolescents' general well-being. Self-reported complaints of negative psycho-emotional states, like feeling low or irritated and nervousness, among adolescents, are prevalent; however, their relation to sleep duration is less known This study aims to explore the associations between self-reported negative psycho-emotional states and insufficient sleep duration on school and non-school days among 11, 13, and 15-years old adolescents in Latvia by assessing the moderation effect of age and gender.

Methods: Data from the Health Behaviour in School-aged Children Study on 2017/2018 of Latvia (n = 4412; 49.6% boys) were used for statistical analysis. Three different logistic regression models were calculated to assess the main effects of self-reported negative psycho-emotional states

adjusted by gender and age (Model 1) and interaction effects of gender (Model 2) and age (Model 3) on insufficient sleep (<7 h), separately on school and non-school days. The answer categories "About every day", "More than once a week" "About every week" were combined into the category "Weekly", while the category "About every month" and "Rarely or never" were combined and used for data analysis as a reference category (Less than weekly).

Results: On average, 31.2% reported feeling low weekly, 52.9% feeling irritated/bad-tempered weekly and 39.1% feeling nervous weekly. 19.3% reported insufficient sleep duration (<7 h) on school days and 4.4% on non-school days. All reported weekly negative psycho-emotional states were associated with twofold increased risk of insufficient sleep duration on school days. On non-school days this association remained only among those reporting feeling low weekly. Associations found between negative psycho-emotional states and sleep duration are not moderated by adolescents' age or gender as no significant interactions were found.

Conclusions: Adolescents with weekly negative psycho-emotional states are at a twofold risk of insufficient sleep duration on school days regardless of their age or gender. Therefore, health care professionals and educators should pay attention to the association between adolescent's psycho-emotional state and sleep duration as it might indicate underlying sleep problems.

ID: 230/PT2: 2

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: adolescence, antisocial behaviours, normalization, environment

Relationship between antisocial behaviour and perception of the normalization of these behaviours within their environment.

Villafuerte-Díaz, Ana; Moreno-Maldonado, Concepción; Rivera, Francisco; Ramos, Pilar
University of Seville, Spain

Background: The relationship between beliefs about antisocial behaviour and participation in antisocial behaviours has been previously researched. This study aims to analyze (1) the differences in the prevalence of antisocial behaviour and in the adolescent perception of how their environment reacts to antisocial behaviour and (2) the relationship between the participation in antisocial behaviours and the perception of the normalization of these behaviours within their environment.

Methods: The sample was composed of 20,187 adolescents aged 13 to 18 who participated in the 2018 edition of the Health Behaviour in School-aged Children (HBSC) study in Spain. The sample was divided into three groups: 1) a global group; 2) a group that included adolescents who reside in a low-quality neighbourhood; 3) a group that included adolescents who reside in a high-quality neighbourhood. Specific items about participation in antisocial behaviour, perception of antisocial behaviour within their environment, and neighbourhood quality were selected from the HBSC questionnaire. Chi-Square was used as a significance test and Crammer's V to analyze the effect size. In addition, to analyze the relationship between manifesting antisocial behaviours and the normalization of these behaviours within their environment, Spearman's correlation and Cohen's q were used to estimating the effect size.

Results: Statistically significant differences were found between the groups in the prevalence of antisocial behaviour and in the normalized perception of antisocial behaviours, except in stealing wallets and uploading sexual videos on the Internet. In half of the items, the relationship between the variable participation and perception of normalization by their environments shows differences depending on the comparison group.

Conclusions: Although the data reveal that adolescents who perceive that these behaviours are normalized in their environments are more likely to participate in antisocial behaviours, this does not eliminate the possibility that some adolescents behave in this way despite being aware that it is not allowed in their context.

ID: 183/PT2: 3

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, PSYCHIATRY

Keywords: Methylphenidate, ADHA, linear growth

The effect of Long-Acting versus short-acting Methylphenidate on linear growth in school failure children with ADHD; Before and After therapy.

Elsiddig, Sohair[1]; Soliman, Ashraf[1]; Khalil, Ahmed[1]; Kamal, Madeeha[2]; Selim, Basma[1]
[1]Hamad Medical Corporation, Qatar; [2]Sidra Medicine

Introduction: ADHD is a chronic childhood-onset psychiatric disorder; Methylphenidate MP is the best-known and most widely used ADHD medications. Controversy exists in MP effect on linear growth

Objective: Study the effect of ADHD and different MP formulations (short-acting (SAMP) versus long-acting (LAMP) on the linear growth of children with ADHD for 2 years.

Methods: We studied 53(68% males) prepubertal children with ADHD and school failure. Subjects received SAMP (n = 14) or LAMP (n = 39) for 2 year. height, weight, HtSDS, BMISDS were studied at diagnosis, followed for two years after treatment.

Results: At presentation, BMISDS (1.13 ± 1.49). 30% obese (BMISDS ≥ 2), 66% (−2 < BMISDS > +2). Their HtSDS was (0.30 ± 1.14). Only one patient was short (HtSDS < −2). The LAMP group was older and had higher BMISDS in comparison to the SAMP group (table). After 10 months HtSDS decreased significantly ($p < 0.001$) in the LAMP group. Further, drop noticed by 2 years; HtSDS was significantly decreased compared to HtSDS before therapy ($p = 0.03$). Children on SAMP had no significant change occurred in their HtSDS or BMISDS compared to data before therapy Table 1.

Conclusions: No significant growth impairment involving height or weight in children with ADHD, but it seems that using LAMP had a significant adverse effect on linear growth, especially during

Table 1 Growth parameters of children on MP therapy for 2 years

		Age 1	HtSDS1	BMISDS1	Age2	HtSDS2	BMISDS2	Age3	HtSDS3	BMISDS3
Short Acting	Mean	7.13	-0.08	0.13	7.91	-0.18	0.16	8.48	-0.08	-0.01
	SD	2.28	1.43	1.04	2.36	1.38	1.05	2.33	1.45	1.00
Long Acting	Mean	9.17	0.44	1.49	10.09	0.25	1.48	11.21	0.29	1.57
	SD	2.69	0.99	1.47	2.70	0.96	1.39	2.72	1.04	1.33
	*P value	0.01	0.23	0.00	0.01	0.31	0.00	0.00	0.40	0.00
	#P value					0.00	0.48		0.03	0.35

* P < 0.05 between the LAMP versus SAMP group.

# P <0.05 Before and After LAMP therapy.

Age 1: at diagnosis, Age 2: after 10 months of therapy, Age 3: after 2 years of therapy

the first year of therapy. However, this was not detected in the SAMP group for the same period of treatment. We did not find a significant effect of LAMP or SAMP on BMISDS.

ID: 197/PT2: 4

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Munchausen, hematuria

To each his own: an unusual cause of gross hematuria

Branco Caetano, Francisco[1]; Santos, Rute[2]; Sousa, Sátya[2]; Sassetti, Leonor[1,2]

[1]Adolescent Medicine Unit, Hospital D. Estefânia—Centro Hospitalar Universitário Lisboa Central; [2]Child Protection Team, Hospital D. Estefânia—Centro Hospitalar Universitário Lisboa Central

Introduction: Hematuria is a frequent finding in children. While some of its causes are straightforward, close attention to personal and family history is warranted when no apparent diagnosis seems to be plausible.

Case Study: A 7-year-old girl presents to the emergency room (ER) reporting headache, fever, foul-smelling urine and gross hematuria. A urine strip test was positive for leukocytes and erythrocytes and a urinary tract infection presumed. Days later, reports of recurring fever and oliguria led to blood tests, which were normal. Pseudomonas aeruginosa was identified in urine culture. A kidney ultrasound was normal. She was admitted to the hospital for further study, where a surprisingly high hydric balance was observed. No oedema, hypertension or renal failure was detected. Complement and coagulation studies were normal. Gross hematuria with coagulase was objectified by the team on multiple samples, but suspicions were raised after it was noted that it would only happen when the mother was present. Urine collected in her absence showed no traces of haemoglobin on strip tests, even when gross hematuria was noted on the same day. These strange findings prompted a further search through the mother's medical records. These showed multiple hospital admissions, oblivious to the team, with diagnosis including tropical parasite infections, incongruent neurological deficits and unexplained hematuria, eventually deemed as factitious. There were also records on compulsory admissions to psychiatric wards. Constraints in identifying the origin of the bloody urine eventually led to the patient's discharge, after a referral to the Child Protection Team. A month later, the patient presented with similar symptoms at the ER. A self-collected urine sample revealed similar results as before, while a catheter-collected sample, an hour later, revealed no changes. Further genetic testing in the Scientific Police Laboratory revealed that the sample with gross hematuria didn't belong to the patient. A factitious disorder imposed on another (formerly known as Munchausen syndrome by proxy) diagnosis was assumed and custody was removed from the mother. The case is still under investigation by the authorities.

Conclusions: Factitious symptoms imposed on children by their parents are not uncommon, although under-diagnosed. While most commonly diagnosed in children under 2 years old, there is usually a long lag until diagnosis. Being aware of the condition and of family risk factors is needed in order to avoid unnecessary and invasive exams, as well as to stop trauma to the child as soon as possible.

ID: 214/PT2: 5

Type 4—Poster Presentation

Topics: ALLERGY, IMMUNOLOGY & RESPIRATORY, COVID-19

Keywords: asthma, wheezing, exacerbation, COVID-19

Asthma and recurrent wheezing: how are our patients doing during COVID-19 pandemic

Foles, Ana Isabel; Afonso, Anaísa; Gouveia, Teresa
Serviço de Pediatria, Centro Hospitalar de Setúbal, Portugal

Background: Asthma is the most common chronic disease in childhood. Recurrent wheezing (RW) in preschool children and asthma exacerbation remains an important cause of emergency department visits (ED) and, furthermore, for follow-up appointments in the pediatric department (PDA). Poorly controlled asthma increases the risk of a complicated disease course for those with COVID-19.

Methods: We aimed to characterize asthma and RW patients attending PDA and their follow-up during the first 6 months of COVID-19 in Portugal. Retrospective analysis of clinical records between March-2019 and August-2020. We applied a telephone-inquiry to assess disease evolution in the period of "social confinement" [March to May 2020 (SC)] and when those measures were withdrawn [June to August 2020, "no confinement" (NC)].

Results: 66 patients were analyzed, 58% male, mean 7 years-old (SD = 4.4), 41% diagnosed with RW (63% episodic wheeze; 37% multiple-trigger), 59% with asthma. Concomitant allergic rhinitis in 55% and atopic eczema in 15%. Family history of atopy in 79%. Most patients lived in urban areas (55%), 44% with humidity. Cohabitant smoker in 49%. During SC and NC, most patients felt better or no change in respiratory symptoms. 72% used regular inhaled glucocorticoid (IGC) as control therapy, some suspended it without negative outcome (SC: n = 5; NC: n = 13). Few patients had 1 to 3 exacerbations (SC: 14%; NC: 12%) and most had none (SC: 77%; DC: 85%), these results have a statistically significant (p = 0.000) difference when compared with March and April 2019 (1 to 3 exacerbations in 64%; none in 23%). We found that patients with house humility felt that respiratory symptoms interfered with daily-activities (p = 0.006) and had exacerbations (p = 0.009) during SC. No significant difference was found in patients with a cohabitant smoker. Through SC, 7 patients made a visit to the ED (less 6 than during the same period of time in 2019), but more patients were medicated with oral corticosteroids (OC). Reports of avoidance of ED during SC and NC by 8 families. The 5 patients tested for COVID-19 had a negative result. Poorly controlled symptoms were found in 8% of patients younger than 5 years-old (TRACK questionnaire) and 13% of older patients (ACT questionnaire).

Conclusions: Most patients have their asthma controlled. There was a significant decrease in asthma exacerbations, however, more patients needed CO. These may be related with some initial avoidance in ED visits. Indoor humidity is a known asthma trigger, which may have assumed increased importance since patients spend more time at home.

ID: 117/PT2: 6

Type 4—Poster Presentation

Topics: DERMATOLOGY

Keywords: erythema multiforme, target lesions, rash

Presentation of an erythema multiforme case in a 23-month-old infant

Lazaridi, Eleni; Katsaras, Georgios Nikolaos; Skira, Miguel; Vladikas, Anastasios; Tsitsani, Pelagia
Pediatric Department, General Hospital of Pella—Hospital Unit of Edessa, Greece

Background: Erythema multiforme is an acute, multifactorial and possibly self-limited dermatitis. It can be distinguished into minor and major depending on whether there is mucous membrane involvement or not. The annual impact on the pediatric population is 1%. Erythema multiforme is differentiated from hemorrhagic urticaria, thermal burns, graft disease against host and

phototoxic rashes. The purpose of our study is the description of a 23-month-old case with erythema multiforme as well as of its treatment, due to its rarity in this age group.

Case Study: A 23-month-old male infant was admitted to the hospital because of a rash which was rapidly spread widely within the first 24 hours with the typical "target" lesions. He had a previous infection of the upper respiratory system a week ago for which he was treated with amoxicillin/clavulanic acid. Also, mucous membranes involved with lip swelling and small effusions in the oral cavity were observed. The patient received double antihistamine treatment and topical corticosteroids. A complete blood count (CBC) was performed, as well as testing of C3, C4, ANA, anti-ds-DNA, pharyngeal smear culture, and blood and urine laboratory tests. Finally, a strep test, an RA-test, immunoglobulins control, Mantoux test and chest x-ray were conducted. The patient did not show any symptoms of systemic infection. He was highly irritated accompanied by an intense feeling of itching sensation. He was discharged after 5 days of hospitalisation in good general condition and with complete remission of the rash.

Learning Points Discussion: Drug rashes are a differential diagnostic challenge. It is imperative to raise awareness of such cases, so as to avoid as well recognise a possible dramatic development in blistering and necrotizing lesions, as observed in Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN).

ID: 121/PT2: 7

Type 4—Poster Presentation

Topics: NUTRITION & DIETS

Keywords: Breastfeeding, alcohol, tobacco, cognition, academic achievement

Drinking or smoking while breastfeeding: Does it impact the child's development?

Gibson, Louisa Helen Rebecca; Porter, Melanie
Macquarie University Australia, Australia

Background: Although there is much research suggesting that prenatal exposure to alcohol and tobacco can be harmful to the child, there is little evidence regarding drinking or smoking while breastfeeding. The consumption of alcohol and the intake of tobacco while breastfeeding can both alter brain development, which has the potential to impact a child's cognition and development.

Methods: This study used data from 5107 children and caregivers from the longitudinal Growing Up in Australia Study. Regression analyses were used to assess whether drinking alcohol or smoking tobacco resulted in negative impacts on a child's cognition, academic achievement and health-related quality of life. Logistic regression was used to assess whether drinking alcohol or smoking tobacco increased the risk of being diagnosed with Autism Spectrum Disorder or Attention-Deficit/Hyperactivity Disorder. Several lifestyle and demographic variables were controlled for including the use of alcohol and tobacco while pregnant and socio-economic indicators.

Results: Greater or risker drinking while lactating was dose-dependently associated with decreased cognitive as well as spelling, writing and grammar scores at older ages, independent of prenatal exposure ($p < 0.05$). No changes in health-related quality of life scores were observed, and no increased risk of Autism Spectrum Disorder or Attention-Deficit/Hyperactivity disorder was evident ($p > 0.05$)

Conclusions: Drinking alcohol while breastfeeding may negatively impact the cognitive development of a child and reduce their academic achievement. While more research is needed, the safest recommendation for breastfeeding mothers may be to abstain from alcohol completely until the infant is fully weaned off breast milk.

ID: 110/PT2: 8

Type 4—Poster Presentation

Topics: NUTRITION & DIETS

Keywords: school children, dietary diversity, obesity

High dietary diversity is associated with child obesity in Iranian school children: an evaluation of dietary diversity score

Hooshmand, Sahar

My Health Realm food and nutrition consultant, The Netherlands

Objective: The prevalence of overweight and obesity in Iranian children has increased considerably in the last decades. Obesity in children is a major concern. A higher variety of diets which may cause obesity are overweight among urban schoolchildren. The objective of this study was to measure dietary diversity score and obesity in children from Iran.

Methods: The present study examined Dietary Diversity Score(DDS) and weight status by calculating Body Mass Index (BMI) and the World Health Organization's (WHO) anthropometric indices of weight-for-age (WA) and weight-for-height. A cross-sectional study was performed on 2234 Iranian aged 6–9 years, attending primary schools residing in urban areas from low and middle-income categories. Dietary diversity scores were assessed based on the frequency of consumption of individual food items categorized into 11 individual food groups.

Results: Overweight children showed the highest mean score for cereals(F = 2.209, P = 0.005), vegetables(F = 5.234, P = 0.001), non-vegetarian foods(F = 12.3920, P = 0.000), mixed dishes (F = 9.899, P = 0.000), beverages(F = 9.654, P = 0.000), sweets and sugar(F = 5.122, P = 0.002) and fats(F = 10.263, P = 0.000). Mean scores for vegetables, sweets, beverages and fat consumption increased with increasing weight. High scores for pulses and legumes consumption were observed in obese children. Scores for vegetable consumption were higher among overweight children.

Conclusions: Overweight and obese school children had high diversity scores in their diet.

ID: 219/PT2: 9

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Emphysema, local anaesthesia, odontogenic

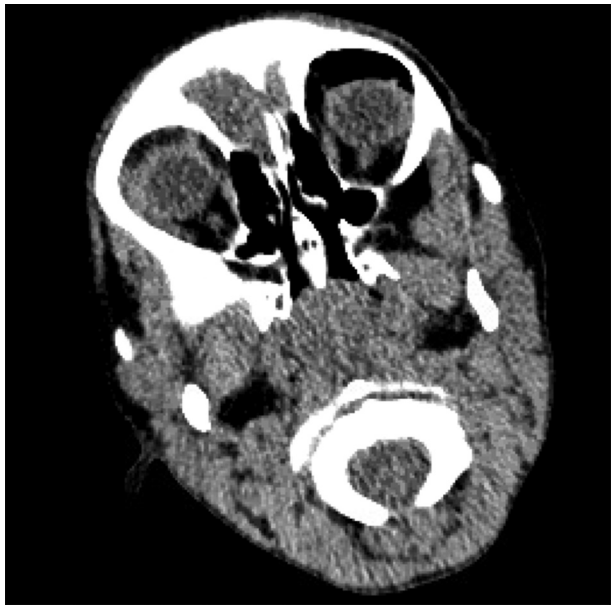
Unilateral facial and orbital edema—an infection, allergic reaction or iatrogenic consequence?

Faustino, Joana; Almeida, Sara; Mendonça, Vanessa; Almeida, Ana; Brízido, Margarida; Armindo, Rui; Oom, Paulo

Hospital Beatriz Ângelo, Portugal

Introduction: Emphysema related to dental procedures is unusual but can occur secondary to procedures including tooth extraction and use of devices such as air/water syringes, that deliver high pressure. Differential diagnoses of subcutaneous emphysema and conditions that can present with head and neck swelling include angioedema, anaphylaxis, soft tissue infections and hematoma. Most patients only have moderate local swelling. However, early recognition is very important as it can spread larger amounts of air into deeper spaces and may cause serious complications.

Figure 1.



Case Study: Six-year-old healthy boy, transferred from a dental clinic immediately after local anaesthesia, with benzocaine, articaine and epinephrine, for tooth extraction due to sudden orbital and facial edema. He had multiple caries and was on the last day of a 7-day course of amoxicillin and clavulanic acid for odontogenic infection. On physical examination: eupneic with normal vital signs; edema of the left upper eyelid with fine crepitus on palpation and left hemiface edema with local pain on palpation. The ophthalmologic observation was normal and excluded optic nerve compromise. Facial and orbit axial tomography documented extensive infiltration of the cell-adipose planes of the left face by air with extension to the external part of jaw body, retromaxillary fat, masticatory muscle spaces, parapharyngeal space and adjacent to the orbit roof. There was no change in the morphology and position of the globe, retro-orbital fat permeability or orbital apex. The patient improved in a few days with conservative treatment. His dentist confirmed the use of a high-pressure device during anaesthesia to distract from the pain Figure 1.

Conclusions: Early recognition of subcutaneous emphysema secondary to dental care is very important as it can cause life-threatening complications by spreading to the neck and mediastinum and potentially compress the airway. Other possible severe complications include infection and air embolism. With conservative treatment along with antibiotic prophylaxis, most patients show improvement within a few days to weeks.

Session

PT3: Poster Theatre (PT-3)

Time: **Friday, 4 December 2020**: **16:30—17:30**	*Location*: **Virtual**

Presentations

ID: 192/PT3: 1

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: VOC, neonatology, MCC/IMS, stress

Detection of volatile organic compounds using ion mobility spectrometry coupled to multi capillary columns in neonatology

Bous, Michelle[1]; Goedicke-Fritz, Sybelle[1]; Kaiser, Elisabeth[1]; Stutz, Regine[1]; Wulff, Anika[2]; Baumbach, Jörg Ingo[2]; Zemlin, Michael[1]
[1]Saarland University Medical School, Homburg, Germany, Germany; [2]B. Braun Melsungen AG, Center of Competence Breath Analysis, Dortmund, Germany

Background: Every manipulation in premature infants and their environment is a potential source of infection and stress. These factors can unfavourably affect infants` short and long-term development. Besides diagnostic procedures such as venipunctures, even diaper changes tend to be stressful. Therefore, it is desirable to reduce every move and to avoid the opening of the incubator if not necessary. We want to test a new approach: the analysis of volatile organic compounds (VOC). They are produced in the body during physiological and pathophysiological processes and are released into the environment via skin, urine, stool or exhaled air. We want to test whether VOC is suitable for analysis of stool and urine in diapers. The aim is to develop a non-invasive method for VOC analysis of diaper contents.

Material and Methods: VOC profiles of 133 stool and urine samples from a total of 12 premature infants and 35 care product and drug samples were investigated by ion mobility spectrometry coupled to multi capillary columns (MCC/IMS). Inclusion criteria were hospitalization at Saarland university medical centre Homburg, a birth weight <2,000 g and a gestational age <32 weeks. Statistical analysis was performed using the Mann-Whitney U-test with Bonferroni correction.

