CHILDREN'S HEALTH DAY

CONFERENCE 2018

ABSTRACTS

ORAL PRESENTATIONS

Oral presentation

EAST/SeSAME SYNDROME WITH PRESENTATION OF NEAR SUDDEN UNEXPECTED DEATH FROM EPILEPSY

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Keywords. EAST/SeSAME syndrome, epilepsy, ataxia, sensorineural deafness, tubulopathy, intellectual disability, electrolyte imbalance, SUDEP, rehabilitation. Introduction. EAST syndrome, also called SeSAME syndrome, is a rare autosomal recessive syndrome caused by mutations in the KCNJ10 gene encoding a potassium channel expressed in the brain, inner ear and kidney. EAST syndrome presents with epilepsy, ataxia, sensorineural deafness, and tubulopathy. SUDEP or sudden unexpected death from epilepsy is the term used when sudden death occurs with epilepsy with no obvious cause of death found after investigation. Case report description. A 3-year-old female with EAST/SeSAME syndrome, who usually experiences seizures once a week/ month, presented with respiratory and cardiac arrest that occured while she was sleeping. Her parents found her and called emergency services. Resuscitation was successfully performed, but the child could not be awakened. Because of suspicions of a seizure, diazepam was administered. With no improvements, the girl was hospitalized. During hospitalisation, on MRI cerebral oedema was discovered, possibly ischemic, thus urgent neurosurgery was performed. Additionally, blood analysis found hypokalemia, which was corrected. After surgery the girl regained consciousness, she had spontaneous leg and arm movements but there was no verbal contact, she could not change position by herself in bed. Leaving hospital in the girl's situation was difficult; however after two months of rehabilitation she can sit, walk while supporting her weight with both arms, eat using fork and drink from cup, answer to questions with "yes" or "no". Conclusion. Patients with epilepsy syndromes have higher sudden death risk, additionally being in bed during seizure increases sudden death probability, therefore child should be frequently checked during sleep. Every child after respiratory and cardiac arrest should be hospitalized for further investigation.

Oral presentation

CROSS INFECTION OF VARICELLA AND MEASLES IN TWO UNVACCINATED CHILDREN IN ONE FAMILY HOUSEHOLD

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Keywords. Measles, varicella, cross infection, vaccine preventable diseases Introduction. Measles and varicella are highly contagious, vaccine preventable viral illnesses. Measles are infectious from 3 days before up to 4-6 days after onset of rash. Measles are so contagious that 90% of people who have been in contact with measles patient and ar not immune, will also become infected. Therefore travelers or people heading to large, crowded gatherings are at higher risk of being infected. In 2018 measles outbreaks are ongoing in large number of European countries. Cases in Europe primarily occur in unvaccinated populations in both adults and children. Case report description. Family with 6 children travelled from Riga trough Moscow to Thailand. 2 youngest boys, 3-year-old and 7-year-old, were completely unvaccinated. During their trip in Thailand both youngest boys presented with fever followed by rash. 3-year-old boy was admitted to hospital in Thailand with suspicions of measles. Diagnosis was confirmed after return to Riga. 7-year-old boy in Thailand presented with chickenpox but was not hospitalised. Few days after returning from Thailand both boys presented with fever again. 3-year-old boy showed signs of chickenpox and was treated as an outpatient. 7-year-old boy was rushed to emergency department with fever (41°C), confluent maculopapular rash on face, behind ears, individual rash elements on chest, dry cough and sore throat. On clinical examination he was dehydrated, SIRS positive, ophthalmological examination found conjunctivitis. He was hospitalised with suspicions of measles. Symptomatic therapy was administered and samples for measles PCR and serologic testing for measles were taken. Results of serologic testing revealed positive measles IgM, positive measles antigen, positive PCR for measles and negative IgG. 2 days after hospitalisation auscultative findings indicated pneumonia, a complication of measles. Treatment with Amoxicillin was stared, which was replaced with Cefuroxime because of allergic reaction to Amoxicillin. With improvement in his condition, patient was discharged 6 days after admission. Conclusion. Measles and varicella are highly contagious diseases. Unvaccinated children are highly susceptible to these infections, especially during travel to other countries. To reduce morbidity with these infectious diseases every child should be vaccinated.

Oral presentation

TEN-YEAR DYNAMICS OF DELIBERATE SELF-DESTRUCTIVE BEHAVIORAL PROBLEMS THAT MEET PEDIATRIC HOSPITAL

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Keywords: Adolescents, self-poisoning, suicide. Objectives: Aim of the study was to evaluate ten-year dynamics of deliberate self-poisoning between two groups: group 1 – self-poisoning with aim to get inebriated, group 2 – self-poisoning with a clear aim of suicide. Methods: A retrospective study that includes patients aged <18, with deliberate acute self-poisoning by medicaments, drugs, or alcohol (2008–2017) was performed at Pediatric Intensive Care Unit (ICU) of Vilnius City Clinical Hospital. Groups 1 and 2 were compared by sex, age, family structure, season of intoxication, severity of intoxication (GCS), length of hospitalization, substances used and other self–harm. Results: A total of 1192 cases were analyzed. There were 884 cases (74.1%