Results: We have demonstrated that MCC/IMS can be used to classify diapers of preterm infants based on the contained excrements (stool, urine or both) via VOC analysis with a significance level of $p < 0.05$. Many influences on the VOC profile were identified such as the diaper storage period, the application of care products as well as the drugs that were dispensed.

Discussion: We have developed an ambient air-independent method for the measurement of VOC in diapers of premature infants using ion mobility spectrometry coupled to multi capillary columns (MCC/IMS). The results represent an innovative approach to non-invasive diagnostics in neonatology. The signals of potential influences such as care products and disposable materials and diapers can be identified, allowing signals of the biosamples to be assigned correctly.

ID: 206/PT3: 2

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: prematurity, newborn

Late Prematurity: Hospitalization in a Neonatology Unit of a level II hospital

Virtuoso, Joao; Oliveira, Rita S.; Carvalho, Pedro; Mendes, António
ULS Guarda, Portugal

Background: Late prematurity is defined as births between 34 and 36 weeks and 6 days of gestational age. Corresponding to about 70% of all premature births, this group of newborns has high early and late morbidity and mortality, compared to full-term newborns because they are physiologically and metabolically more immature.

Method: A retrospective descriptive study of the cohort of Newborns with gestational age between 34 + 0 and 36 + 6 weeks, born in the maternity ward of Level II Hospital, between 1 January 2016, and 30 June 2019, who required admission to the Neonatology Unit of that same hospital. Peri and

neonatal variables were analyzed—diagnoses, length of stay and transfer to neonatal intensive care (NICU).

Results: During the study period, a total of 1981 births took place in this hospital, of which 51 (2.6%) corresponded to late preterm newborns, and of these, 29 (57%) required admission to the Neonatal Unit. Of the latter group, 55% were female, with a median birth weight of 2250 g. In the majority, prematurity was spontaneous and in 20% it had a maternal cause. In 75% of cases, the pregnancy was monitored and progressed normally until delivery. In 34%, a fetal maturation protocol was performed. The average hospital stay was 14.3 days, with a median of 13 days. The most frequent diagnosis was neonatal jaundice. It was verified the transfer of a newborn to the NICU due to the need for invasive mechanical ventilation.

Conclusions: As described in the literature, in our study the group of late preterm infants presented significant neonatal morbidity, visible by the high percentage of cases requiring admission to the Neonatal Unit.

ID: 118/PT3: 3

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE

Keywords: mastitis, breast inflammation

Presentation of a mastitis case in a 13-year-old teenager

Tsitsani, Pelagia[1]; Katsaras, Georgios Nikolaos[1]; Skira, Miguel[1]; Verikokkou, Konstantina[1]; Vasiliadis, Christos[2]; Diamantopoulou, Alexandra[2]; Oikonomou, Evaggelos[1]

[1]Pediatric Department, General Hospital of Pella—Hospital Unit of Edessa, Greece; [2]Gynecology Department, General Hospital of Pella—Hospital Unit of Edessa, Greece

Background: Mastitis is defined as inflammation of the breast. It usually occurs between the ages of 20 and 50, with a higher incidence in breastfeeding women. It can rarely occur in childhood and adolescence. Predominant pathogens are staphylococcus and streptococcus. Inflammation can affect the skin or form inside the breast and then spread to the entire gland and create abscess cavities.

Case Study: Adolescent female was admitted to the hospital due to sensitivity and redness around the left breast and decimal fever for 48 hours. An objective examination showed left nipple infiltration as inflammatory elements of the areola. The stage of breast development was B4 and the development of hair growth in puberty P4 by Tanner.The patient underwent a complete laboratory test examination which showed an increase in white blood cell count of 17.000 and an increase in the c-reactive protein of 8,6 mg/dL, (normal value<0,5 mg/dL). Fluid nip culture revealed Staphylococcus aureus. The ultrasound examination revealed dilated lactiferous gland 2 cm and absence of an abscess. The patient received cefotaxime and clindamycin for 10 days and showed gradual improvement leading to full recovery.

Learning Points Discussion: Breast examinations should be performed in all adolescent girls as well as providing information on maintaining hygiene. Breast self-examination should be encouraged by the pediatrician so that changes are early recognized.

ID: 189/PT3: 4

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE

Keywords: ADHD, Adolescent

Gender influences on high school students in Qatar with and without Attention Deficit Hyperactivity Disorder

Kamal, Madeeha[1]; Ali, Samer[2]; Shahbal, Saad[3]; Alshibli, Schahla[3]; K. Yadav, Santosh[1]
[1]Sidra Medicine, Qatar; [2]Qatar University, Qatar; [3]Hamad Medical Corporation, Qatar

Objective: To evaluate the effect of Attention Deficit Hyperactivity Disorder and gender differences compared to non-ADHD peers, at high schools in Qatar

Methods: A cross-sectional descriptive study using a standardized rating scale of teacher observations was conducted in the schools of Qatar. Teachers completed SNAP-IV (Swanson, Nolan, and Pelham) rating scale questionnaires for the ADHD core symptoms together with 9 questions to evaluate the academic and social difficulties.

Results: 1775 students (mean age; 15 ± 1.5 years; boys/girls; 717/1058) were included in this study. On the basis of SNAP-IV scale, 150 students were classified as ADHD (8.5%; M/F; 93/57) and 1625 students as non-ADHD peers (91.5%; boys/girls; 624/1001). Students with ADHD had more academic and social difficulties than non-ADHD peers (p = 0.001). More than 60% boys with ADHD had academic difficulties in all three areas (reading, writing and math) as compared to non-ADHD peers (p = 0.001); whereas, more than 49% of girls with ADHD experienced academic difficulties as compared to non-ADHD peers (p = 0.001) (table). Math was the most difficult academic area with 62% of the boys and 56% of the girls with ADHD have difficulties as compared to non-ADHD peers with 16% and 18% respectively (p = 0.001). Both boys and girls with ADHD had more social

Table 1. ADHD and non-ADHD peers with corresponding academic and social difficulties categories on basis of gender

Parameters	Gender Total (B/G); number		Total No-ADHD N; 1625 (%) (a)	Total ADHD N; 150 (%) (b)	Inattentive ADHD (%) (c)	Hyperactive ADHD (%) (d)	Combined ADHD (%) (e)	P-value
Total population 1775	Boys	717	624/717 (87)	93/717 (13)	18/93 (19.4)	44/93 (47.1)	31/93 (33.3)	
	Girls	1058	1001/1058 (94.6)	57/1058 (5.4)	20/57 (35.1)	26/57 (45.6)	11/57(19.3)	
Difficulty in Reading	Boys	94	38/605 (6.3)	56/93 (60)	13/18 (72)	22/41 (54)	21/30 (70)	<0.001
	Girls	142	116/968 (12)	26/57 (46)	12/20 (60)	9/26 (34.6)	5/11 (45)	
Difficulty in Writing	Boys	119	63/592 (11)	56/93 (60.0)	13/18 (72)	21/41 (51)	19/30 (63)	<0.001
	Girls	139	113/968 (11.7)	26/57 (45.6)	12/20 (60)	9/26 (35)	5/11 (45)	
Difficulty in Math	Boys	139	81/502 (16)	58/93 (62.4)	15/18 (83)	21/38 (55)	22/29 (76)	<0.001
	Girls	192	160/909 (17.6)	32/57(56.1)	15/20(70)	11/26 (42)	6/11 (55)	
Difficulty in making and maintaining friends	Boys	72	30/566 (5)	42/91 (46)	11/18 (61)	15/42 (36)	16/31 (52)	<0.001
	Girls	47	35/795 (4.4)	12/39 (31)	8/17 (47)	3/17 (17.6)	1/5 (20)	
Difficulties with friend making upset or distress	Boys	100	44/589 (8)	56/88 (64)	12/17 (70)	23/41 (56)	21/30 (70)	<0.001
	Girls	89	66/839 (8)	23/39 (59)	15/18 (83)	6/17 (35)	2/4 (50)	
Difficulties in classroom or burden on teacher	Boys	69	32/204 (16)	37/86 (43)	8/18 (44)	14/37 (38)	15/31 (48)	<0.001
	Girls	47	32/280 (11)	15/35 (43)	11/17 (65)	2/14 (14)	2/4 (50)	
Difficulties in peer relationships	Boys	70	21/199 (11)	49/86 (57)	11/18 (61)	19/37 (51)	19/31 (61)	<0.001
	Girls	36	21/274 (8)	15/35 (43)	9/17 (53)	4/14 (28.6)	2/4 (50)	
Difficulties in classroom learning	Boys	133	70/193 (36)	63/80 (79)	11/16 (69)	29/35 (82)	23/29 (79)	<0.001
	Girls	96	67/258 (26)	29/34 (63)	17/17 (100)	8/13 (62)	4/4 (100)	
Difficulties in emotions, concentration, behavior	Boys	128	61/203 (30)	67/86 (78)	12/18 (66.6)	30/37 (81)	25/31 (80)	<0.001
	Girls	99	72/274 (26)	27/30 (90)	12/12 (100)	11/14 (79)	4/4 (100)	

difficulties than non-ADHD peers (p = 0.001). Girls with hyperactive/impulsive subtype were reported to have fewer difficulties than all other subtypes, however, they faced difficulty in emotions and getting along with others compared to ADHD male (p = 0.87) and as compared to non-ADHD peers (p < 0.001). Girls with the inattentive subtype experienced more social difficulties than boys with inattentive subtype which interferes with classroom learning and getting along with others as compared to non-ADHD peers (p < 0.001). All subtypes of ADHD had more academic and social difficulties than non-ADHD peers Table 1.

Conclusions: The prevalence of ADHD was 8.5% at high schools in Qatar, It significantly varied between genders with 5.4% of girls and 13% of boys in adolescence. Students with ADHD had more academic and social difficulties than non-ADHD peers and gender difference was observed with ADHD. Boys had more academic difficulties than girls with ADHD. Among those with inattentive subtype, boys with ADHD had more academic difficulties than girls, who had more social difficulties than boys. The results of this study revealed that students with ADHD are associated with academic and social difficulties in the school environment. Gender differences among students with ADHD should be considered in the school and clinical environment.

ID: 116/PT3: 5

Type 4—Poster Presentation

Topics: NEONATOLOGY, EMERGENCY PEDIATRICS

Keywords: femoral bone fracture, newborn, cesarean section

Newborn baby with a femoral shaft fracture as a result of cesarean section manipulations

Katsaras, Georgios Nikolaos[1]; Chatziravdeli, Vasiliki[2]; Lazaridi, Eleni[1]; Oikonomou, Evaggelos[1]; Tsitsani, Pelagia[1]

[1]Pediatric Department, General Hospital of Pella—Hospital Unit of Edessa, Greece; [2]2nd Orthopaedic Department, General Hospital of Thessaloniki "Papageorgiou", Greece

Background: Presentation of a rare incidence of femoral shaft fracture in a newborn baby delivered by caesarian section (CS), attributed to obstetrical manipulations.

Case Study: A newborn baby, 37 weeks gestational age, was delivered by CS due to sciatic position in our institution. The body weight was 2800gr and the Apgar score was 7 on the 1st minute and 9 on the 5th minute. Mother's medical history consisted of 5 past vaginal deliveries, of otherwise healthy babies. Clinical examination of the neonate revealed redness, edema and sensitivity of the left femur. Radiographic evaluation revealed a left femoral shaft fracture. Orthopaedic consultation was obtained and a hip spica cast was applied under anaesthesia. Osteogenesis imperfecta was ruled out as a possible cause of bone fragility. Follow up after 3 months, showed that the fracture had healed uneventfully and the femur had remodelled.

Conclusions: Almost 75% of long bone fractures are due to adverse deliveries. Ehrenfest in 1922 described the first femoral shaft fracture after CS. The incidence of such a fracture is 0,3/1000 CS, and is actually based on poor obstetrical manipulations and is also related to a low degree of relaxation of the uterus. In the majority of cases, the cause is the impaction of the femur in the maternal pelvic region. It is nevertheless imperative to rule out other congenital diseases that cause bone fragility, such as osteogenesis imperfecta.

ID: 204/PT3: 6

Type 4—Poster Presentation

Topics: ENDOCRINOLOGY

Keywords: T1DM, MDI, BD, Insulin regimen, Glycemic control

An assessment of the impact of intensification of insulin regimen from time of diagnosis in type 1 diabetes mellitus

Moshage, Yvette[1]; White, Mary[2]
[1]Murdoch Children's Research Institute, Australia; [2]Royal Children's Hospital Melbourne

Introduction: Current international guidelines recommend the commencement of intensive insulin regimens using either multiple daily injections (MDI) or continuous subcutaneous insulin infusion (CSII, "pump" therapy) from the time of diagnosis with type 1 diabetes mellitus (T1DM) regardless of age (1). In February 2019, there was a significant alteration in clinical practice at the Royal Children's Hospital (RCH) such that in place of commencement of twice-daily injections (BD) at diagnosis in young children, all children are now commenced on MDI from the time of diagnosis regardless of age.

Material and Methods: In this retrospective cohort study all children aged <18 years of age at the time of diagnosis with T1DM between 1 January 2017 and 31 December 2019 at RCH were considered for inclusion. The primary aim of this current study is to examine the impact of the choice of insulin regimen on clinical outcomes based on HbA1c measurements at 12 months post-diagnosis of T1DM in a contemporary cohort of children with newly diagnosed T1DM. We also sought to assess the effect of the choice of insulin regimen on clinical resources and the occurrence of acute adverse events in this time period.

Results: ANOVA analysis showed significant lower HbA1c scores at 3, 6, 9 and 12 months post-diagnosis on MDI regimen, mean HbA1c at 12 months post-diagnosis for BD = 7.6 ± 0.9 and MDI = 7.0 ± 1.1, $p < 0.01$. ANOVA results also indicated a significantly shorter length of hospital stay (LOS) (BD = 3.5 ± 1.9 and MDI = 2.8 ± 1.0, $p = 0.02$) in days for patients on MDI therapy. The number of allied health contacts in the first two weeks after discharge (BD = 2.6 ± 1.5 and MDI = 2.1 ± 1.4, $p = 0.02$) and in the first year post-diagnosis (BD = 11.9 ± 3.3 and MDI = 10.6 ± 3.7, $p = 0.02$) showed fewer health contacts for patients on MDI therapy. Multiple regression analysis showed that the partial remission phase was independently the only significant predictor for glycemic control, $p < 0.01$.

Conclusions: While the mean HbA1c was lower at 12 months post-diagnosis in those on MDI therapy, only the presence of a partial remission phase demonstrated an independent positive impact on glycemic control. Patients on MDI therapy had shorter LOS and fewer health contacts, leading to lower costs and more resource-saving effects. There was no increase in acute complications correlated with MDI therapy which makes MDI an appealing and safe prescribing practise.

ID: 173/PT3: 7

Type 4—Poster Presentation

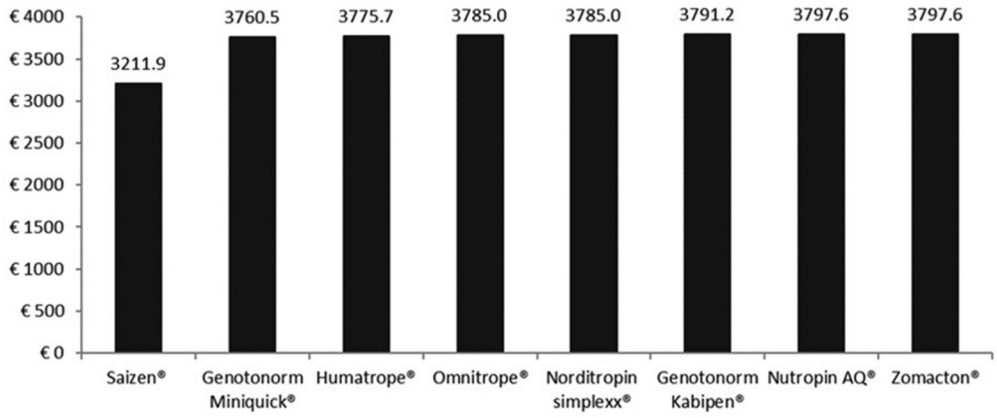
Topics: ENDOCRINOLOGY

Keywords: easy pod, growth hormone treatment, growth hormone deficiency, cost-consequence analysis

Cost-consequence analysis for recombinant human growth hormone treatment administered via different devices in children with growth hormone deficiency in Spain

Alcón Sáez, José Juan[1]; de Arriba Muñoz, Antonio[2]; Latre Gorbe, Cristina[3]; Gari Peris, Carla[4]; Camins, Leticia[5]; Torres, Covadonga[5]
[1]Consorcio Hospital General Universitario de Valencia; Valencia (Spain); [2]Hospital Universitario Miguel Servet; Zaragoza (Spain); [3]Hospital Sant Joan de Déu; Barcelona (Spain); [4]Outcomes' 10 S. L.U.; Castellón (Spain); [5]Merck, S.L.U.; Madrid (Spain)

Figure 1. Cost per cm gained (including wastage costs)



Background: Recombinant human growth hormone (r-hGH) is the standard treatment for growth hormone deficiency (GHD). Poor adherence to r-hGH causes reduced growth response. Saizen® electronic auto-injector, Easypod®, is the only delivery device that allows a precise measure of adherence. Recently, the Spanish ECOS study found higher adherence rates (mean 94.5% [95%CI 92.7–96.3%]) for Saizen with Easypod® than the average reported in prior studies with conventional devices. The objective was to evaluate the cost-consequence of r-hGH administered by Easypod® versus other conventional devices licensed in Spain for the r-hGH treatment of children and adolescents with GHD.

Methods: The cost-consequence analysis was based on a patient-level model where 10,000 GHD patients were simulated per treatment arm. Patients were classified in a decision tree according to their response to r-hGH and, subsequently, entered a Markov model representing the different levels of r-hGH use (adherence and treatment interruption). Cumulative height gained and drug costs were computed until the patient's bone maturation, the costs per cm gained were estimated for each r-hGH comparator. Patient characteristics, height references, adherence rates (transition probabilities), treatment response data and drug list prices (€, 2020) were adapted to Spanish standards and validated through an expert panel. Saizen® comparators were Humatrope®, Nutropin AQ®, Genotonorm Kabipen®, Genotonorm Miniquick®, Omnitrope®, Norditropin simplexx® and Zomacton® (the cartridge size that generated less wastage was used).

Results: For a mean of 10.4 years of treatment, patients receiving Saizen® gained, on average, 19.6 cm (final height: 165.5 cm) compared with 14.9 cm (final height: 160.8 cm) for other treatments. Patients on Saizen® were mostly adherent during the treatment course (58% of the time); whereas those on the comparators were fully adherent 22% of the time. Patients on Saizen® spend 3% of the time in the treatment interruption state; this percentage was 7% for comparators. Total drug costs including wastage ranged from €56,095.6 (Genotonorm Miniquick®) to €62,991.7 (Saizen®). Drug wastage costs varied from €0 (Genotonorm Miniquick®) to €553.5 (Nutropin AQ® and Zomacton®) and were €3.7 for Saizen®. Saizen was associated with the lowest cost/cm gained (€3211.9/cm) amongst all the other r-hGH treatments, while Nutropin AQ® and Zomacton® had the highest cost/cm gained (€3797.6/cm) (Figure 1).

Conclusions: Saizen with Easypod® improves height gains through better adherence. It also can be a cost-saving alternative compared with the other licensed r-hGH treatments in Spain and it did generate low wastage of medication due to this automatic dose adjustment and optimization.

ID: 119/PT3: 8

Type 4—Poster Presentation

Topics: ENDOCRINOLOGY

Keywords: Congenital Adrenal Hyperplasia, school-age female patient, adrenarche

School-age female patient with undiagnosed Congenital Adrenal Hyperplasia.

Tsitsani, Pelagia[1]; Lazaridi, Eleni[1]; Verikkokou, Konstantina[1]; Vladikas, Anastasios[1]; Vasileiadou, Katerina[2]; Diamantopoulou, Alexandra[2]; Katsaras, George Nikolaos[1]

[1]Paediatric Department, General Hospital of Pella, Hospital Unit of Edessa, Greece; [2]Obstetrics and Gynecology Department, General Hospital of Pella, Hospital Unit of Edessa, Greece

Background: Congenital Adrenal Hyperplasia was described in 1865 by Luigi de Crecchio. It is a group of rare inherited autosomal recessive disorders, resulting from the deficiency of one of the five enzymes required for the synthesis of cortisol in the adrenal cortex. It is classified as a classical form with a frequency of 1/15,000 births and as non-classical estimated at 0.1% of the general population. Aim of this study is to present a young patient with undiagnosed congenital adrenal hyperplasia who appeared in the emergency department with painless macroscopic hematuria.

Case Study: A female 710/12 years old presented with painless macroscopic hematuria. The child exhibits premature adrenarche during the last six months with no signs of axillary hair, acne or increased apocrine odour. The clinical examination revealed clitoral enlargement without genital ambiguity, stage of virilization IIv (Prader), stage of development of hirsutism P3 (Tanner) and stage of breast development B2 (Tanner). The patient underwent full laboratory—hormone testing, ultrasound imaging of the upper and lower abdomen, as well as an assessment by a gynaecologist and pediatric endocrinologist. Menstrual dysfunction was ruled out and hematuria was attributed to hemorrhagic cystitis. Endocrinology testing showed high values of 17-OH progesterone (20 ng/ml), as well as androgen DHEA(9.2 ng/ml), DHEA-S(199. 9 μg/dl) and D4-androstenedione (3.49 ng/ml), while the ultrasound of the abdomen found no solid or cystic damage in the anatomical area of the adrenal glands, and the uterus and ovaries were of a child's type. Synachten test and molecular testing confirmed a diagnosis of Non-Classical Congenital Adrenal Hyperplasia.

Conclusions: Non-classical Congenital Adrenal Hyperplasia occurs in childhood and adolescence. The pediatrician should always perform a thorough clinical examination not to miss premature pubarche, which is the predominant clinical sign in children < 8 years old. Females with adequate monitoring and treatment have normal survival rates.

ID: 288/PT3: 9

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: eating habits, health complaints, adolescents, urban

Eating habits and psychosomatic health complaints among urban adolescents in Kazakhstan

Abdrakhmanova, Shynar[1,2]; Adayeva, Assel[2]; Ng, Kwok[3,4]; Slazhneva, Tatyana[2]; Kausova, Galina[2]

[1]National Center of Public Health of the Ministry of Health, Kazakhstan; [2]Kazakhstan's medical university "Kazakhstan School of Public Health", Kazakhstan; [3]University of Eastern Finland, Finland; [4]Physical Activity for Health Research Cluster, Health Research Institute, Department of Physical Education and Sport Sciences, University of Limerick, Ireland

Introduction: Nutrition behaviour of adolescents is important due to changes that occur in their body at this age. Many adolescents neglect healthy diets by eating critically infrequent amounts of fruits and vegetables as well as consume high amounts of sugary drinks and sugary foods such as sweets.

Purpose: Study the relationship between eating habits and psychosomatic health complaints among urban adolescents.

Materials and Methods: The data were collected from a nationally representative survey (n = 4 868) in the 2018 Health Behavior in School-aged Children (HBSC) Kazakhstan. aged 11-,13- and 15-years (boys: 50.4%, urban: 54.7%). The study examined the eating habits of urban schoolchildren, such as daily breakfast, the frequency of consumption of vegetables, fruits, and sweets and sugary carbonated drinks. Binary logistic regression methods on the presence of psychosomatic health complaints (frequent abdominal pain, headaches, dizziness every day or several times per week) were analyzed with adolescents' negative eating habits.

Results: 37.9% of urban adolescents did not eat breakfast daily on weekdays; 46.5% consumed fruits and 42.3% vegetables less often than 5–6 times per week; 40.9% ate sweets at least 5–6 times per week; about a quarter of children surveyed,24%, drank sugary drinks at least 5–6 times per week. Psychosomatic complaints were present in children who did not eat breakfast daily: dizziness (OR = 2.3 (95% CI 1.8;3.0); abdominal pain (OR = 2.0 (95% CI 1.5; 2.6); headaches (OR = 1.9 (1.5;2.4). Low consumption of vegetables and fruits (less than 5–6 times per week) was positively associated with a higher level of psychosomatic health complains dizziness (OR = 1.3 (95% CI 1.03;1.7); abdominal pain (OR = 1.3 (95% CI 1.02;1.7); no association with headaches was identified. There was a positive association of sweet consumption at least 5–6 times per week with headaches (OR = 1.4 (95% CI 1.1;1.7). No associations were found between consumption of sugary drinks at least 5–6 times per week and the psychosomatic health complaints.

Conclusions: The results demonstrate that risks of health problems are high among adolescents with unhealthy eating habits. Proper nutrition is essential for the health of youth. It is necessary to promote healthy eating behaviour through the implementation of integrated solutions at the multispectral level.

ID: 296/PT3: 10

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: mental health complaints, life satisfaction, well-being

The impact of mental health complaints on life satisfaction among children in Kazakhstan

Adayeva, Assel[1]; Abdrakhmanova, Shynar[1,2]; Ng, Kwok[3,4]

[1]Kazakhstan's medical university "Kazakhstan School of Public Health", Kazakhstan; [2]National Center of Public Health of the Ministry of Health, Kazakhstan; [3]University of Eastern Finland, Finland; [4]Physical Activity for Health Research Cluster, Health Research Institute, Department of Physical Education and Sport Sciences, University of Limerick, Ireland

Introduction: Mental health and quality of life of children and adolescents is a key public health concern. An important aspect of mental well-being is life satisfaction, which is closely related to the subjective state of health.

Purpose: Assessment of the association between adolescents' mental health complaints and their level of life satisfaction.

Materials and Methods: This study is based on data from Health Behavior in School-aged Children (HBSC) survey, conducted for the first time in Kazakhstan in 2018. A nationally represented sample (n = 4868; boys: 50.4%) of 11, 13 and 15-year-olds were used for this study. Self-reported individual mental health complaints, such as feeling low, feeling irritable, feeling nervous, and difficulties sleeping were analyzed in relation to children's life satisfaction through calculation of statistical criteria for contingency tables (Chi-square test for independence and OR). High life satisfaction defined as a score of six or more on the Cantril ladder. Frequent complaints referred to symptoms experienced every day or several times per week in the last six months.

Results: Low life satisfaction was reported by 9.1% of Kazakhstan adolescents. Adolescents who reported frequent feeling low (19.4%) were significantly more likely to have low life satisfaction (OR = 2.8 (95% CI 2.2;3.6)) than those who rarely or never experienced feeling low (7.9%). Schoolchildren with frequent complaints on feeling irritable (18.8%) were significantly more likely to have low life satisfaction (OR = 3.1 (95% CI 2.5; 3.8)) compared to those without such symptoms (6.9%). Similar associations were observed for feeling nervous frequently (21.2% versus 7.6%) and difficulties in falling asleep (18.4% versus 7.7%), with risks of low life satisfaction: frequent nervousness: OR = 3.3 (95% CI 2.3;4.2); frequent experience of sleep difficulties: OR = 2.7 (95% CI 2.1;3.4).

Conclusions: The study revealed that negative mental health complaints of adolescents were associated with life satisfaction in Kazakhstan context. Such findings are early indicators for other serious consequences during adolescence, such as symptoms of depression, decreased motivation, problems with academic performance and social adaptation. Timely identification and study of predictors of life satisfaction could promote healthy and competitive generation.

Session

PT4: Poster Theatre (PT-4)

Time: **Friday, 4 December 2020**: **17:30—18:30**	*Location*: **Virtual**

Presentations

ID: 132/PT4: 1

Type 4—Poster Presentation

Topics: RARE DISEASES, PSYCHIATRY, ADOLESCENT MEDICINE

Keywords: Catatonia, Psychiatry, Pharmacology, Adolescent, Resource-limited

Can't touch this: Management of pediatric catatonia unresponsive to benzodiazepine monotherapy in a resource-limited setting

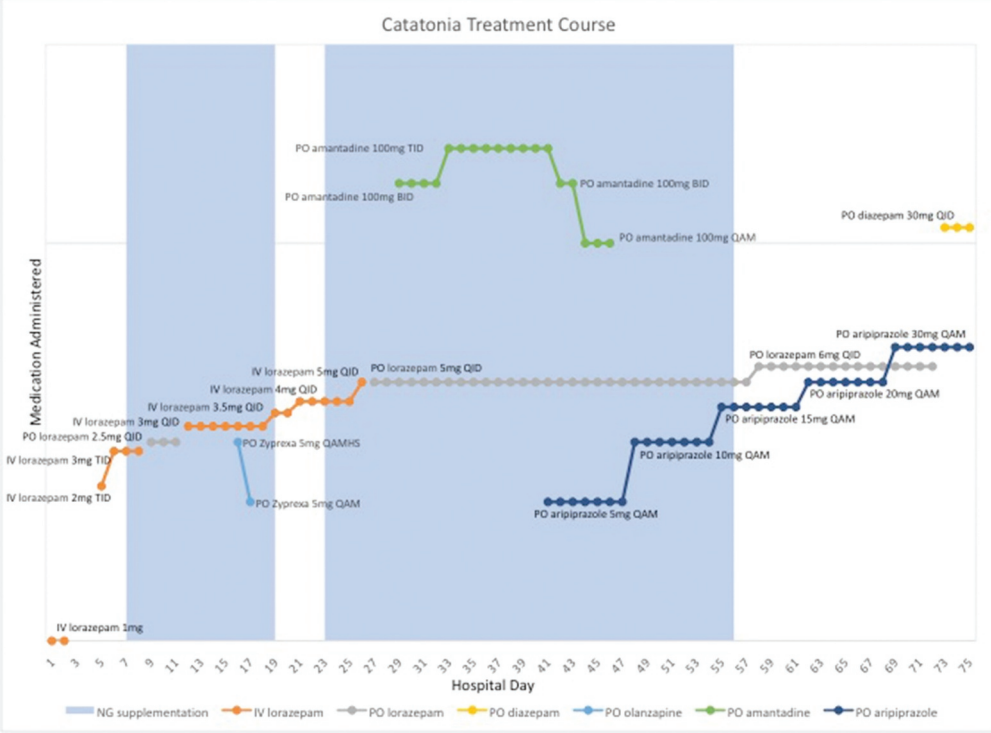
Campbell, Laura Rose; Gunther, Matthew Grant; Mao, Kai-Hong Jeremy

University of Southern California/Los Angeles County + USC Medical Center, United States of America

Background: Pediatric catatonia is the focus of an emerging body of research, with numerous case reports detailing clinical attributes and unique treatment considerations among pediatric populations (Benarous, 2018). As with adult patients, benzodiazepine therapy is a core feature of treatment, with electroconvulsive therapy recommended for unresponsive patients. However, access to ECT remains limited for minors within California, with minimal availability for low-income populations. When ECT is unavailable, providers have turned to glutamate agonist and antipsychotic medications (Roberto, 2014), although there is no clear consensus on the optimal approach to augmenting treatment.

Case Study: We present the case of a 13-year-old female with profound symptoms of catatonia and limited response to benzodiazepine monotherapy, who was successfully treated in a system of care with highly restricted ECT access. An in-depth review of the available literature informed the treatment team's pharmacologic approach over the course of the patient's 75-day hospitalization.

Figure 1.



Results: The patient underwent extensive medical workup including neuroimaging and lumbar puncture, which was negative for an underlying organic aetiology. Throughout hospitalization, the patient required prolonged NG nutrition supplementation. An initial trial of lorazepam monotherapy demonstrated limited improvement, despite titration to a daily dose of 24 mg. Amantadine augmentation was attempted but discontinued due to inadequate response. Aripiprazole was added to the medication regimen, leading to a gradual improvement in catatonia symptoms. Only after initiation of antipsychotic therapy did symptoms of an underlying psychotic process begin to emerge. Aripiprazole was titrated to clinical response, and the patient was transitioned to a longer-acting benzodiazepine formulation, diazepam. The patient was discharged home with close outpatient psychiatric follow-up Figure 1.

Discussion: Even as psychiatric providers advocate for expanded access to ECT, consult services are challenged to implement treatment strategies using second-line modalities. Although clinicians should be cautious with medication trials, they should strive to optimize doses and discharge patients on benzodiazepine medication regimens when clinically appropriate. It is essential to collaborate closely with the primary medical team, as pediatric catatonia often represents unfamiliar territory with few provider guidelines for pediatricians. Additionally, families may require extensive psychoeducation and support to build an adequate therapeutic alliance.

Conclusions: This case highlights the difficulty of managing catatonia without a robust response to an initial "Ativan challenge." Evidence suggests that up to one-third of patients may not respond to benzodiazepine monotherapy; without ECT available, providers must develop alternate strategies. Our stepwise approach to treatment may be adapted for use in other psychiatric consult liaison settings.

ID: 176/PT4: 2

Type 4—Poster Presentation

Topics: INFECTIOUS DISEASES, RARE DISEASES, RHEUMATOLOGY

Keywords: Kawasaki, vasculitis, cardiovascular, bcgitis

Erythema and inoculation of Bacillus Calmett-Guerin (bcgitis) as a predictive sign of incomplete Kawasaki disease (KD) atypical and refractory. presentation of a case.

Castaneda Ramirez, Laura Elena; Vazquez Corona, Andrea; Zozaya Garcia, Alain
Hospiten Los Cabos, Mexico

Introduction: The syndrome or Kawasaki disease is a childhood vasculitis, with cardiovascular disease, acute, self-limited, but potentially serious due to the cardiac complications that can occur. One of the signs of great value being the presence of erythema and induration at the site of inoculation of the vaccine, when it has been applied recently (six months to one year). This sign is

Table 1. Criterios de la enfermeded de kawasaki

Tabla 1. Criterios de la enfermedad de Kawasaki

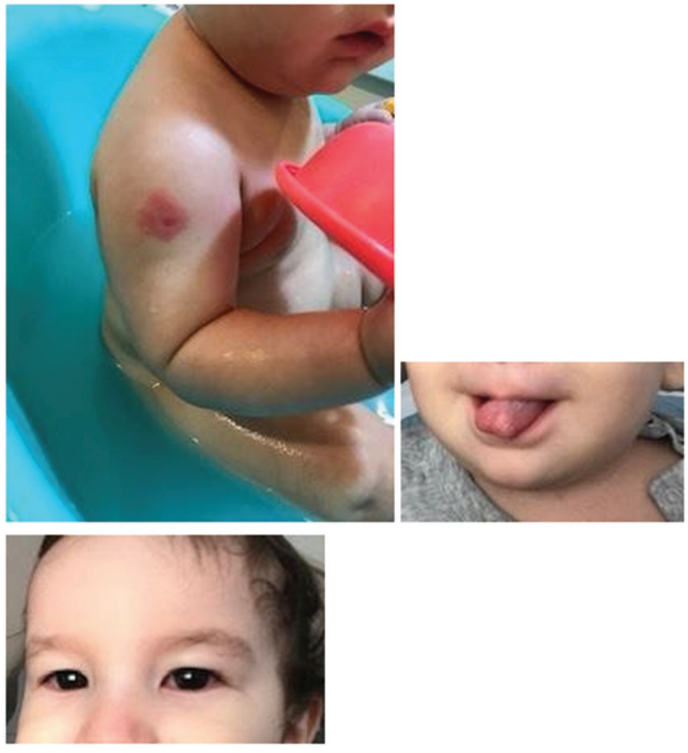
Fiebre de ≥5 días* y presencia de ≥4 de los 5 criterios principales siguientes**:

1. Cambios en extremidades:
   - Fase aguda: eritema de palmas y plantas; edema de manos y pies
   - Fase subaguda: descamación de dedos de manos y/o pies
2. Exantema polimorfo
3. Inyección conjuntival bilateral
4. Cambios en labios y mucosa oral: labios fisurados y eritematosos, lengua aframbuesada e hiperemia faríngea
5. Adenopatía cervical (>1,5 cm diámetro)

Exclusión de otras enfermedades con clínica similar.

*Los pacientes con 5 días de fiebre y <4 criterios principales pueden diagnosticarse de EK en presencia de anomalías coronarias en la ecocardiografía.

**En presencia de ≥4 criterios principales, se puede diagnosticar de EK al cuarto día de enfermedad o incluso antes, por médicos experimentados que hayan tratado muchas EK.



present in 36% of cases and has been incorporated into the diagnostic guidelines for Kawasaki disease in Japan.

We present the clinical case of a 10-month-old infant, who presents a clinical picture of incomplete, atypical and refractory Kawasaki disease, with a 5-day fever, two main criteria and mild pericardial effusion plus BCGitis as a diagnostic sign so as not to delay early treatment.

Case Study: A 10-month-old male infant, with no personal pathological perinatal history, fed exclusively at the mother's breast, with a complete immunization schedule for his age. Starts 5 previous days with a fever of 39–40°C., diarrhoea and abdominal pain, on physical examination we found bilateral conjunctival injection, branched tongue, fissured lips and BCGitis of 2 cm in diameter with erythema and induration, a poor general condition, continuous crying, no murmurs, no hepatomegaly, Echocardiogram with mild pericardial effusion and normal ECG. Laboratory Hb 10.2 g/dl, leukocytes 13,800 x mm3, segmented predominance, normal platelets. Blood chemistry, kidney function tests, and normal electrolytes. Urine test with leukocytes 48–50 xc and pyocytes 90%. CRP 200 mg/L ESR 65 mm/h and Procalcitonin 8.84 ng/ml. He was treated with a double dose of 2 g/kg gamma globulin in a 12-hour infusion plus Aspirin at 100 mg/kg/day divided into 4 doses with an unfavourable response since the fever reappeared at 36 hrs. From the beginning of the first treatment as well as an increase in acute phase reactants, lipid profile, cardiac enzymes, decrease in arterial gases and persistence of BCGitis Table 1.

Discussion: Atypical incomplete Kawasaki like the case presented is more frequent at an early age. We know that most of the time the diagnosis of this disease is not easy.

Results: BCGitis is a predictive sign of diagnostic utility in Incomplete KD in infants under 12 months of age, who have the vaccine in our Country, Mexico

ID: 194/PT4: 3

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: Hip dysplasia, assessment, night splinting

Neonatal hip dysplasia—Assessment and long term night splinting

Handelsman, John Ellis; Godfried, David Harold

Hassenfeld Children's Hospital at NYU Langone, New York, United States of America

Introduction and Objective: Hip dysplasia frequently follows neonatal hip dislocation. A "clicking hip" with subtle instability, may also be dysplastic. Early radiologic signs are an upward sloping acetabulum, delayed femoral head ossification and lateral hip displacement. Current teaching and practice are to monitor hip dysplasia by ultrasound alone. Treatment is limited to a Pavlik Harness —a splint that is difficult to apply. When the ultrasound suggests that the acetabular roof is satisfactory, splinting is frequently discontinued. Persistent dysplasia and poor long term hip function may occur following this protocol. A single AP pelvic X-ray for hips at six months, when a bone is present, provides a more reliable measure of dysplasia.

Materials and Methods. At age six months, a single AP pelvic X-ray was performed on every patient with a previously unstable or clicking hip. If dysplastic, a simple Camp type hip abduction splint, worn outside pyjamas, was then used at night. This was maintained until the dysplasia had resolved and the acetabular angle was 24° or less. An interval of six months was maintained between pelvic X-rays. Between 2012 and 2018, 32 infants with hip dysplasia were treated with a simple abduction night splint, starting at an average age of seven months. Hip dysplasia was bilateral in 17 patients.

Results: Full correction of hip dysplasia, as judged by concentric reduction and appropriate acetabular angles, was achieved in all except one hip. Night splinting was required for an average of eighteen months. The persistently dysplastic hip was subsequently corrected by a pelvic osteotomy.

Conclusions: Once the bone is present in the pelvis and femoral head, hip dysplasia is more reliably diagnosed by a single pelvic X-ray than by sonogram. Ongoing night splinting, using a simple abduction device, effectively corrects infantile hip dysplasia.

ID: 193/PT4: 4

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: Child Abuse, Radiation

Prudent use, not abuse, of Imaging in Infant Non-Accidental Trauma

Handelsman, John Ellis
Hassenfeld Children's Hospital at NYU Langone, New York, United States of America

Background: Child abuse in infants is a serious problem and warrants a thorough investigation. Radiologic examination, however, must relate to clinical findings. Multiple CT scans should be performed only if properly indicated. Many reputable Children's Hospitals routinely add CT scans of the brain, thorax, abdomen and pelvis to the accepted skeletal survey, when accidental trauma is even a remote possibility.

Methods: The hospital records and X-rays of five infants, aged 2 to 10 months, between July 2014 and June 2016, were examined for legal purposes and subsequently followed to final family court decisions. The injuries were isolated non-displaced spiral femoral shaft fractures in two cases, a distal femoral buckle fracture, a non-displaced humeral shaft fracture and a painful elbow with no established fracture. No infant had associated bruising or any other evidence of abuse. All were neurologically intact with no conjunctival haemorrhages. Each had healthy siblings, attentive parents and appropriate family backgrounds. Apart from the necessary skeletal survey of the limbs, all also underwent a brain CT, with scans ranging from 220 to 528. Multiple CT scans of the thorax, abdomen and pelvis were also performed. One patient was re-X-rayed two weeks later for "healing fractures"'. Besides limb X-rays, CT scans of the brain and body were also repeated. Furthermore, his healthy twin sister was subjected to an identical radiological examination, including brain and body CT scans, without any previous physical examination.

Results: All fractures healed rapidly and completely. The elbow injury was a simple "pulled elbow". A reasonable cause for each injury was established. The family court judges found no abuse in any instance.

Conclusions: The effective radiation dose in an infant undergoing a head CT, averages the equivalent of 350 chest X-rays. A thoracic CT equates to 115, an abdominal CT, 240, and a pelvic CT, to 335 chest X-rays. Excessive and repeated CT scans of the body and especially of the brain can be harmful. There is evidence of subsequent increased development of acute lymphoid leukaemia (Drs. Rebecca Smith-Bindman and Patricia Buffler) and of brain tumours (National Cancer Institute). There is also potential damage to the developing brain, causing learning problems and an increased school dropout rate (Dr Per Hall). This rigid protocol must be changed. "First, do no harm".

ID: 175/PT4: 5

Type 4—Poster Presentation

Topics: NUTRITION & DIETS
Keywords: toddlers, nutrition, diet, neurocognitive, development

Association of dietary intake with neurocognitive outcomes in 18-month-old Canadian toddlers.

Rossen, Larissa[1,2]; Montgomery, Sarah Elizabeth[1,2]; Zibrik, Deborah[1,2]; Dyer, Roger[2]; Oberlander, Tim[2,3]; Lamers, Yvonne[1,2]
[1]Food, Nutrition and Health Program, Faculty of Land and Food Systems, The University of British Columbia, Vancouver, BC, Canada.; [2]British Columbia Children's Hospital Research Institute, Vancouver, BC, Canada.; [3]Department of Pediatrics, Faculty of Medicine, The University of British Columbia; Vancouver BC, Canada.

Background: A child's brain is rapidly developing during the first two years of life and by the age of two the brain reaches 80% of its adult weight. This period of life may be particularly sensitive to deficiencies in the diet with an increasing body of literature suggesting a connection between improved nutrition and optimal brain function.

Objectives: The aim of this research was to investigate associations between dietary intake of key nutrients and blood biomarker concentration identified as crucial for central nervous system development and function, and their association with cognitive and behavioural outcomes in toddler-aged children.

Methods: Cross-sectional baseline data were drawn from 18-month old toddlers participating in a partially randomized controlled trial investigating associations between feeding patterns, nutrient biomarker status, and neurodevelopmental outcomes in Vancouver, British Columbia, Canada. Cognitive and behavioural outcomes included: The Bayley Scale of Infant Development (3rd Ed; BSID-III); Child Behavior Checklist (CBCL); Early Childhood Behavior Questionnaire Very Short Form (ECBQ); and the MacArthur-Bates Communicative Development Inventories (MCDI-WS). Five-day food records were used to estimate daily dietary nutrient intake. Blood biomarkers included plasma concentrations of ferritin, lutein, choline, vitamins A and D, and docosahexaenoic acid (DHA) measured as a percentage of total fatty acids in red blood cells.

Results: A sample of 145 toddlers (63 boys, 82 girls) with baseline data available had a mean gestation and birth weight of 39.3wks and 3.38 kg, respectively. Plasma choline concentration ($\tau b = -.181$, $p < .001$) and dietary lutein intake ($\tau b = -.130$, $p < .01$) were negatively correlated with total behavioural problems (CBCL). Mean length of sentences on the MCDI-WS and dietary intake of iron ($\tau b = .148$, $p < .05$), vitamin D ($\tau b = .187$, $p < .01$), choline ($\tau b = .138$, $p < .05$), and DHA ($\tau b = .168$, $p < .05$) were positively correlated. Using Poisson regression, dietary intake of DHA (B = .002, $p < .01$, 95% CI: .001-.003) and vitamin D (B = .046, $p < .01$, 95% CI: .007-.086) were positively associated with a mean length of sentences on the MCDI-WS, after controlling for child gender, child weight, energy intake, maternal non-verbal intelligence (measured using TONI-4), and breastfeeding status. Measures of behaviour (ECBQ) were not associated with nutritional biomarkers.

Conclusions: These findings may reflect associations between nutritional status and optimal brain function at 18-months of age, a period of life which is particularly sensitive to nutrient inadequacies.

Funding Sources: This study is supported by The University of British Columbia, the British Columbia Children's Hospital Research Institute, Canada, and funding from Société des Produits Nestlé S.A.

ID: 174/PT4: 6

Type 4—Poster Presentation

Topics: NUTRITION & DIETS

Keywords: breastfeeding, biomarkers, pediatric nutrition

Breastfeeding practice and nutrient intake in 18-month old Canadian toddlers

Montgomery, Sarah Elizabeth[1,2]; Ho, Gloria[1,2]; Rossen, Larissa[1,2]; Zibrik, Deborah[1,2]; Dyer, Roger[1,2]; Oberlander, Tim[1,2]; Lamers, Yvonne[1,2]

[1]University of British Columbia; [2]British Columbia Children's Hospital Research Institute

Background: Adequate nutrition is critical for growth and development during the first 1000 days of life. The World Health Organization recommends infants be exclusively fed breast milk until 6mo of age, followed by complementary breastfeeding up to >/ = 2 yrs. Little is known about the nutritional status of toddlers (1–4 yrs of age), a critical age of dietary transition and introduction to an increasing variety of solids. We reported higher blood levels of docosahexaenoic acid (DHA) and lower levels of vitamin A and ferritin in breastfed compared to non-/occasionally breastfed toddlers. The objective of this analysis was to determine the dietary intake of these toddlers, to elucidate the differences in their biomarker status.

Methods: We analyzed cross-sectional baseline data from 127 18-mo-old toddlers enrolled in the Away We Grow partially randomized controlled trial in Vancouver, Canada. Toddlers were categorized as breastfed (currently receiving breast milk as primary milk source, i.e., >/ = 2 times/day) and non-/occasionally-breastfed. Five-day food records served to estimate dietary intake.

Results: In this cohort, 46% were males, 45%, 19%, and 36% were of European, Chinese, or other ethnicities, respectively, and 29% were breastfed. Of the non-/occasionally-breastfed toddlers, 75% consumed cows' milk and 23% consumed formula. Of all toddlers, more than half did not meet their recommendations for vitamins D (77%) and E (72%), linoleic acid (81%), and choline (55%). More breastfed than non-/occasionally-breastfed toddlers had vitamin E and choline intake below their recommendations (87% vs 65%, and 65% vs. 51%, respectively). Breastfed toddlers had a lower total dietary intake of vitamin D and choline, and a higher intake of alpha-linolenic acid, compared to non-/occasionally-breastfed toddlers (all p</ = 0.01). We observed a trend ($p < 0.1$) for higher DHA and lower vitamin A and iron intakes in breastfed compared to non-/occasionally-breastfed toddlers.

Conclusions: These preliminary findings show that toddlers are not meeting their vitamins D and E, choline and linoleic acid recommendations, and breastfeeding status is associated with differences in nutrient intakes. The transition to solids reflects a time when foods that are rich sources of these nutrients (i.e. fatty fish, eggs, meats, and nuts) may not be regularly consumed by all toddlers. Further investigation of dietary patterns and specific food consumption will provide us with more insight into why children may not meet their dietary recommendations.

Funding Sources: This study is supported by the University of British Columbia, and the British Columbia Children's Hospital Research Institute, Canada, and funded by Société des Produits Nestlé S.A.

ID: 139/PT4: 7

Type 4—Poster Presentation

Topics: RARE DISEASES

Keywords: Agenesis, lateral incisors, hereditary syndromes, MSX1, MSX2

Taurodontism and peg laterals associated with Witkop syndrome

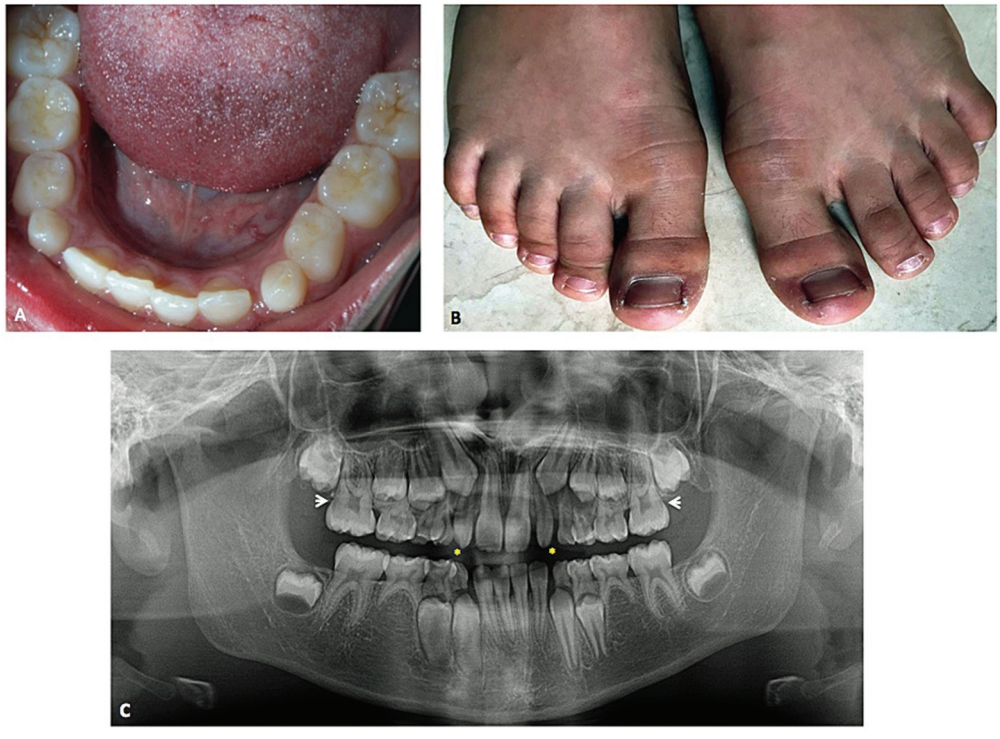
Rivera-Silva, Gerardo[1]; Guerrero-Ferreira, Miguel[2]; Morín-Juárez, Aarón[1]
[1]University of Monterrey, Mexico; [2]Universidad de Michoacan, Mexico

Background: Witkop syndrome is a rare benign autosomal dominant disorder that is diagnosed during mid-childhood when the persistence of deciduous teeth becomes apparent, but this illness may be problematic to diagnose because nail defects may be insignificant.

Case Study: A 9-year-old girl presented with a 3–month history of dental caries. On physical examination revealed an absence of mandibular second premolars (fig. 1A—139) and thin and brittle toenails (fig. 1B—139). A panoramic dental radiograph revealed hippo taurodontism in the left and right first upper molars, agenesis of the lower second premolars, maxillary peg laterals and canines with ectopic eruption (fig. 1C 139). The clinical diagnosis was Witkop syndrome or tooth and nail syndrome (TNS). The diagnosis was confirmed by the identification of a mutation in the MSX1 gene (4p16.1).

Conclusions: The expressivity of tooth and nail abnormalities is inconstant, which is due to an S202X mutation in MSX1 that is responsible for TNS. In the perspective of these mutations, the presence of both tooth and nail and clef phenotypes indicates that tissue-specific modifier loci impact the expression of these phenotypes. The prognosis of TNS is good and the patient received specific dental management.

Figure 1.



ID: 223 / PT4: 8

Type 4—Poster Presentation

Topics: DERMATOLOGY, NEONATOLOGY, HAEMATOLOGY/ONCOLOGY

Keywords: vascular, hemangioma, tumour, neonatology

cogent medicine

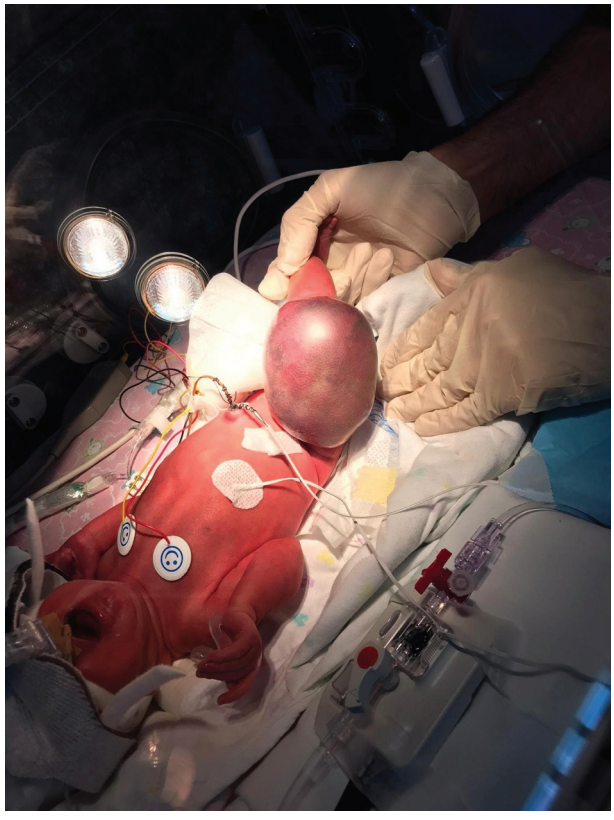
A congenital vascular tumour: a challenging approach

Fernandes, Ana Catarina[1]; Antunes, Joana[2]; Barata, Isabel[3]; Mascarenhas, Andreia[3]
[1]Pediatrics Department, Hospital de Santarém, Portugal; [2]Pediatrics Department, Hospital de Cascais, Portugal; [3]Neonatology Department, Centro Hospitalar Lisboa Central, Portugal

Introduction: Vascular tumours comprise a heterogeneous group of disorders. Differential diagnosis may be challenging, benefiting from an interdisciplinary treatment approach.

Case Study: A 31 week and 3 days premature girl with a known right upper leg vascular mass diagnosed after prenatal ultrasound (US) performed at 31 weeks. Despite fetal signs of hyperdynamic circulation, she did not show cardiac decompensation at birth. On the anterior region of the right thigh was an elastic purple-blue, 12 cm diameter, tumour with pale edges, without palpable thrill or ulceration. Over the first days of life, the tumour increased in size. Initial laboratory evaluations showed severe anaemia, thrombocytopenia and coagulopathy, suggestive of Kasabach–Merritt phenomenon (KMP), requiring multiple transfusions. Postnatal US and CT angiography confirmed a vascular mass with skin and subcutaneous tissue invasion with complex venous malformation process, suggestive of hemangioma or hemangioendothelioma. Tissue biopsy was not performed due to the risk of bleeding. Propranolol (2 mg/Kg/day) and prednisolone (2 mg/Kg/day) was started (on day one and five, respectively). On day fifteen there was no improvement and KMP persisted, so sirolimus (0,8 mg/m2, 12–12 h) was added, but suspended between day twenty-one and fifty-six and restarted at a lower dose (0,4 mg/m2 12–12 h). Multiple blood products transfusions were made due to KMP. Propranolol, prednisolone and sirolimus therapy showed lack of improvement at day eighty-four of life. Amputation of the limb has been delayed until no less invasive treatments available, or as a life-saving measure Figure 1.

Figure 1.



Conclusions: Congenital hemangiomas (CH) are benign vascular tumours, fully formed at birth, and are rapidly involuting (RICH) or non-involuting (NICH). RICH usually regresses spontaneously within the first year. High-output cardiac failure or thrombocytopenia are possible complications, especially in extended lesions, requiring early excision/embolization or corticotherapy. Kaposiform hemangioendothelioma (KHE) are a rare type of vascular tumours that are infiltrative, can invade the skin, subcutaneous fat and muscle, and are associated with KMP, with a mortality rate of 14–24%. Magnetic resonance is the imaging choice to demonstrate its extension. Evidence-based treatment guidelines are unavailable. Biopsy with histopathological evaluation is needed if diagnostic uncertainty. In this case, the lesion vascular anatomy precluded possible catheterization/embolization and biopsy was not feasible. Other treatments include vincristine, ticlopidine with aspirin, heparin, interferon-α, cyclophosphamide and radiotherapy. None of these has been consistently successful, and many have undesirable side effects. This case represents a challenging diagnosis. Only time and further investigation, achievable according to clinical stability, will reveal the proper diagnosis and treatment response.

ID: 221/PT4: 9

Type 4—Poster Presentation

Topics: HAEMATOLOGY/ONCOLOGY

Keywords: Autoimmune hemolytic anaemia, cold antibodies, intravascular hemolysis, cold agglutinin disease

Hemolysis by cold antibodies in pediatric age: When paroxysmal cold hemoglobinuria isn't the cause—Type 3 Case Report

Novo, Marta Luisa[1]; Pimenta, Sofia Alexandra Morais[2]; Oliveira, Raquel[3]; Ferreira, Andreia[4]; Oliveira, Rita[4]; Antunes, Marika[4]; Costa, Emília[5]; Couto Guerra, Isabel[5]; Cleto, Esmeralda[5]

[1]Pediatric Department, Centro Hospitalar Universitário do Algarve, Portugal; [2]Pediatric Department, Centro Hospitalar Tâmega e Sousa; [3]Pediatric Department, Unidade Local de Saúde Alto Minho; [4]Hematology Department, Centro Hospitalar Universitário do Porto; [5]Pediatric Hematology Unit, Pediatric Department, Centro Materno Infantil do Norte, Centro Hospitalar Universitário do Porto

Background: Autoimmune hemolytic anaemia (AIHA) by cold antibodies in pediatric age can be presented in two different entities: paroxysmal cold hemoglobinuria (PCH) or cold agglutinin disease (CAD). PCH is the most frequent and most exclusive in children, occurs commonly after viral-like illness and caused by an IgG biphasic autoantibody that links to red blood cells in cold temperatures and causes complement-mediated intravascular hemolysis at 37ºC. CAD is uncommon in children, representing 10% of AIHA cases in pediatric age, may occur after a Mycoplasma pneumonia or Epstein-Barr virus infection and involves IgM autoantibodies that frequently have "I" or "i" specificity or rarely "Pr" specificity, which leads to anaemia, either due to extravascular or and cause complement-mediated intravascular hemolysis.

Case Study: A previously healthy 3-year-old boy, attends the local emergency services in December presenting fever, headache, 24 h diffuse abdominal pain and dark urine, with reference to a cold 2 weeks before. Presenting at admission: tachycardia, pallor and jaundice. Initial complimentary exams revealed: normocytic, normochromic anaemia (haemoglobin 8,4 g/dL, reticulocyte count 89,570/uL), unspecified peripheral blood smear, high lactate dehydrogenase (1526 UI/L), unconjugated bilirubin and aspartate aminotransferase, normal kidney function, positive dipstick for blood but without red blood cells in urinalysis (presence of hemoglobinuria). The direct antiglobulin test was positive, only for C3d/C3b (IgG negative). At this moment, it was admitted AIHA by cold antibodies, warmth and hydration measures were adopted. During the investigation, the Donath-Landsteiner (DL) test was negative, but a cold autoantibody with a titer >1:64 at 4ºC was identified. A further etiologic investigation revealed positive PCR for Rhinovirus and negative for Mycoplasma pneumonia, also negative serologic tests for CMV and EBV. The patient was

subjected to warmth measures, hydration and folic acid supplementation with progressive clinical and analytical improvement.

Conclusions: AIHA resulting from intravascular hemolysis is rare in pediatrics, with PCH being the most common cause. In this case, after a negative DL test, the diagnosis of CAD was considered and confirmed. The only therapeutic measure to prevent hemolysis and continued haemoglobin decrease is by the increasing environmental and corporal temperatures. Thus, early identification of AIHA by cold antibodies is essential to promptly adopt warming measures in order to improve intravascular hemolysis and anaemia.

Session

PT5: Poster Theatre (PT-5)

Time: **Saturday, 5 December 2020**: **9:00—10:00**	*Location*: **Virtual**

Presentations

ID: 150/PT5: 1

Type 4—Poster Presentation

Topics: PSYCHIATRY

Keywords: autism spectrum disorder; phenotype, genetic tests, copy number variations

Clinical and genetic characteristics in Romanian autism spectrum disorders patients

Budisteanu, Magdalena[1,2,3]; Papuc, Sorina Mihaela[2]; Erbescu, Alina[2]; Dobre, Maria[2]; Gaina, Gisela[2]; Mateescu, Laura[1,4]; Grozavescu, Raluca[1,4]; Andrei, Emanuala[1]; Anghelescu, Cristina[1]; Nedelcu, Cristina[1]; Linca, Florentina[1]; Budisteanu, Bogdan[1]; Ioana, Doina[1]; Dobrescu, Iuliana[1,4]; Rad, Florina[1,4]; Arghir, Aurora[2]

[1]quot; Prof. Dr Alex. Obregia" Clinical Hospital of Psychiatry, Romania; [2]Victor Babes National Institute of Pathology, Bucharest, Romania; [3]Titu Maiorescu University, Bucharest, Romania; [4]Carol Davila University of Medicine, Bucharest, Romania

Introduction: Autism spectrum disorders (ASDs) are complex neuropsychiatric conditions characterized by impairments in communication and social interaction, restricted interests and repetitive patterns of behaviour. ASD has a genetic architecture that is extremely heterogeneous in terms of variant types, ranging from large chromosomal rearrangements and CNVs to small insertions/deletions and single nucleotide sequence variants. Chromosomal microarrays (CMA) had a major contribution in revealing many ASD risk genes and the role played by rare de novo mutations in ASD susceptibility. We report on the results of a CMA investigation in a group of ASDs patients from Romania.

Method: Forty patients with ASDs as the main phenotypic feature was referred to our clinical departments and laboratory for clinical evaluation and genetic testing. A complete clinical evaluation was performed with a focus on psychiatric examination and psychological evaluation with specific ASDs tests (ADOS, ADI-R). Array-CGH was performed for the entire group with Agilent 4x180k platform.

Results: 15 pathogenic or likely pathogenic CNVs and 9 variants of uncertain significance (VOUS), including approximately 220 OMIM genes, were detected in our patient group. Besides well-

described syndromic ASDs regions (e.g., 1q21.1 deletion, MBD5 and MACROD2 gene disruption), other genomic regions, rarely reported in ASDs patients were identified (such as duplication of 7p22.2p22.1, CHRNA7 gene duplications, 15q21-q22 deletion).

Our data illustrate the utility of array-CGH in the investigation of ASDs patients, to add data supporting the role of rare CNVs in ASDs susceptibility.

Acknowledgement: The research leading to these results has received funding from the EEA RO NO Grant 2014–2021, the project contract No 6/2019.

ID: 106/PT5: 2

Type 4—Poster Presentation

Topics: PSYCHIATRY

Keywords: schizophrenia, children, adolescents, family history, environmental factors

Risk factors in early-onset schizophrenia—a four years study

Budisteanu, Magdalena[1,2,3]; Andrei, Emanuela Lucia[1]; Linca, Florentina Ionela[1]; Hulea, Diana Stefania[4]; Velicu, Alexandra Catalina[4]; Mihailescu, Ilinca[1]; Budisteanu, Bogdan[1]; Riga, Sorin[1]; Arghir, Aurora[2]; Papuc, Sorina Mihaela[2]; Dobrescu, Iuliana[1,4]; Rad, Florina[1,4]

[1]quot; Prof. Dr Alex. Obregia" Clinical Hospital of Psychiatry, Romania; [2]'Victor Babes' National Institute of Pathology, Bucharest, Romania; [3]'Titu Maiorescu' University, Faculty of Medicine, Bucharest, Romania; [4]'Carol Davila' University of Medicine and Pharmacy, Bucharest, Romania

Background: Schizophrenia is a neurodevelopmental disorder, characterized by impairment in reasoning, affectivity and social relationships. Although the diagnosis of schizophrenia in children and adolescents has been challenged for many years, at present childhood-onset schizophrenia is considered and accepted as a clinical and biological continuum with the adult-onset disorder. The present study aimed to evaluate the influence of psychiatric family history, area of residence, obstetrical complications on the age of onset and severity of symptomatology in children and adolescents with schizophrenia.

Methods: The data were collected from 2016 to 2019, from the Department of Child and Adolescent Psychiatry, and included all children and adolescents diagnosed with schizophrenia according to ICD-10 criteria.

Results: The study included 148 patients diagnosed with a schizophrenia-spectrum disorder. A positive familial history for psychiatric diseases was an important risk factor both for an early onset of the disease and for the severity of symptoms ($p < 0.01$). Urbanicity was another risk factor, most of our patients (61%) being from an urban area. There were no statistically significant gender differences in terms of the severity of the symptoms. However, boys exhibited a greater symptom severity than girls, and also presented more co-occurring disorders. There were no statistically significant correlations between obstetrical complications and age of onset and severity of symptoms.

Conclusions: A psychiatric family history and urbanicity are important risk factors for early-onset schizophrenia; other factors, such as obstetrical complications, small birth weight, type of birth, can also be present, but in a less measure.

Acknowledgements: This work was supported partially by a grant of Romanian National Authority for Scientific Research and Innovation CCCDI—UEFISCDI project number COFUND-ERANET NEURON SYNSCHIZ 6/2018 and by Ministry of Education and Research in Romania, under

Program 1—The Improvement of the National System of Research and Development, Subprogram 1.2—Institutional Excellence—Projects of Excellence Funding in RDI, Contract No.7PFE/16.10.2018

ID: 131/PT5: 3

Type 4—Poster Presentation

Topics: RARE DISEASES

Keywords: paediatric surgery, Hirschsprung's disease, Duhamel procedures

Outcomes for children born with Hirschsprung's disease

Cook, Helena

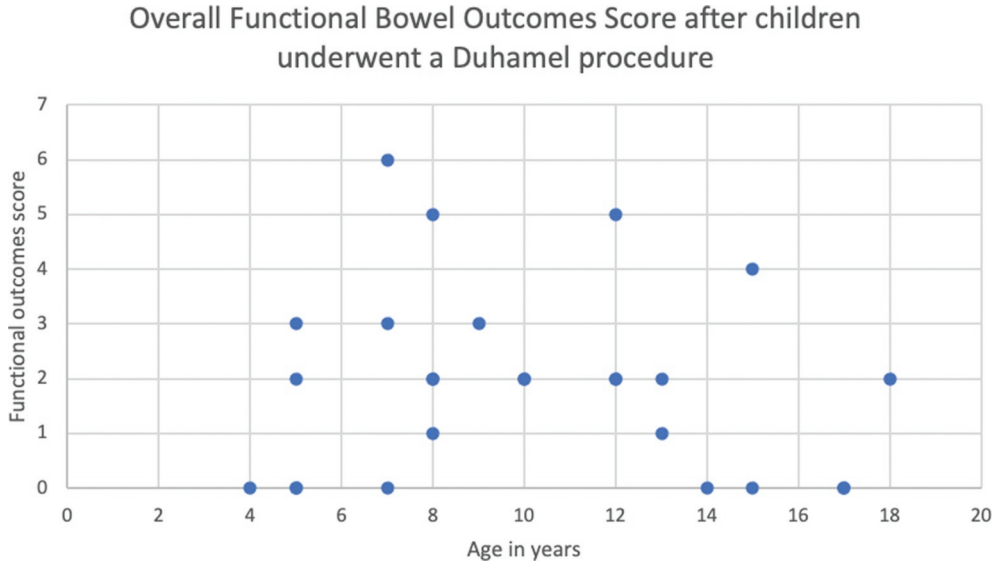
Brighton and Sussex Medical School, United Kingdom

Background: Hirschsprung's disease is a congenital colon condition causing chronic constipation and if untreated, toxic megacolon. The definitive treatment is a surgical pull-through of ganglionic bowel to replace aganglionic bowel and allow normal defecation. Three types of pull-through are performed at this centre. This study examines the outcomes of its Hirschsprung's patients compared to the literature. Outcomes include short and long term complications, constipation, soiling and voluntary bowel movements.

Methods: The records of 55 children aged under 18 with Hirschsprung's disease were collated. The Krickenbeck classification was used to assess bowel function. The following data was collected: short-term and long-term complications, type of pull-through and length of the disease. For Duhamel procedures, the functional bowel outcome score was also collected and analysed in relation to the literature. Data were analysed using cross-tabulations.

Results: 63% of children had a short-segment disease. Longer length disease and comorbidities were associated with poorer outcomes including enterocolitis. Most children (82.6%) had undergone pull-throughs, and there were reasonable medical or social reasons why some children had not. The majority of operative procedures were Duhamel procedures. 30.7% of children had good bowel outcomes post-Duhamel procedure, but the majority of children had experienced at least one long term complication. Most Duhamel procedures were able to perform voluntary bowel movements, and the majority suffered no soiling after pull-throughs. Constipation was the most commonly reported long-term complication after Duhamel procedures (61.5%), and 87.5% of

Figure 1.



these children required laxatives or washouts to manage this. Bowel outcomes did not appear to improve with age (Figure 1).

Conclusions: Many children with Hirschsprung's have poor bowel outcomes after Duhamel pull-through surgery. Constipation is especially prevalent, and this is likely due to the remnants of aganglionic bowel that remain after this procedure. Whilst life-threatening complications remain rare at this centre, successful management of common complications such as constipation and soiling is important, as these may impact psychosocial wellbeing. Soiling after pull-throughs is most likely overflow secondary to constipation, highlighting how important successful management or prevention of constipation is. Novel pull-through techniques have shown a lower rate of constipation, and these should be considered in the future management of Hirschsprung's patients at this centre. Follow up of surgical patients into adulthood is also recommended.

ID: 205/PT5: 4

Type 4—Poster Presentation

Topics: RHEUMATOLOGY

Keywords: colchicine, Henoch-Schönlein Purpura, recurrent

A different approach in recurrent Henoch-Schönlein Purpura

Virtuoso, Joao[1]; Pinto, Ana Sofia[1]; Ribeiro, Joana Filipe[1]; Oliveira, Rita S.[1]; Ferreira, Joana Fonseca[1]; Salgado, Manuel[2]

[1]ULS Guarda, Portugal; [2]Hospital Pediátrico de Coimbra, Portugal

Background: Henoch-Schönlein Purpura (HSP) is the most common vasculitis of childhood and is an acute, systemic, immune complex-mediated leukocytoclastic vasculitis. HSP is a self-limited disease with an average duration of symptoms of 4 weeks and approximately 30% of patients have one or more recurrences, typically within four months of the initial presentation. Additional therapies for the treatment of recurrent pediatric HSP are not well defined, but there are reports that suggest benefits from medications such as colchicine.

Case Study: A 16-year-old male, with unremarkable past history, was admitted to a second-level hospital with palpable purpura, accompanied by recurrent episodes of abdominal pain (one with hematochezia) and arthralgia. He was discharged 48 h after and started therapy with prednisolone. He had two more admissions due to relapsing episodes after weaning prednisolone. Laboratory tests showed: urinalysis with erythrocytes (70 /uL). Complete blood count, urea and creatinine within the reference values. Serologies: Anti-Mycoplasma pneumoniae IgM positive, IgG negative. Skin biopsy revealed an old lesion of leukocytoclastic vasculitis. HPS secondary to infection by Mycoplasma pneumoniae was assumed and he was treated with clarithromycin and started weekly tapering from prednisolone. In spite of this treatment, he had a new relapsing episode for 6 months and then colchicine was added to the therapy. With this therapy, there was a progressive improvement in the clinical condition, allowing suspension of corticosteroid therapy 3 months later. He maintained therapy with colchicine for 1 year, without any recurrence episodes.

Has scheduled genetic study for FMF.

Conclusions: In cases of HSP with an unusual and complicated presentation, it may be useful to think in Familial Mediterranean fever (FMF) as a differential diagnosis. Patients with FMF are at increased risk for developing HSP, suggesting that genetically determined immune dysregulation may contribute. Colchicine is the first-line treatment for FMF and some cases of successful treatment of HSP with colchicine have been reported, therefore it should be considered in the treatment of patients with prolonged HSP.

ID: 112/PT5: 5

Type 4—Poster Presentation

Topics: COVID-19

Keywords: dental, covid-19, paediatric care, guidelines, review

Review of the recommendations and guidelines for paediatric dental care during the COVID-19 pandemic

Hazara, Roya

Luton and Dunstable hospital, United Kingdom

Background and Objective: Covid-19 exploded across the world like a tsunami in March 2020 resulting in a global pandemic. First identified in Wuhan, China, Covid-19 is an infectious disease caused by severe acute respiratory syndrome. Common symptoms are commonly fever, coughing, shortness of breath, loss of taste and smell. Nausea, vomiting and diarrhoea have also been reported in some cases. It is transmitted by close contact through small droplets produced during coughing, sneezing and talking. As the world tried to take control of this deadly virus, lockdown measures came into place resulting in the closure of all dental surgeries and hospitals cancelling all elective dental procedures. Dental professionals are at an increased risk due to routinely carrying out aerosol generated procedures. Whilst all routine dental care was suspended, emergency care was provided with the correct use of personal protective equipment. Dental emergency in children is inevitable, whether it is an abscess, a painful decayed tooth or sports injury. It is scary at best of times, let alone in extraordinary lockdown circumstances. Royal College of Surgeons provided a clear and concise document on dealing with dental emergencies for children during these uncertain times. This poster presentation aims to review the recommendation provided by the Royal College of surgeons and other guidelines available on delivering paediatric dental care during the covid-19 pandemic.

Method: The recently published recommendations were accessed through the Royal College of Surgeons website, faculty of general dental practice and The Scottish Dental Clinical Effectiveness Programme websites.

Learning Points: Obtaining an understanding of the guidelines available. Considering the key recommendations on delivering dental care during a pandemic. Identifying valuable lessons learnt

Conclusions: There were clear frequent updates, recommendations and guidelines made available to deal with paediatric dental emergencies during Covid-19 pandemic, taking into account the safety of the patient and the care provider.

ID: 207/PT5: 6

Type 4—Poster Presentation

Topics: COVID-19

Keywords: COVID-19, mood, emotions, worries

The perception of older children and adolescents about the COVI-19 pandemic—A qualitative study in Sri Lanka

Rodrigo, Ginige Dushmanthi Ishani; Croos, Vajira; Thayalan, Meera; Kahawevitharana, Anupa; Shafira, Fathima

General Sir John Kotelawala Defence University, Sri Lanka

Introduction: COVID-19 pandemic has reached all corners of the globe. Older children and adolescents have their own understanding, perceptions and emotions about it. Some of these may endanger their health if not addressed in time.

Objective: The aim of this study was to explore the fears and worries of older children and adolescents regarding the pandemic and identify any physical symptoms or changes in mood.

Materials and Methods: A pre-tested self-administered questionnaire was given to a group of children and adolescents attending the outpatient department of the University Hospital KDU as patients or accompanying persons over a period of 2 months. After obtaining consent and assent they were asked to answer several open-ended questions and to identify their mood using a "feelings faces" chart. Data were analysed manually.

Results: A total of 77 children completed the study (33 females:44 males). The average age was 12.15 years. An open-ended question states what you know about COVID-19 pandemic in two lines" used as an ice-breaker evoked many responses which could be categorised to four main themes; the epidemic nature and communicability of disease, how it is spread, prevention measures and disease outcome. The majority (63; 81%) said they felt scared. The main worry was that they and their families might contract the disease (52; 67%). 9 (11.6%) were worried that schools may not reopen and exams may get delayed, while 8 (10.4%) were worried that their parents may lose their employment. 55 (71.4%) had discussed their fear with parents, grandparents, siblings or friends while 22 (28.5%) felt too scared to talk about it. 31 (40.25%) said they experienced physical symptoms with headache (21) and stomachache (10) being most common. Most children described multiple conflicting emotions ranging from anger, frustration, loneliness, sadness as well as the feeling of security and happiness. The mood was described as "happier than before" by 48 (62.3%) mostly attributing it to being at home with their families, while 11(14.2%) described the mood as sadder than before. 16 stated that their mood was the same as before.

Conclusions: Children seem to experience conflicting emotions as well as worries and frustrations due to the COVID-19 pandemic. These need to be addressed to prevent long term damage to their physical and mental health.

ID: 156/PT5: 7

Type 4—Poster Presentation

Topics: RARE DISEASES, DERMATOLOGY, NEONATOLOGY

Keywords: Neurodegenerative disease, Metabolic disorder, Novel

NAXD deficiency and its cutaneous manifestations—A Case Report

Malik, Mohammad[1]; Nadir, Haleema[2]; Cubitt, Jonathan[1]

[1]Welsh Centre for Burns and Plastic Surgery, Morriston Hospital, Swansea Bay University Health Board, Swansea, United Kingdom; [2]Barts and the London Medical School of Medicine and Dentistry (QMUL), London, United Kingdom

Introduction: Metabolism is a tightly regulated sequence of events, supported by key reactions between enzymes and enzyme-specific substrates. These reactions have the potential to produce metabolic side products that can have deleterious effects to further key metabolic reactions. The nicotinamide repair system consists of two partner enzymes, NAD(P)HX epimerase (NAXE) and NAD (P)HX dehydratase (NAXD). These enzymes regulate the levels of metabolic side products.

Case Study: Here we present a case of an 11-month old who presented to our paediatric department with pyrexia, lethargy and multiple cutaneous skin lesions on the background of NAXD

deficiency. Despite early intervention with intravenous antibiotics, the patient failed to improve and subsequently passed away.

Conclusions: The skin lesions were thought to be a consequence of systemic disease rather than a propagator of infection. Clinicians should be aware of this incredibly rare metabolic disease, and its potential to cause widespread systemic dysfunction and the developing avenues for management.

ID: 233/PT5: 8

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: school stress; health; adolescence

Making the case for the importance of school-related stress to understand adolescents' health and introducing Project EASE

García-Moya, Irene; Jiménez-Iglesias, Antonia; Diez, Marta; Paniagua, Carmen; Murillo, Cristina; Nacimiento, Lydia; Tirado, María José

Universidad de Sevilla, Spain

Introduction and Objective: Stress is undeniably a main determinant of human health and the increasing number of adolescent students who experience high levels of school-related stress is a current challenge worldwide. According to the latest data from the WHO collaborative survey HBSC, over a third of adolescents reported feeling some or a lot of pressure from schoolwork, and prevalence in some countries reached 80% at the age of 15 years. In addition, trends between 2002 and 2018 show an increase in school pressure in girls in the majority of countries, with gender differences (which were apparent in most countries in the early 2000s) expanding. Furthermore, especially in higher-income countries, increases in school pressure partly explained an observed increase in psychosomatic health complaints across time. To promote health and wellbeing, both education and health professionals need additional evidence on the prevalence of school-related stress and its determinants. For that reason, the aims of this poster are 1) to provide an overview of key evidence on this topic, and 2) introduce Project EASE, a research project designed to carry out an in-depth analysis of school-related stress in secondary schools with an innovative method.

Methods: Project EASE is a mixed-method investigation, which combines quantitative and qualitative methodologies. In the first phase, surveys will be used to obtain a general characterization of school-related stress and the main factors associated with it from a quantitative perspective. The second phase, of qualitative nature, will involve undertaking focus groups with boys and girls from schools characterized by their high and low levels of school-related stress in the first phase. The final phase of the project focuses on providing valuable information for decision-making and developing recommendations on how to reduce school-related stress and foster adolescents' health and wellbeing.

Conclusions: Taking school experiences into consideration is fundamental to understand stress during adolescence. Gender differences in the levels and trends in school-related stress point to a risk factor for adolescent girls' health in particular, which requires attention. Research projects like Project EASE can provide useful evidence for health professionals working with adolescents. Specifically, they can provide a deeper view of students' stress, and on the psychosocial factors and processes linked to this phenomenon.

ID: 237/PT5: 9

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: Kidscreen-10, adolescents, reliability, validity

Analysis of the psychometric properties of the Kidscreen-10 health-related quality of life questionnaire in adolescents in Spain from a gender perspective

Salado, Vanesa; Velo, Sheila; Ramos, Pilar; Francisco, Rivera
Seville University, Spain

Introduction: Studies show the excellent psychometric properties of the three versions of the Kidscreen questionnaire. This instrument is a measure of the quality of life of young people related to health. Kidscreen allows knowing the subjective perception that the adolescent has about their physical, mental and social health.

Objective: The main objective of this study is to analyze the psychometric properties of the quality of life questionnaire (Kidscreen-10) in Spanish adolescents according to gender. The sample has 35,631 Spanish adolescents (aged 11–18) whose responses were collected through a multistage sampling stratified by conglomerates.

Results: The results obtained show mean differences in all items except item 9. Scores in all items are higher in boys with a small or negligible effect size. On the other hand, the psychometric properties of the Kidscreen questionnaire related to reliability are adequate in the global sample and according to gender. Evidence of internal validity shows the unidimensionality of the instrument as the best possible structure, although the fit is poor (which is shown in both sexes). Regarding evidence of external validity, the Kidscreen shows a high correlation with the measure of life satisfaction. These results are similar in boys and girls. Version 10 of the Kidscreen represents an overall score from the original questionnaires. In this study, equity was observed for boys and girls in relation to the psychometric properties of the instrument.

Conclusions: Future studies could review and synthesize the psychometric information obtained by research from different countries and check the influence of social and cultural factors on the possible differences obtained.

ID: 262/PT5: 10

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: prescription

Evaluating the quality of paediatric medical discharge prescription completion in a regional paediatric centre

Wong, Ruby; Gadzama, Ishaya; Murphy, Anne-Marie; Gallagher, Siobhan
Department of Paediatrics, University Hospital Limerick, Ireland

Background: While writing discharge prescriptions may be an everyday job as a physician, it is also potentially a fundamental source of medication errors. In University Hospital Limerick (UHL), each prescription contains 3 pages—Instructions are given as follows: white is the patient's copy, pink is to be filed into the patient's chart, and blue is to remain inside the prescription pad. The aim of this audit is to determine the compliance of doctors incorrectly completing the discharge prescription process in our Paediatric Department.

Methods: Retrospective data were obtained from discharge prescription pads in the two paediatrics inpatient wards (Rainbow and Sunshine wards) in UHL from April to June 2020. Based on the results gathered, we conducted an educational session to re-emphasise to doctors the importance of good prescription writing techniques and areas requiring improvements. A re-audit was performed between July and September 2020 to close the audit loop.

Results: In total 201 prescriptions were reviewed in the initial audit, and 266 in the re-audit. Prescriber's name, Irish medical council number and signature were present in 97%, 92% and 99% respectively of the prescriptions initially. In the re-audit, prescriber's name was seen in 98% of the prescriptions, Irish medical council in 98% and prescriber's signature in 99%. Only 90% of the prescriptions for record purposes contained patient's identifiers. Dates of prescription were documented in 96% of all prescriptions during the first audit, which declined to 90% in the re-audit. A total of 64% of the pink prescription pages were filed into the patient's chart initially, with a slight improvement to 67% in the re-audit.

Conclusions: Good prescription writing techniques help to ensure safe medical practice. Our audit highlights some key areas of concern which require physician's attention during prescription writing in our department but overall the compliance with the discharge prescription process by paediatric medical teams is reasonable.

ID: 241/PT5: 11

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Facial palsy, Facial reanimation.

Paediatric facial paralysis: An Overview and insights into management.

Malik, Mohammad Umair; Cubitt, Jonathan James
Welsh Centre for Burns and Plastic Surgery, United Kingdom

Introduction: Facial paralysis describes the physical inability to activate the muscles of facial expression. It is a condition of great variability and has an annual incidence of 2.7 per 100,000 in children under the age of 10, and 10.1 per 100,000 in children over the age of 10. Common to all cases of facial paralysis is the impact on functional and psychosocial wellbeing. Patients may present with varying degrees of difficulty in eating, speaking, pronunciation and an inability to protect or lubricate the cornea. Our ability to display emotion through facial expression is an integral component of social interaction. Inability to display such emotion can lead to discordance between what the individual feels and what the observer perceives, negatively impacting the quality of life and leading to psychosocial isolation. These features may be particularly pronounced when facial paralysis occurs in childhood.

Conclusions: Therefore, treating facial paralysis in childhood is imperative. Herein, we outline the important considerations in the assessment, examination and management of paediatric facial palsy, through our own experience and review of the literature, highlighting the role of medical management, dynamic and static procedures for reanimation and synkinesis in efforts to correct deficits created by facial paralysis.

Session

PT6: Poster Theatre (PT-6)

Time: **Saturday, 5 December 2020**: **10:00—11:00**	*Location*: **Virtual**

Presentations

ID: 232/PT6: 1

Type 4—Poster Presentation

Topics: PSYCHIATRY, NEUROLOGY

Keywords: psychological development, language, adoption, residential care

Psychological development in children being raised in adoptive families and residential care

Peñarrubia, M. Gracia[1]; Paniagua, Carmen[2]; Román, Maite[2]; Cáceres, Isabel[2]; Palacios, Jesús[2]
[1]Universidad Loyola, Seville (Spain); [2]Universidad de Sevilla, Spain

Introduction: Early exposition to experiences of adversity such as institutionalization, maltreatment, neglect or a dysfunctional family context can lead to a variety of short- and long-term developmental delays across cognitive, socio-emotional and physical domains (Nelson, 2017). Studies about children's development and early adversity are increasing, although there is little research about this issue in children institutionalized in Spanish foster centres and children internationally adopted by Spanish families.

Case Study: In this study, psychological development was examined in three groups of 4-to 8-years-old children: 40 children adopted by Spanish families, 50 children who were institutionalized in residential care in Seville (Spain), and a community comparison group of 58 children. The Battelle Developmental Inventory (Newborg, 2005) was used to assess five developmental areas —motor, adaptive, cognitive, personal-social, and communication–, obtaining a global developmental score. For in-depth language testing, the Comprehension of Grammatical Structures Test (Mendoza, Carballo, Muñoz & Fresneda, 2005) was applied. These tests were always performed in the same order, and their implementation lasted approximately 80 minutes.

Results: Data showed that children in residential care had lower scores in motor and communication areas, and in the global composite score, in comparison with adopted and control groups. Adopted children obtained intermediate scores in cognitive and grammatical comprehension, with lower scores than the control group but higher scores than the foster children. The influence of early experiences on psychological development was also explored. A longer stay in institutional care before being adopted was related to lower cognitive development in the adoptees ($rs = -.32$, $p = .049$). Moreover, a higher age at residential placement was related to lower personal-social and adaptive development in institutionalized children ($rs = -.39$, $p = .006$ and $rs = -.31$, $p = .032$ respectively). These data imply that psychological development may be negatively influenced by early experiences of adversity, although some heterogeneity could be observed in their development, showing deficits in some developmental areas and normative results in other ones.

ID: 234/PT6: 2

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, PUBLIC HEALTH

Keywords: early childhood, education, nutrition, psychosocial stimulation, social media

Factors associated with knowledge of early childhood nutrition and psychosocial stimulation among social media users in Indonesia

Rianda, Davrina[1,2]; Rasitha, Devriani[1]
[1]Lab Pintar, Banten, Indonesia, Indonesia; [2]Human Nutrition Research Center, Indonesian Medical Education and Research Institute (HNRC-IMERI), Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

Background: The rise of the digital era hints at the possibility of using social media platforms for early childhood nutrition and stimulation education. However, data on knowledge of associated topics among the users and its related factors were lacking. We aimed to evaluate the associations between sociodemographic characteristics, social media exposure, personal concern, and attitude on knowledge of early childhood nutrition and psychosocial stimulation among social media users.

Methods: A cross-sectional study was carried out between April 10 until 1 October 2020, among Indonesian Instagram and Twitter users. Data were collected from an online-based questionnaire distributed through a link provided on each social media platform. Questionnaires from the Care for Child Development module, Women's Nutrition throughout the Life Cycle and in the Context of HIV and AIDS module, and Training Course on Child Growth Assessment were translated to Indonesian and used to quantify the knowledge of early childhood topics. Subjects who obtained above 75% of the total score were classified as excellent knowledge, while those whose scores equal to or less than 75% were categorized as good-to-insufficient. Multiple logistic regression was used to evaluate the associations between factors and the level of knowledge of early childhood nutrition and stimulation Table 1.

Table 1. Association of sociodemographic characteristics, social media exposure, personal concern, and attitude on the knowledge of early childhood nutrition and psychosocial stimulation among social media users (n=186)

	Excellent knowledge of early childhood nutrition				Excellent knowledge of psychosocial stimulation			
	Crude OR (95% CI)	*p*- value	Adjusted OR (95% CI)	*p*-value	Crude OR (95% CI)	*p*-value	Adjusted OR (95% CI)	*p*-value
Sociodemographic characteristics								
Age < 25 years old	1.74 (0.70 - 4.31)	0.232	1.27 (0.46 - 3.53)	0.649	0.27 (0.14 - 0.52)	<0.001***	0.30 (0.12 - 0.75)	0.010*
Female	1.36 (0.16 - 11.5)	0.776	-	-	1.36 (0.16 - 11.5)	0.776	-	-
Formal education ≤ 12 years	2.12 (0.96 - 4.67)	0.063	1.97 (0.81 - 4.78)	0.134	2.12 (0.96 - 4.67)	0.063	-	-
Unemployed	1.27 (0.56 - 2.84)	0.566	-	-	0.45 (0.24 - 0.81)	0.008**	0.59 (0.30 - 1.16)	0.128
Married	0.87 (0.31 - 2.48)	0.803	-	-	2.97 (1.34 - 6.45)	0.006**	0.84 (0.28 - 2.47)	0.748
Living outside Java island	0.59 (0.19 - 1.83)	0.366	-	-	0.93 (0.45 - 1.95)	0.856	-	-
Social media exposure								
Time spent on Instagram ≤ 60 minutes/day	0.59 (0.23 - 1.56)	0.293	-	-	1.65 (0.87 - 3.14)	0.128	-	-
Time spent on Youtube ≤ 60 minutes/day	0.71 (0.33 - 1.56)	0.400	-	-	1.36 (0.75 - 2.45)	0.308	-	-
Time spent on Twitter ≤ 60 minutes/day	0.49 (0.17 - 1.36)	0.172	0.53 (0.18 - 1.53)	0.239	1.85 (0.72 - 4.75)	0.198	-	-
Personal concern and attitude								
Having concern about their capabilities in nurturing children	0.66 (0.29 - 1.51)	0.330	-	-	0.47 (0.26 - 0.87)	0.015*	-	-
Experiencing difficulties in finding easy-to-read child care materials	0.50 (0.20 - 1.24)	0.134	0.47 (0.19 - 1.18)	0.106	0.43 (0.23 - 0.82)	0.010*	0.40 (0.20 - 0.82)	0.012*
Experiencing difficulties in accessing child care experts	1.00 (0.45 - 2.26)	0.989	-	-	0.81 (0.44 - 1.48)	0.490	-	-
Expecting a more dominant role in parenting compared to partner	1.05 (0.48 - 2.23)	0.898	-	-	0.69 (0.39 - 1.24)	0.221	-	-
Parents as a role model for child care	0.97 (0.45 - 2.13)	0.949	-	-	0.67 (0.38 - 1.21)	0.190	-	-
Social media affects their plan in nurturing children	0.65 (0.27 - 1.55)	0.331	-	-	1.06 (0.53 - 2.12)	0.862	-	-

OR, odds ratio.
*p<0.05
**p<0.01
***p<0.001

Results and Conclusions: Data from a total of 186 subjects were analyzed in this study. Subjects were mostly female (95.7%) and aged below 25 years old (67.2%). About 16% and 43% of the subjects achieved excellent knowledge of early childhood nutrition and stimulation, respectively. In the bivariable analysis, subjects with equal to or less than 12 years of formal education tended to obtain excellent knowledge of early childhood nutrition. Age below 25 years old, unemployed, not yet married, having concern on own capabilities in nurturing children, and experiencing difficulties in finding easy-to-read child care reading materials were associated with lower odds of having excellent stimulation knowledge. In the multivariable analysis, no association was found between identified factors and nutrition knowledge. However, we observed a few predictors of knowledge of psychosocial stimulation. Social media users under 25 years of age (aOR 0.30, 95%CI 0.12–0.75; p = 0.010) and those experiencing difficulties in finding easy-to-read materials of child care (aOR 0.40, 95%CI 0.20–0.82; p = 0.012) were less likely to achieve excellent knowledge of early childhood psychosocial stimulation. Future larger studies are warranted to confirm these findings for providing a better approach to promotion and education of early childhood care in social media platforms.

ID: 245/PT6: 3

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, PSYCHIATRY, ADOLESCENT MEDICINE

Keywords: International adoption, growth, adversity, prenatal alcohol exposure, ADHD

A longitudinal study of growth and prevalence of medical issues in internationally adopted children

Román, Maite[1]; Paniagua, Carmen[1]; Moreno, Carmen[1]; Peñarrubia, M. Gracia[2]; Palacios, Jesús[1]
[1]Universidad de Sevilla (Spain); [2]Universidad Loyola, Seville (Spain)

Introduction: Children who are adopted from care are more likely to experience problems across development due to the combination of malnutrition, alterations in endocrine growth factors and psychosocial deprivation. Growth impairments are common among internationally adopted children when they arrive at their adoptive families, with deficits in weight, height and head circumference (Miller et al., 2009; Palacios, Román & Camacho, 2010; Sonuga-Barke, Schlotz & Kreppner, 2010; van IJzendoorn, Bakermans-Kranenburg & Juffer, 2007). At the same time, the prevalence of some medical problems among internationally adopted children is higher than among non-adopted children. Fetal alcohol spectrum disorders and attention-deficit hyperactivity disorder (ADHD) are two of the most common diagnoses in internationally adopted children, with rates considerably high (Chasnoff, Wells & King, 2015; Frenkel et al., 2020; Gunnar & van Dulmen, 2007; Lindblad, Weitoft & Hjern, 2009; Miller, Pérouse de Montclos & Sorge, 2016).

Case Study: A longitudinal study of international adoptees has been carried out since their placement into their adoptive families until their teenage years (Longitudinal Adoption & Institutionalization Study; LAIS.US). The present study examined 25 children adopted in Spain from Russia. The first focus of the study was the analysis of the growth trajectory (weight, height, head circumference and Body Mass Index) and of the changes after puberty. The second focus of the study was the analysis of the prevalence of developmental delays, prenatal alcohol exposure and attention deficit disorder. Information about children's growth was available at the time of arrival in the adoptive family and an average of 3, 7 and 13 years after adoption. Adoptive parents gave information about children's pediatrics problems.

Results: Results showed that at the time of adoption, the internationally adopted children showed a significant delay in anthropometric indicators, with weight, height and BMI improved dramatically after adoption. However, the delay shown by the head circumference in the first data collation remained stable from childhood to teenage years. Prevalence of developmental and

medical problems was very high, with attention deficit disorders affecting 45.5% of the sample. Although there is great variability among international adoptees, in many cases pediatric support is required to promote recovery more effectively.

ID: 244/PT6: 4

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: Adolescents, cyberbullying, body image

The relationship between body image satisfaction and cyberbullying among adolescents adjusted for selected psychosocial factors.

Malinowska-Cieślik, Marta[1]; Dzielska, Anna[2]; Mazur, Joanna[2,3]

[1]Department of Environmental Health, Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, Poland; [2]Department of Child and Adolescent Health, Institute of Mother and Child, Warsaw, Poland; [3]Department of Humanization in Medicine and Sexology, University of Zielona Gora Collegium Medicum, Zielona Gora, Poland

Introduction: Studies prove the relationship between the adolescents' body image and cyberbullying, but little is known about the moderating effect of body satisfaction through which these relations may develop.

Objective: The main goal of the study was to assess the associations of body image with adolescents' cyberbullying involvement in the context of psychosocial factors. We hypothesized that low body satisfaction would increase the risk of cyberbullying and that the demographic, individual and social factors would moderate the influence of the body image to cyberbullying involvement.

Method: The study used data of 5838 adolescents (47.6% male) aged 13 to 17 years old collected in the cross-sectional survey implemented in Poland as part of the Health Behaviour in School-aged Children WHO-Collaborative Study (HBSC) in 2017/2018. The cyberbullying was measured by the questions adapted from the revised Olweus Bully/Victim Questionnaire. The study sample was divided into four groups: (1) only perpetrators, (2) only victims, (3) both perpetrators and victims, (4) and not involved in cyberbullying as a reference group. Independent variables included demographic factors (gender, age, family structure), family socioeconomic status (family affluence and social position), individual factors (school achievements and social self-efficacy), and social factors (family and peer support, connections to others). Body satisfaction was measured by the Body Image Subscale of the Body Investment Scale by Orbach & Mikulincer (1998). A series of logistic multinomial regression models were estimated, including successive blocks of factors as independent variables. Regression analysis was conducted to determine the predictive value of each variable included in the model. Subsequent models were compared using the pseudo-R-sq Nagelkerke goodness-of-fit coefficient.

Results: The findings have proved that body satisfaction plays a moderating role in reducing the risk of becoming a victim and a bully-victim. It remained a significant protective factor even after the inclusion of other psychosocial predictors. The risk of cyberbullying was moderated by body satisfaction independently. Even the body satisfaction effect decreased in more extensive models, it became significant in victims and bully-victims. Considering the gender, the stronger protective effect of body satisfaction has been observed in boys compared to girls in victims and bully-victims.

Conclusions: Body satisfaction is an important protective and moderating factor in adolescents' cyberbullying involvement, especially as victims and bully-victims. Besides the improvement of

social support, school performance and connections to others, the strengthening of body satisfaction is an important measure to prevent cyberbullying among adolescents.

ID: 257/PT6: 5

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: Social media, sleep, adolescents, emotional state

Escaping from negative feelings to social media predicts adolescent sleep problems

Lukoseviciute, Juste; Smigelskas, Kastytis
Lithuanian University of Health Sciences, Lithuania

Introduction: The term social media (SM) refers to the various internet-based networks that enable users to interact with others, verbally, and visually. SM is becoming more and more popular, especially among young people. At least 92% of adolescents use SM. Studies show that problematic social media use (PSMU) among adolescents is related to mental health problems (depression, anxiety and psychological distress, lower life satisfaction) and unhealthy lifestyle (worse sleep quality, lower levels of vigorous physical activity). There is a growing body of research that confirms the associations between sleep problems and PSMU. The aim of this study was to analyze the relationship between PSMU and sleep problems.

Methods: The study was conducted in 2018 during the Health Behaviour in School-aged Children (HBSC) survey in Lithuania. The data were collected in a school-based survey based on the internationally standardized HBSC study protocol. The study sample comprised 4191 schoolchildren (mean age 13.9 ± 1.69 years; 49.1% girls). It was a representative sample of Lithuanian schoolchildren from grades 5, 7, and 9. The study was conducted at 64 secondary schools across the country (response rate in participating schools was 80.7%). PSMU was assessed using the nine-item Social Media Disorder Scale; PSMU was considered if at least five of nine symptoms were present. The scale's internal consistency in our study was $\alpha = 0.81$. Sleep problems were assessed using three aspects: difficulties in getting to sleep (5 items), awakening at night (3 items), and tiredness in the morning (2 items). The data were analyzed using IBM SPSS Statistics, version 26. The multivariate associations of PSMU and sleep problems were estimated using a linear regression method. The statistical significance level was set at $p < 0.05$.

Results: The study showed that PSMU was similarly prevalent by gender (12.8% in boys and 12.6% in girls; $p = 0.794$) but significant differences were found among grades: 5th—10.9%, 7th—14.8%, 9th—12.8% ($p = 0.009$). Bivariate correlation revealed that total sleep score significantly correlated with the number of PSMU symptoms ($r = -0.331$; $p < 0.001$). Escape from negative feelings was the most consistent independent factor for difficulties in falling asleep, awakening at night, tiredness in the morning, and overall sleep ($p < 0.001$). Other significant PSMU were compulsive thinking on SM, craving for more time in SM, and feeling bad when being absent from SM.

Conclusions: Social media use is a predictor for sleeping problems, especially if one uses it to escape from negative feelings.

ID: 276/PT6: 6

Type 4—Poster Presentation

Topics: ADOLESCENT MEDICINE, PUBLIC HEALTH

Keywords: Bullying victimization, schoolchildren, mental health, liking school

Bullying victimization impact on mental health and attitude towards school among Kazakhstan's schoolchildren

Adayeva, Assel[1]; Abdrakhmanova, Shynar[1,2]; Slazhneva, Tatyana[1]; Kausova, Galina[1]; Ng, Kwok[3,4]
[1]Kazakhstan's medical university "Kazakhstan School of Public Health", Kazakhstan; [2]National Center of Public Health of the Ministry of Health, Kazakhstan; [3]University of Eastern Finland, Finland; [4]Physical Activity for Health Research Cluster, Health Research Institute, Department of Physical Education and Sport Sciences, University of Limerick, Ireland

Introduction: Bullying in the school environment has been increasing in recent years. Bullying is referred to as repeated manifestations of aggressive behaviour towards persons of lower physical, social or psychological power. Such acts negatively affect mental health and behaviour, as well as the learning process of schoolchildren.

Purpose: In this study, we investigated the relationships between bullying victimization and depression, as well as the impact of school bullying on children's attitude towards school in a nationally representative sample of urban and rural adolescents.

Materials and Methods: The data were obtained from 2018 Health Behavior in School-aged Children (HBSC) study in Kazakhstan. A survey was conducted according to the HBSC international study protocol among adolescents aged 11–15 years (n = 4 868, 50.4% of boys, 54.7% of urban schoolchildren). Cross-sectional analysis from self-reported data on bullying at school, the 10-item CES-D (Center for Epidemiologic Studies Depression Scale; where depression used a cut of 10 or more), and liking school.

Results: One in five (20.1%) Kazakhstan adolescents (20.2% urban and 19.7% rural) reported being bullied at school at least once a month in the past couple of months and 20.4% of adolescents (21.1% urban and 19.6% rural) had depressive symptoms. Negative feelings about school (not liking it very much and not liking it at all) were reported by 13.3% of schoolchildren (17.7% urban and 7.9% rural). Significantly more adolescents who were bullied at school often had depressive symptoms than those who were not bullied: 30.2% vs. 18.1% ($p < 0.001$, $\chi 2 = 59.9$). Negative attitudes towards school were significantly more common among bullying victims compared to those who were not bullied at school: 35.4% vs. 17.7% ($p < 0.001$, $\chi 2 = 102.4$). Urban and rural schoolchildren showed the same patterns in relationships of bullying victimization with exhibiting depressive symptoms and not liking school.

Conclusions: Findings show that bullying in school environments is a serious public health issue that could lead to mental health problems for adolescents and negative impact on attitude towards school. There is a need for further development and implementation of school-based bullying prevention programs dedicated to the whole school community.

ID: 286/PT6: 7

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Kawasaki Disease

A three-year retrospective audit on the management of Kawasaki Disease patients in University Hospital Limerick

Wong, Ruby; Black, Chris; Power, Rachel
Department of Paediatrics, University Hospital Limerick, Ireland

Background: Kawasaki Disease (KD), first described by Dr Tomisaku Kawasaki in 1967, is an acute febrile illness of unknown aetiology, predominantly affecting children under the age of 5. The American Heart Association (AHA) first published its guideline on the diagnosis, treatment and long-term management for KD patients in 2004, with a revised guideline published in 2017. The aim of this study is to audit the management of KD patients in University Hospital Limerick (UHL), as compared to the 2017 guidelines recommended by the AHA.

Methods: A retrospective audit was performed on all paediatric patients diagnosed with KD between May 2017-June 2020 in UHL. Patients were identified through the HIPE discharge database, as well as patient transfer records.

Results: There were eight patients identified with KD in our time-frame; showing equal gender distribution, with a mean age of presentation of 27.5 months. All patients received an echocardiogram (ECHO) during the acute phase; two of whom had a repeat scan in the same admission, and one received an ECHO 1–2 weeks following discharge. Patient's coronary arteries were quantitatively assessed based on Z-score. Five patients had a score of 1, two patients had a score of 3, and one patient was not quantified. All patients were treated with intravenous immunoglobulin (IVIG) and Acetylsalicylic Acid; three patients received a repeat dose of IVIG. Two patients received additional corticosteroid treatment. Five of the eight patients had thromboprophylaxis following their initial treatment. In terms of follow up, three patients have been discharged and five receive a regular out-patient review.

Conclusions: This audit gives an overview of the management of Kawasaki Patients in UHL compared to the standards recommended by the AHA. Findings demonstrate that our practice is largely compliant with the recommendations established in the guideline.

Session

PT7: Poster Theatre (PT-7)

Time: **Friday, 4 December 2020**: **12:00—13:00**	*Location*: **Virtual**

Presentations

ID: 278/PT7: 1

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, EMERGENCY PEDIATRICS, COVID-19

Keywords: COVID-19, overdose, poisoning, accidental ingestion

Accidental poisoning in children! Are we seeing more presentations during a lockdown?

Loomes, Caitriona[1]; Ali, Rana Azher[1]; Rehman, Hameed Ur[1]; Twomey, John[2]; Fitzgerald, Michael[2]; Murphy, Anne-Marie[1]

[1]Department of Paediatrics, University Hospital Limerick; [2]Paediatric Emergency Department (PED), University Hospital Limerick

Background: According to the National Poisons Centre Ireland over 6000 cases of accidental poisonings in children less than ten years of age were reported in 2018. Three-quarters of these were under 5 years of age and 27% were paracetamol related (1). Anecdotally, we noted a rise in such presentations to our Paediatric Emergency Department at the outset of the implementation

of COVID-19 restrictions in March 2020 limiting families to within a two-kilometre radius of their homes, suspension of schools, working from home, Cocooning etc.

Objective: Our aim was to carry out a prospective study on accidental poisonings presenting to our Paediatric Emergency Department during a six-week period of the first lockdown from April 1st to 20 May 2020 in order to answer this question.

Methods: 1. A list of all patients attending with a history of accidental exposure of potentially toxic substances was collated from our Paediatric Emergency Department log book. 2. Patient demographics, substance ingested, and outcomes were documented. 3. A list of all patients presenting with poisoning during the same timeframe in 2019 was obtained using the hospital's health information system (HIPE) for comparison Figure 1 and Figure 2.

Results: There were 14 accidental poisoning presentations during this six- week period of which 92.9% (13/14) were aged six or less and 57.1%(8/14) were paracetamol ingestions. Other substances included; laundry detergent, antihistamines, batteries, chemical substances. Hospital admission was required in 7.14% (1/14). No fatalities were recorded.

In 2019; over the same 6 week period, there were only three presentations to our Paediatric Emergency Department with toxic ingestions/ poisonings.

Conclusions: Since the implementation of COVID-19 restrictions, limiting children to their homes, an increase in accidental poisoning presentations to our Paediatric Emergency Department was noted when compared to 2019. Children's curiosity, distracted care providers, poor storage or inadequate packaging of potentially lethal substances are all probable contributing factors (2). A further prospective study during the second lockdown is currently underway.

Figure 1.

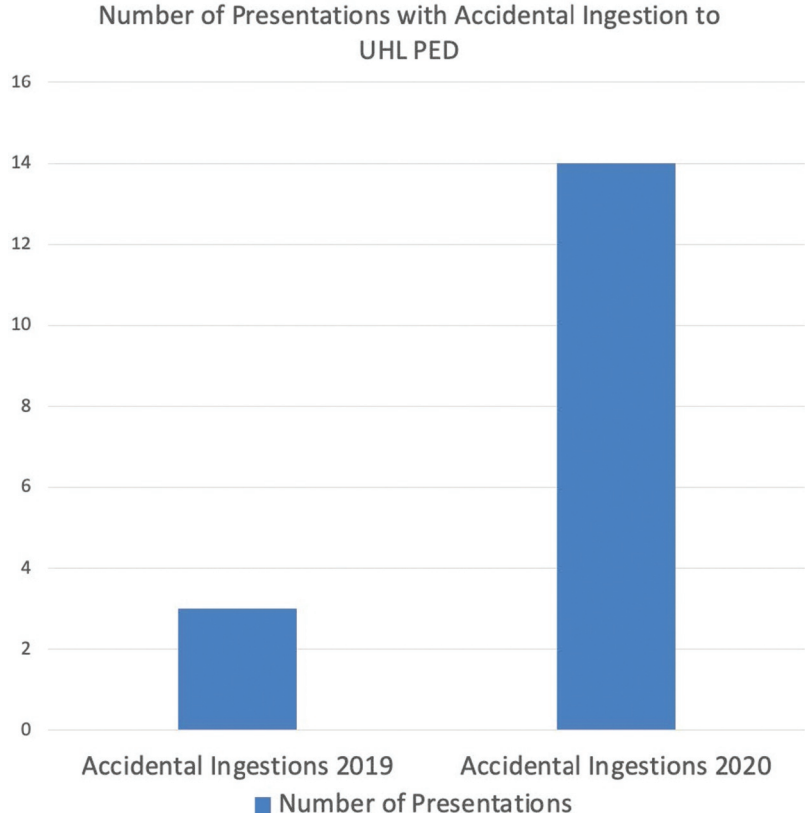
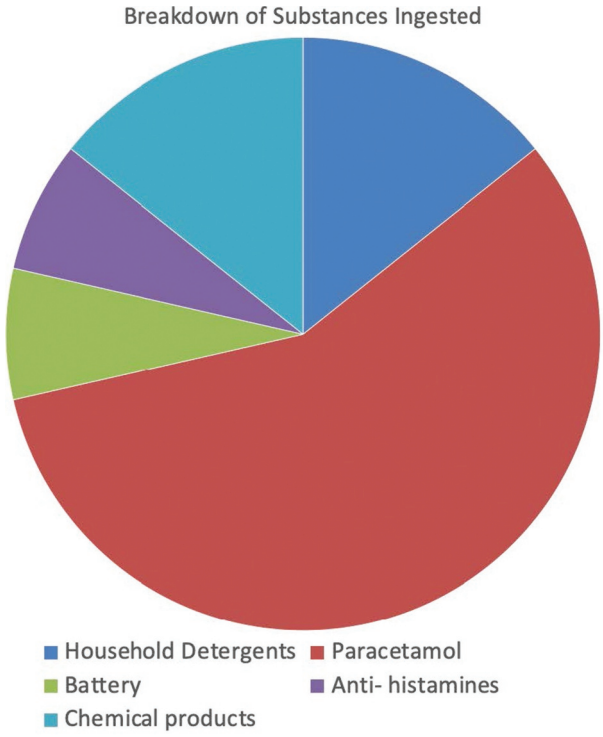


Figure 2.



ID: 252/PT7: 2

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, COVID-19

Keywords: COVID-19, communication, documentation, paediatrics, audit

An audit of communication and documentation of covid-19 swab results to parents of paediatric inpatients

Loomes, Caitriona[1]; Milyani, Asmaa[1]; Gallagher, Siobhan[1]; Stapleton, Patrick[2]; Murphy, Anne-Marie[1]
[1]Department of Paediatrics, University Hospital Limerick, Ireland; [2]Department of Microbiology, University Hospital Limerick, Ireland

Background: As per the guidelines issued by the HSE (Health Service Executive, April 2020) it is the responsibility of the ordering hospital to inform patients of their Sars Co-V swab results. It is expected that the patient is informed of a positive or negative result, and the outcome of the discussion should be documented in the patient notes.

Objective: Our aim was to assess if it is documented in the medical notes at University Hospital Limerick that parents have been informed of their child's Sars Co-V swab results.

Methods: 1. A list was generated of all children who had a nasal/throat Sars Co-V swab in University Hospital Limerick over a three-month period. 2. The medical notes of 88 patients were reviewed, noting the documentation of communication of swab results to parents. 3. An educational teaching session was provided to doctors, informing them of the current HSE guidelines. 4. The data was re-audited one month following our education session. A further 27 medical charts were reviewed Figure 1 and Figure 2.

Figure 1.

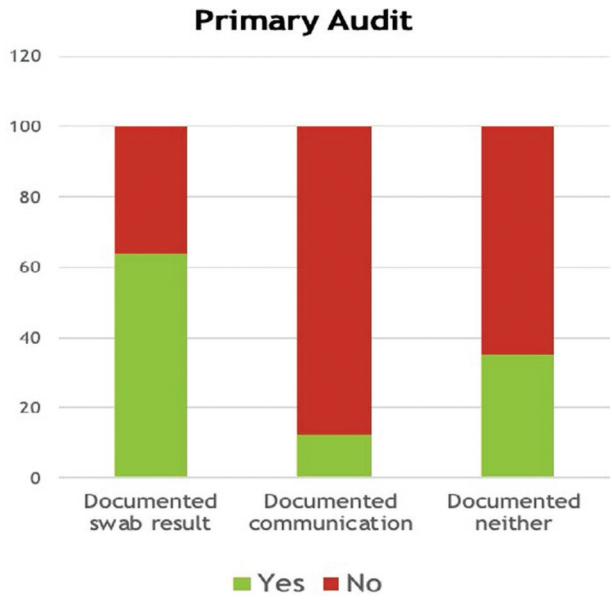
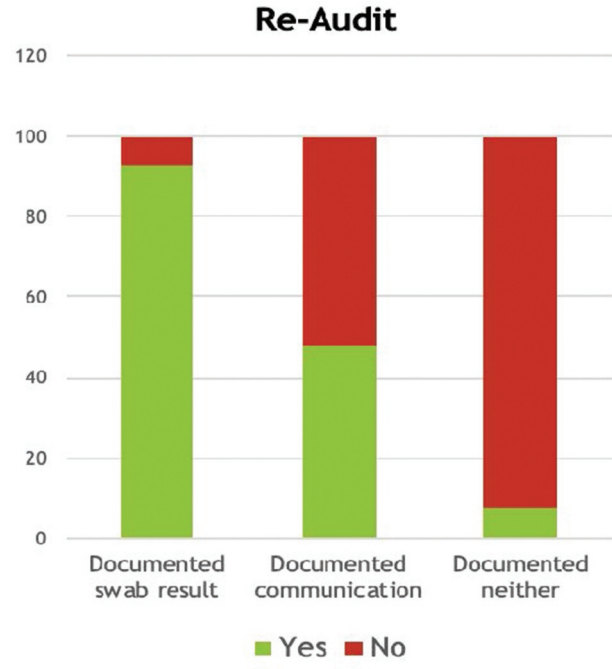


Figure 2.



Results: Results of Primary Audit Cycle: A total of 109 swabs were performed on the 88 patients. In 63.6% (56/88) of cases, the swab result was documented. In 12.5% (11/88) it was documented that parents were informed of swab results. In 35.2% (31/88) cases, neither were documented. Results of Re-Audit Cycle: Of the 27 charts reviewed; 92.6% (25/27) documented a swab result. In 48.1% (13/27) of cases, it was documented that the result had been communicated to parents. In 7.4% (2/27) there was neither documentation of result or communication.

Conclusions: An absolute improvement in documentation of swab results by 29% was noted. There was a 35.6% improvement in the documentation of the communication of swab results. There is a need for ongoing improvement in order to maintain compliance with the HSE guidelines. This is to

ensure families are informed in a timely fashion, to aid contact tracing and to alleviate their anxieties.

ID: 305/PT7: 3

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: parenteral nutrition, term neonates, RDS, NICU

Association between clinical characteristics and parenteral nutrition in term neonates admitted to a tertiary Neonatal Intensive Care Unit

Stylianou-Riga, Paraskevi[1]; Boutsikou, Theodora[2]; Kouis, Panayiotis[1]; Kinni, Paraskevi[1]; Iliodromiti, Zoi[2]; Sokou, Rozeta[2]; Yiallouros K., Panayiotis[1]; Iacovidou, Nicoletta[2]

[1]Medical School, University of Cyprus, Nicosia, Cyprus; [2]Neonatal Department, Medical School, National and Kapodistrian University of Athens, Aretaieio Hospital, Athens, Greece

Background: Parenteral nutrition (PN) in neonates provides an alternative route for nutrition. Although PN administration is more common in preterms, seriously ill term neonates may also require PN. This study examines the factors associated with the risk for PN requirement and its duration among term neonates admitted to a tertiary Neonatal Intensive Care Unit (NICU).

Methods: All term neonates admitted between April 2017 and October 2018 to the NICU of Archbishop Makarios III hospital, (the only paediatric tertiary referral centre in Cyprus) were the study subjects. Medical records were reviewed, for data collection and statistical analysis was carried out using logistic and linear regression analysis.

Results: 134 term neonates were admitted to the NICU during the study period and 90 of them (67%) required PN. Hypotension in the first 24 hrs (OR:16.04, 95%CI:2.05–125.52, p:0.008) and Neonatal Respiratory Distress Syndrome (NRDS) (OR: 13.08, 95%CI:4.31–39.65, $p < 0.001$) were associated with a higher risk for PN. Higher 5-minute Apgar score was associated with a lower risk for PN (OR:0.50, 95%CI: 0.29–0.86, $p < 0.012$); higher gestational age had a protective effect but did not reach statistical significance. Hypotension (β:5.38, 95%CI:0.03–10.77, p:0.05), NRDS (β:5.83, 95%CI: 0.61–11.05, p:0.029) and early infection (β:1.90, 95%CI:0.38–3.42, p:0.015) were associated with increased duration of PN.

Conclusions: Among term neonates, hypotension and NRDS are strongly associated with both the risk as well as the duration of PN, thus emphasizing its role in nutritional support of critically ill infants.

ID: 301/PT7: 4

Type 4—Poster Presentation

Topics: INFECTIOUS DISEASES, EMERGENCY PEDIATRICS

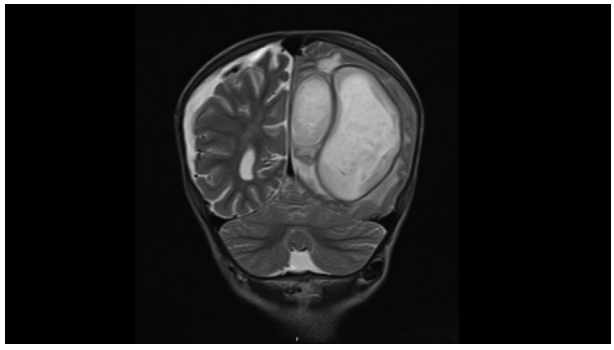
Keywords: Brain abscess, cyanotic congenital heart disease, infective endocarditis

Brain abscess in Cyanotic Congenital Heart Disease—An alert with a case report

Reis, Joana Soares[1]; Silva, Cláudia[2]; Baptista, Carolina[2]; Grilo, Marta[2]; Gonçalves, Edite[3]; Carvalho, José[2]; Ribeiro, Augusto[2]

[1]Pediatrics Department, Centro Hospitalar de Vila Nova de Gaia/Espinho, Portugal; [2]Pediatric Intensive Care Unit, Pediatrics Department, Centro Hospitalar de São João; [3]Pediatric Cardiology Department, Centro Hospitalar de São João

Figure 1.



Introduction: Brain abscesses (BA) are focal collections within the brain parenchyma that have become rare in children with an estimated prevalence of 0.3–1.8/100.000. BA can arise as a complication of a variety of infections, trauma or surgery. Cyanotic congenital heart disease (CCHD) presents with structural changes that create turbulence that disrupts the endocardium favouring the formation of vegetations and increasing the risk of infective endocarditis (IE). The presence of an intracardiac right to left shunt allows septic microemboli to reach the brain and cause distal abscess formation.

Case Study: We report the case of a 20-month-old cyanotic male infant with Shone Syndrome and intracardiac right to left shunting previously submitted to two palliative surgical procedures that included an aortopulmonary shunt. He was admitted to the hospital due to a fever of unknown origin and worsening cyanosis. Blood chemistry was normal and chest radiograph showed an enlarged heart with normal pulmonary parenchyma. Given his past history, broad-spectrum antibiotics for IE were initiated (vancomycin, gentamicin and rifampicin). Transthoracic echocardiogram was inconclusive but computed tomography (CT)-angiogram confirmed the diagnosis by showing vegetations in the aortopulmonary shunt. The infected shunt was surgically removed on the 17th day of admission (DoA) and a bilateral cavopulmonary anastomosis (Glenn) was performed. Blood cultures were positive for S. hominis resistant to methicillin and C. albicans was isolated from that surgical shunt. After adjusting parenteral antibiotics, the child remained afebrile until the 24th DoA when the sustained fever began. Physical examination revealed central cyanosis as expected for his surgical palliation, with peripheral oxygen saturation of 75%, heart rate of 160 bpm and no apparent neurological deficits. A full-body scan was performed and a brain CT showed a large multiloculated abscess cavity in the left occipital-parietal region confirmed by magnetic resonance (MR) as shown in Figure 1. The abscess was excised via craniotomy and cultures were negative. He was given parenteral meropenem and vancomycin for 11 weeks and antifungal therapy for 6 months. On 7th month follow up the patient was asymptomatic without apparent neurological sequelae.

Conclusions: In this case, the absence of neurological symptoms or deficits made the BA diagnosis more challenging. Any patient presenting with persistent fever despite adequate treatment for IE in CCHD should be evaluated for distal embolic septic complication.

ID: 298/PT7: 5

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: quality improvement, outpatient services, cardiology

Efforts to reduce paediatric cardiology outpatient waiting lists: A quality improvement project

O'Shea, Ciara; Power, Rachel

University Hospital Limerick, Ireland

Aims: There is a high demand for paediatric cardiology outpatient services at both national and regional level, and as such, extensive waiting lists exist. The aim of this quality improvement project was to examine existing outpatient referrals at University Hospital Limerick (UHL), and through the implementation of a validation form, reduce the waiting list.

Methods: A list of outstanding patients to be seen by paediatric cardiology was compiled, together with their referral letters. A validation form was designed. Parents were contacted and asked whether their child had been seen by cardiology; where they had been seen if applicable and whether or not they still required an appointment. If parents were not contactable, the child's GP was called. The data from these validation forms were then compiled and analysed.

Results: A total of 117 pre-existing cardiology referrals amounted between 2015 and 2020. The patient list was divided according to year of referral: 2015 (n = 46), 2017(n = 1), 2018 (n = 11), 2019 (n = 23) and 2020 (n = 36). Validation revealed that 20 patients had been seen elsewhere, and a further 10 no longer desired an appointment. An additional 6 patients were ≥18 years of signifying adult service involvement. This totalled a 31% (n = 36) reduction in the number of children waiting to be seen. The most significant reduction of 67% (n = 31) occurred within the 2015 group. Murmurs accounted for 60% of referrals. Paediatricians were responsible for the majority of referrals at 78%, with neonatologists and GPs accounting for 9% and 13% respectively.

Conclusions: It is evident that there is a substantial requirement for paediatric cardiology services at a regional level. This validation process has led to a 31% decrease in outstanding referrals. The outcome of this validation is more efficient patient care, with improved access to paediatric cardiology services.

ID: 258/PT7: 6

Type 4—Poster Presentation

Topics: ENDOCRINOLOGY, ADOLESCENT MEDICINE

Keywords: Transition, Type 1 Diabetes, Clinics, Adolescence

Exploring the attitudes and experiences of adolescents with Type 1 Diabetes towards the transition of care

D'Sa, Saskia Z[1]; Foley, Deirdre J[1]; Hennigan, Kerrie[1]; Kelly-Conroy, Maria[1]; Quinn, Anne[1]; Norris, Mary[1]; Dunne, Therese[1]; Moloney, Yvonne[2,3]; Fitzpatrick, Sarah[2]; Noctor, Eoin[2,4]; Neylon, Orla M[1,4]; O'Gorman, Clodagh S[1,4]

[1]Department of Paediatrics. University Hospital Limerick, Limerick Ireland.; [2]Department of Endocrinology. University Hospital Limerick, Limerick Ireland.; [3]Department of Midwifery. University Maternity Hospital, Limerick Ireland; [4]Graduate Entry Medical School, University of Limerick, Limerick Ireland

Introduction: Transition from adolescence to adult care is very challenging for most patients. Without appropriate appointments and education, adolescents can get lost to follow up within one-year of transitioning to adult care2. The loss to follow-up can increase risks of adverse short and long term diabetes-related complications, with healthcare contacts mainly limited to crisis-based management1.

Aims: The purpose of this study was to evaluate the patient's perspective of the process of transition from paediatric to adult-based diabetes services in the Mid-West region of Ireland.

Methods: We implemented a new transition clinic at University Hospital Limerick with the collaboration of paediatric and adult endocrinology teams. Seventeen patients consented to participate in a qualitative assessment study and completed questionnaires before and after the transition clinic.

Results: In terms of medical management, patients had a good understanding of hypoglycaemia and insulin dose adjustment principles, but were least comfortable with carbohydrate counting. Patients self-ranked their knowledge on driving and sexual health with a diagnosis of diabetes as poor, in comparison to understanding the effects of alcohol and smoking on diabetes.

Conclusions: Overall, 56% of respondents felt more confident in moving to adult-care and 100% of attendees found attending the transition clinic helpful with the transition process. Furthermore, this study demonstrates the need for structured education prior to transit, and the importance of building strong partnerships between adolescents, their families and adult diabetes services.

ID: 268/PT7: 7

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, RARE DISEASES, HAEMATOLOGY/ONCOLOGY

Keywords: Hereditary spherocytosis, follow-up, general paediatrics

Hereditary spherocytosis: a case series

O'Donnell, Gillian Louise; Martin, Therese; Mahony, Michael; Ahmed, Irfan; Murphy, Anne-Marie
Department of Paediatrics, University Hospital Limerick, Ireland, Ireland

Introduction: Hereditary spherocytosis (HS) is an autosomal dominant condition and a common cause of inherited haemolysis in northern Europe with an incidence of 1 in 2000. The symptoms of HS can emerge in any period of life from birth to adulthood. The clinical picture can vary from asymptomatic to severe hemolysis.

Objective: Our aim is to compile a profile of patients with this rare disorder attending our services.

Methods: Hospital electronic databases were used to identify the cohort of patients with this diagnosis currently listed under the care of Paediatricians at UHL. Case files were reviewed and the following characteristics recorded; Gender, age profile, age at diagnosis, positive family history, complications, ethnicity, and frequency of hospital visits, (inpatient, day case, outpatient) and shared care arrangements.

Results: A total of 15 patients under 16 years of age attend our service, 6 males and 9 females, the current age range is 22 months to 16 years, the age range at diagnosis was from birth to 8 years of age. The majority of our cohort are ethnically Irish (n = 11), 3 are of Italian and 1 of Chinese descent. 14 patients were diagnosed in the newborn period and were EMA confirmed. 1 patient has diagnosed at 8 years of age following presentation with parvovirus B19 infection. One patient experienced acute severe pancreatitis and cholelithiasis aged 9 years. She subsequently underwent a cholecystectomy. Splenectomy was performed in one male patient at the age of 12. Megaloblastic crisis was not observed in any patient. Each patient is prescribed Folic Acid daily.

All of these patients are offered yearly follow up appointments at Tertiary Paediatric Hematology Centres (n = 14 to CHI @ Crumlin, n = 1 to Cork University Hospital) but eventually transition to our local Adult Hematology team.

Conclusions: We report a case series of 15 Paediatric patients with this rare haematological disorder attending our Regional Paediatric unit and highlight the importance of shared care management.

ID: 311/PT7: 8

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Primary polydipsia, polydipsia, polyuria

Polyuria and polydipsia in 7-month-old: a case report

Belo, Inês; Lopes, Caroline; Miranda, Patrícia; Rezende, Teresa
Centro Hospitalar de Leiria

Background: The differential diagnosis based on the symptoms of polydipsia and polyuria in a child is broad and includes several disorders such as renal, endocrine and neurological diseases. Primary polydipsia (PP) is a rare but known cause of polydipsia and polyuria in infants/children. PP is characterized by an excessive fluid intake and consequent increase in urine output that is not caused by a systemic disorder.

Case Study: We report a case of a 7-month-old boy referred to the ambulatory care of our hospital by his primary care physician with polydipsia. Born of an uneventful and surveyed full-term pregnancy, with adequate birth weight. He had no past medical history besides recurrent wheezing, with no chronic medication. The infant had a regular growth and normal development. There was no history of head trauma. Social history was unremarkable and there was no family history of psychiatric, endocrine, renal or neurological disease. An abnormal water intake was noticed at 4-month-old, even at night time, ingesting over 1 litre (L) of water a day (>2L/m2/day). The urinary output was above the normal range (4,9 mL/kg/hour). The blood test showed normal serum glucose, blood urea nitrogen, creatinine, electrolytes and calcium. Urinalysis was normal, except for a low urinary specific gravity (1.003). The urinary osmolality was lower than serum osmolality (114 mOsm/kg vs 294 mOsm/Kg, respectively). Renal and bladder ultrasound were normal. He was admitted In the hospital for etiologic investigation at the age of 9-month-old. A water deprivation test was performed and interrupted after an increase of urine osmolality > 750 mOsm/kg without sodium or osmolality serum elevation. The diagnosis of PP was made. This case had a favourable outcome with the resolution of the symptoms over time.

Conclusions: This case illustrates that although it is rare, PP is a diagnosis to consider in a child presenting with polydipsia. The differential diagnosis between PP and diabetes insipidus can be challenging and the gold standard is a water deprivation test.

Session

PT8: Poster Theatre (PT-8)

Time: **Friday, 4 December 2020**: **17:30—18:30**	*Location*: **Virtual**

Presentations

ID: 304/PT8: 1

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: Breast milk, term neonates, NICU

Maternal demographic and socioeconomic factors are not associated with the availability of mother's own breast milk for term neonates admitted to a tertiary Neonatal Intensive Care Unit

Stylianou Riga, Paraskevi[1]; Boutsikou, Theodora[2]; Kinni, Paraskevi[1]; Iliodromiti, Zoi[2]; Yiallouros, Panayiotis K.[1]; Kouis, Panayiotis[1]; Iacovidou, Nicoletta[2]

[1]Medical School, University of Cyprus, Nicosia, Cyprus; [2]Neonatal Department, Medical School, National and Kapodistrian University of Athens, Aretaieio Hospital, Athens, Greece

Background and Objective: Mother's own breast milk is considered the best food for neonates, especially for term neonates admitted to the Neonatal Intensive Care Unit (NICU). Many studies have associated maternal demographic and socioeconomic factors with breastfeeding, but few studies have focused on the mother's own breast milk intake in the NICU. We aimed at examining the effect of these factors on maternal milk availability for neonates admitted to the NICU of a tertiary hospital in Cyprus.

Methods: All term neonates admitted to the NICU of Archbishop Makarios III Hospital (the only Neonatal tertiary referral centre in Cyprus) between April 2017 and October 2018, were the study subjects. Data on maternal demographic and socioeconomic status was collected with a questionnaire. Statistical analysis was performed using univariate and multivariate logistic regression in STATA 15.

Results: 134 term neonates (62% male) were admitted to the NICU during the 18-month study period. A total of 16 factors related to maternal working conditions (manual labour, long working hours, standing, nightshift), maternal education, maternal financial status (private or public hospital, frequent obstetrician monitoring), clinical characteristics (gestational diabetes, caesarean section, maternal Body Mass Index-BMI), maternal smoking and number of previous births as well as neonatal factors such as gender, gestational age and birth weight of neonate were examined. No factor was significantly associated with the intake of the mother's own breast milk in the univariate or the multivariate analysis. Only higher maternal education was weakly associated with the availability of breast milk to the neonate (OR: 0.53, 95%CI: 0.23–1.22, p: 0.138) in the multivariate analysis.

Conclusions: This study demonstrated that none of the examined factors was significantly associated with the availability of mother's own breast milk intake for term neonates in the NICU. Larger studies are needed to confirm or refute these findings.

ID: 309/PT8: 2

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: Rhabdomyolysis, muscle pain, weakness, pigmenturia, creatine kinase

Rhabdomyolysis: a six-year experience of a paediatrics Department at University Hospital of Algarve

Oliveira, Íris Rocha; Fernandes, Andreia; Pereira, Mafalda João; Pereira, Rita Justo; Virtuoso, Maria João; Mendonça, Carla

Department of Paediatrics—Centro Hospitalar Universitário do Algarve—Hospital de Faro, Portugal.

Background: Rhabdomyolysis is characterized by skeletal muscle destruction with the release of intracellular muscle components into the bloodstream. Classic clinical presentation includes muscle pain, weakness and dark-tea coloured urine (pigmenturia) with an elevated serum creatine kinase (CK) at least five times above the upper normal limit.

This study aims to assess the experience in rhabdomyolysis in a level III hospital.

Methods: We conducted a retrospective study of rhabdomyolysis cases hospitalized in our department, from January 2014 to September 2020. An analysis of epidemiological, clinical and laboratory data was performed.

Results: In the 6 years period analysed we had a total of 8 cases diagnosed as rhabdomyolysis. Median age range was 10 (2 to 17 years), with a predominance of the male gender (75%). Only one patient presented the classic clinical triad (muscle pain, weakness and pigmenturia) and five patients (62.5%) presented at least one of the symptoms. In two patients none of the classic symptoms was present and the diagnosis was based in clinical history and laboratory findings. Fever was the initial symptom in half of the patients. One patient needed intensive care due to renal function impairment. On physical examination, three patients presented muscle atrophy (either shoulder and pelvic girdle muscle atrophy or slight trapezius muscle atrophy) and only one had an impaired gait (waddling). All cases met the laboratory criteria with CK elevation, with a median value of 28383UI/L. We diagnosed 1 case of sarcoglycanopathy, 2 McArdle disease cases, 1 crush syndrome post-traumatic lesion, and 3 cases caused by an infection. One hospitalized in 2020 is still waiting for a diagnosis.

Conclusions: Our results match the literature knowledge that infectious and congenital disorders are the most common causes of rhabdomyolysis in the paediatric population. Severity can range from an asymptomatic illness to a life-threatening condition, so it's crucial to maintain proper management and early recognition of potentially fatal complications.

ID: 303/PT8: 3

Type 4—Poster Presentation

Topics: NEONATOLOGY

Keywords: TAPS, anaemia, polycythemia

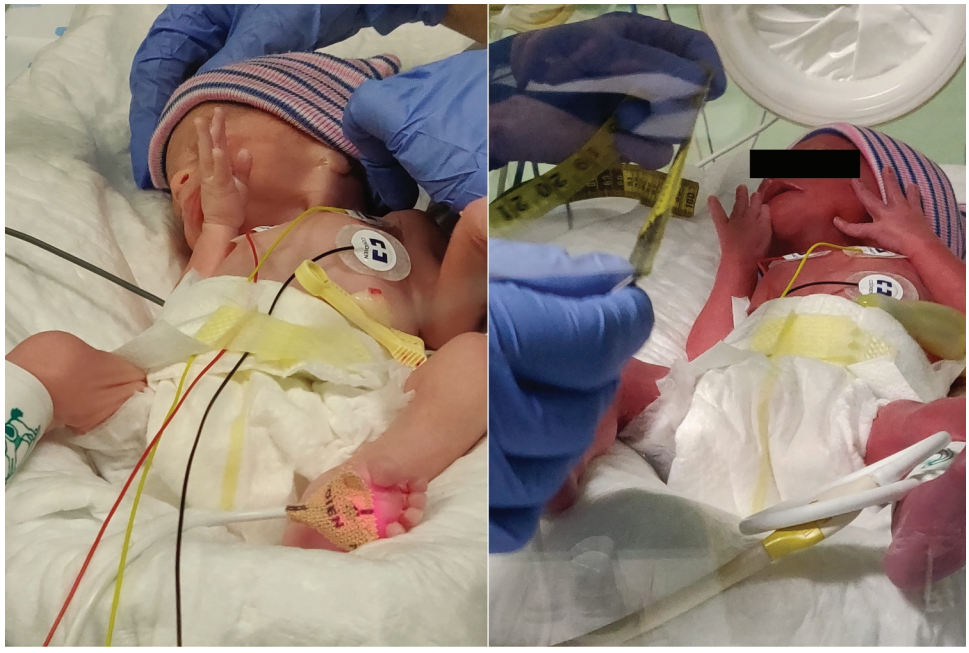
Twin anaemia polycythemia sequence

Reis, Joana Soares[1]; Lira, Joana[1]; Pereira, Isabel Ayres[1]; Costa, Conceição[2]; Vinhas da Silva, António[2]

[1]Pediatrics Department, Centro Hospitalar de Vila Nova de Gaia/Espinho, Portugal; [2]Neonatology Unit, Pediatrics Department, Centro Hospitalar de Vila Nova de Gaia/Espinho, Portugal

Introduction: Twin anaemia polycythemia sequence (TAPS) is a rare and recently described condition in monochorionic twin pregnancies that may occur spontaneously or after laser treatment of twin-to-twin transfusion syndrome (TTTS). It occurs when small AV anastomoses allow the slow unidirectional flow of blood from a donor twin to a recipient twin causing anaemia in the donor and polycythemia in the recipient. Fluid volumes in both gestational sacs remain normal because the slow process allows hemodynamic compensation. Prenatal diagnosis is based on measurement of the middle cerebral artery peak systolic velocity (MCA-PSV). With mild disease increased MCA-PSV in the anaemic donor twin and a decreased MCA-PSV in the recipient twin are characteristic.

Figure 1.



Case Study: A 33-year-old gravida 4 para 0 was referred to our centre at 31 weeks' gestation due to twin gestation and preeclampsia. The pregnancy was uneventful and no signs suggestive of TTTS were found on previous ultrasounds; MCA-PSV measurements were not done. Uncomplicated cesarean section was performed. The first-born infant male was pale, weighed 1095 g and had an Apgar score (AS) of 8/9/9; the second-born twin was plethoric, weighed 1465 g and had an AS of 9/10 (Figure 1). Haemoglobin (Hb) values for twin 1 and twin 2 were 5.8 g/dL and 24.9 g/dl and a reticulocyte count of 11.25% and 6.09%, respectively. The anaemic infant was hypovolemic requiring two blood transfusions on day 1. The polycythemic twin required partial volume exchange transfusion as the hematocrit increased to 73.7% on day 1 despite intensive phototherapy and IV hydration. At the macroscopic examination, the placenta was monochorionic-diamniotic; coloured-dye injection of placental anastomosis was not performed.

Conclusions: Antenatal diagnosis of TAPS is frequently missed with 40–63% of cases only being diagnosed postnatally. Large intertwin differences in Hb values (> 8 g/dl), reticulocyte count ratio > 1.7 or small vascular placental anastomoses without oligo-polyhydramnios are essential for postnatal diagnosis. Perinatologists involved in the care of monochorionic twins should have a high index of suspicion as antenatal ultrasounds without Doppler studies do not rule out a chronic form of inter-twin transfusion.

ID: 295/PT8: 4

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS

Keywords: pediatrics, candidiasis, diabetes, glucosuria.

When something more lurks behind vaginal candidiasis

Justo Pereira, Rita; Rocha Oliveira, Iris; Fernandes, Andreia; Pereira, Mafalda; Martins Tiago, Daniel; Gama, Guida

Centro Hospitalar Universitário do Algarve, Portugal

Introduction: Candidiasis is a yeast infection mainly caused by Candida albicans, which is a common pathogen of the human gut flora and genitourinary tract. Although harmless, Candida albicans is an opportunistic pathogen; for instance, the high sugar levels in diabetic patients are known to promote yeast growth. We report a case of inaugural diabetes in a 9-month-old infant, identified through a repeated history of vaginal candidiasis over a 2-month period.

Case Study: J.B. is a 9 month-old female who was admitted to the Pediatric Emergency room with an erythematous lesion in the genital area, associated with foul-smelling urine for the previous 2 days. J.B. has a 2-month history of recurrent oral and vulvar lesions that showed no improvement with symptomatic fungal treatment. Beyond this, she is a healthy infant. On examination, she is hydrated and stable, with oral and genital lesions compatible with candidiasis. Her urinalysis was negative besides glucosuria and ketonuria. These findings were suggestive of inaugural diabetes, which was later confirmed with occasional hyperglycemia of 20.6 mmol/L (371 mg/dL), ketonemia of 3.1 mmol/L and glycosylated haemoglobin of 7.4%. She did not have any of the common diabetic symptoms. She was admitted to the Pediatric Department with a diagnosis of inaugural diabetes mellitus without ketoacidosis (pH 7.39 and bicarbonates 19.2 mmol/L), starting a subcutaneous insulin scheme treatment.

Conclusions: We present this case to highlight the importance of screening for blood glucose in cases of recurrent oral or vaginal candidiasis. This is a known manifestation of diabetes mellitus, although uncommon in pediatric ages.

ID: 279/PT8: 5

Type 4—Poster Presentation

Topics: GENERAL PEDIATRICS, RARE DISEASES, HAEMATOLOGY/ONCOLOGY

Keywords: Paediatric malignancies, cancer, oncology, tumour

Childhood cancer in a regional paediatric centre: a 5-year review

Mohammed, Zia[1]; Loomes, Caitriona[1]; Curry, Sarah[2]; Murphy, Anne-Marie[1]

[1]Department of Paediatrics, University Hospital Limerick (UHL); [2]Department of Paediatric Oncology, Crumlin at Children's Health Ireland, Crumlin, Dublin 12

Background: Although childhood malignancies are rare, they remain the most common cause of disease-related death in children1. In Ireland, there are approximately 137 new cases of cancers diagnosed in children per year (National Cancer Registry Ireland, 2017). The most frequently diagnosed in Ireland are leukaemias, followed by tumours of the brain and central nervous system and lymphomas.

Objective: The purpose of our study was to review oncological diagnoses and identify trends in children attending our regional paediatric centre over the past five years.

Method: 1. A list of children with paediatric malignancies attending University Hospital Limerick from 2015–2020 was obtained from our database. 2. Clinical records were reviewed to assess our case mix. 3. Patient diagnosis, demographics and outcomes were recorded Figure 1 and Figure 2.

Results: A total of 41 patients attended our unit during the study period of which 43.9% were male and 56.1% female; 48.8% (20/41) of our patients were diagnosed between the ages of 5–16 years; 41.4% (17/41) were diagnosed aged 1–5 years. 48.8% (20/41) of patients had haematopoietic malignancies; 31.7% (13/41) with acute lymphoblastic leukaemia, 12.2% (5/41) lymphoma, 4.9% (2/41) acute myeloid leukaemia. Interestingly, 24.3% (10/41) had tumours of bone and soft tissue. Brain and CNS tumours accounted for 12.2% (5/41). 9.8% (4/41) of patients had solid tumours. The remaining two patients had rarer cancer types. 46.3% (19/41) of patients were undergoing active

Figure 1.

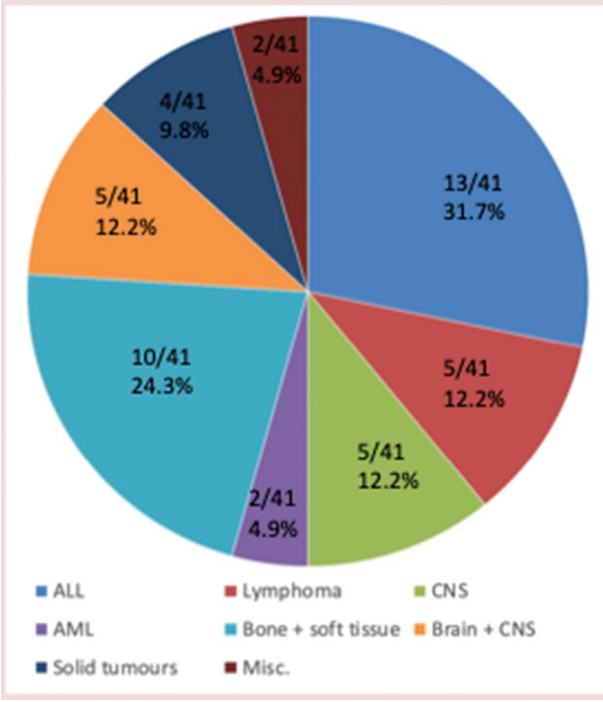
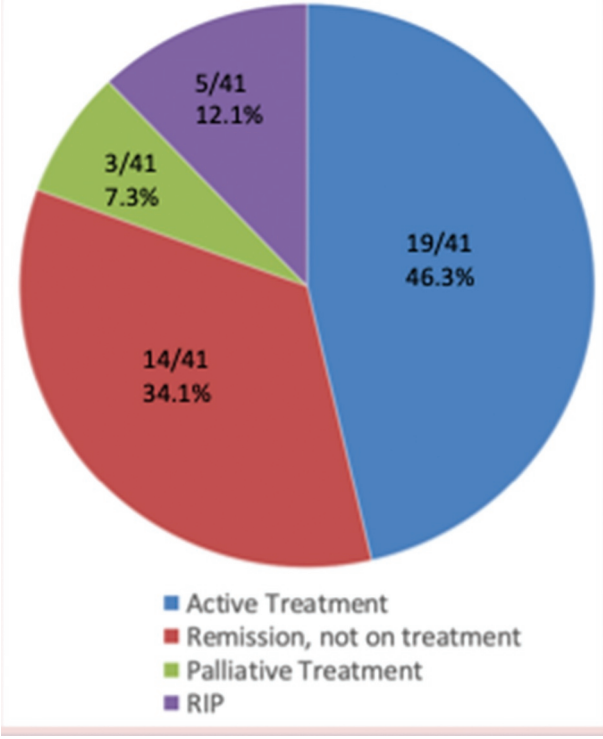


Figure 2.



treatment and 34.1% (14/41) patients were in remission. 7.3% (3/41) of patients were undergoing palliative treatment. 12.1% (5/41) of patients had died.

Conclusions: We note a high incidence of bone and soft tissue tumours, however, our sample size is too small to infer significance. A large proportion of paediatric cancers now have a 5-year survival of more than 80%. This is accompanied by the occurrence of late treatment-related sequelae. Long-term follow up will be required with both local and tertiary services to enable timely recognition of late effects and prompt treatment.

ID: 308/PT8: 6

Type 4—Poster Presentation

Topics: NEUROLOGY

Keywords: Craniopharyngioma, visual impairment, early diagnosis

Craniopharyngioma—a frequently delayed diagnosis

Oliveira, Íris Rocha; Fernandes, Andreia; Pereira, Mafalda João; Pereira, Rita Justo; Tiago, Daniel Martins; Virtuoso, Maria João; Moura, Márcio

Department of Paediatrics—Centro Hospitalar Universitário do Algarve—Hospital de Faro, Portugal.

Background: Brain tumours are the second most common malignancies in children. Clinical presentation primarily depends on the location of the tumour, age of the child and rate of tumour growth. We report a craniopharyngioma case in a seven-year-old male to emphasise the importance of an early diagnosis in order to decrease long-term complications.

Case Study: R.R.R. complained of intermittent headaches which had been going on for two months that woke him up from sleep along with episodes of morning vomiting. Additionally, visual impairment and right convergent strabismus had been felt since the onset a fortnight before. Ophthalmological examination revealed exuberant bilateral papilledema with widespread tortuosity of retinal vessels and retinal haemorrhages. No further deficits were found on physical/neurological examination. CT-scan revealed a heterogeneous calcified space-occupying lesion on Sella turcica, compatible with a craniopharyngioma, that compressed the optic chiasma and III ventricle floor. The analytical study demonstrated decreased FSH and LH. Bilateral severe visual dysfunction with blindness and thyroid and antidiuretic hormone deficit was still present after treatment.

Conclusions: Craniopharyngiomas account for 5–10% of paediatric brain tumours. They are slow-growing tumours that frequently arise from the remnants of Rathke's pouch. Despite being considered histologically benign, they are locally aggressive and cause significant morbidity and mortality. Clinical presentation is the outcome of compression of adjacent neural structures. Symptoms include headaches, visual deficits, endocrine deficiency and hypothalamic dysfunction. Patients are often diagnosed late, only when they develop intracranial pressure symptoms and months after they present endocrine abnormalities. Treatment remains a challenge due to the proximity of the tumour to vital structures and can be responsible for several long-term disabilities. Is essential to make an early diagnosis based on the clinical manifestations of endocrine abnormalities. Therefore, it's crucial to closely follow children so that their growth and development can be monitored.

ID: 291/PT8: 7

Type 4—Poster Presentation

Topics: PUBLIC HEALTH

Keywords: COVID 19, SARS-COV2-2, SOCIAL SERVICE

COVID 19 Pandemic: The side we don't talk about

Silva, Regina Pinto[1]; Guimarães, Francisca Strecht[2]; Mendes, Joana Ferreira[2]; Fernandes, Sofia[2]
[1]Pediatrics Service, Centro Hospitalar Universitário de São João, Portugal; [2]Pediatrics Service, Centro Hospitalar Entre Douro e Vouga, Portugal

Introduction: The novel coronavirus disease 2019 (COVID-19) pandemic is a global health crisis. Even though most of the paediatric population have not been severely affected by COVID 19, there are other serious challenges that should be identified and managed as well, concerning the economic and social deprivation arising from the pandemic.

Case Study: We present the case of a female, 14-year-old adolescent, positive for SARS-CoV-2, who was taken to the paediatrics emergency service of a level 2 Portuguese hospital by her father, not for her symptoms but rather for a severe social issue. Her mother, who was 38-year-old was admitted the prior day due to COVID 19 bilateral pneumonia in need for oxygen therapy. Her father, 39-year-old, who was also positive for SARS-Cov-2, felt the need to go to the emergency room for worsening of his symptoms. Later that day, he was also admitted due to a similar case of COVID 19 bilateral pneumonia. This was a family of 3, originally from Brazil, living for a year and a half in Portugal, with no other family support, as the rest of their relatives live in Brazil. Because of this social context, she was admitted to the hospital. She stayed for 6 days at the hospital, going home as soon as her mother was discharged. During her stay, she didn't need any medication and she remained asymptomatic. Social Service support was needed to provide for clothes and hygiene products. She stayed in an isolation room and all meals were provided by the hospital. Unfortunately, it wasn't possible to obtain informatics support for her to attend online classes, which caused school absenteeism. Although she was able to communicate with her parents using her mobile phone, she expressed her worries about her parent's health to the doctors. It was noticeable to health care professionals her sadness and sense of isolation. The total monetary cost of her admission was 635,69 euros.

Conclusions: It is well discussed the health impact of COVID 19 in children. However, it is necessary to pay attention to the social part of this public health emergency, especially in children and adolescents. Humanistic care and psychological interventions for children should be included in the response strategies for COVID 19. It should be considered the need for alternatives in this kind of social situation, as admission to hospital has not only an economic burden but also a higher risk of acquiring infections in previously asymptomatic patients.

ID: 292/PT8: 8

Type 4—Poster Presentation

Topics: HEALTH ECONOMICS & MANAGEMENT
Keywords: Economy; Maltreatment; Social Service

The economic burden of child maltreatment: A Portuguese example

Silva, Regina Pinto[1]; Mendes, Joana Ferreira[2]; Guimarães, Francisca Strecht[2]; Ferreira, Ana Bernardo[2]; Loureiro, Graça[2]; Fernandes, Sofia[2]
[1]Pediatric Service, Centro Hospitalar Universitário de São João, Portugal; [2]Pediatric Service, Centro Hospitalar Entre Douro e Vouga, Portugal

Introduction: Child abuse includes all forms of physical and emotional maltreatment, sexual abuse, neglect, and exploitation that result in actual or potential harm to the child's health, development, or dignity. It is estimated that, globally, 1 in 15 children are subjected to maltreatment annually.

Case Study: We present the case of a female, 14-day-old newborn, who was taken to the paediatrics emergency service of a level 2 Portuguese hospital, by her 19-year-old mother, during the COVID 19 pandemic. She had suffered a cranioencephalic traumatism against a door during a fight between her parents. There was already an ongoing judicial lawsuit involving the two of them concerning an abusive physical and psychological relationship. The newborn was observed by the Pediatric team and the case was then reported to social service. Due to inadequate social context, she was admitted to the hospital, accompanied only by her mother. There were multiple court sessions during the period she stayed at the hospital, which lasted for a total of 98 days. During that time, she remained asymptomatic, and had no need for treatment or medication, apart from general care of a newborn, including a daily dose of cholecalciferol. The mother decided to cut all relationship ties with her part of the family. losing possible support for the newborn and complicating the situation. Because it was in the months of June to September, it was possible to keep them in an isolated room due to a smaller number of patients admitted to the hospital. All newborn and her mother's meals were provided by the hospital. They weren't allowed to leave, so all interaction she had for 3 months was with her mother and health care professionals. The infant and her mother were discharged after the court to take both to an institution, prohibiting any contact with the father. That was possible 2 weeks after the court decision. The total monetary cost of her admission was 5,384 euros.

Conclusions: Admissions due to child maltreatment have a high economic burden. It should be considered the need for a quicker judicial decision in these types of cases. Even when the fast resolution of the judicial case is not possible, the hospital is not the appropriate place to wait when no medical care is needed, as longer hospital stayings have not only an economic burden but also a higher risk of acquiring infections in previously asymptomatic patients, especially during a COVID 19 pandemic.

Author details
Excellence in Pediatrics
Rue des Vignerons
E-mail: secretariat@ineip.org
1A, Case Postale 359, 1110 Morges 1 (VD), Switzerland.

Citation information
Cite this article as: 12th Excellence in Pediatrics Conference – 2020 Book of Abstracts, Excellence in Pediatrics, *Cogent Medicine* (2020), 7: 1848781.

Cogent Medicine **(ISSN:) is published by Cogent OA, part of Taylor & Francis Group.**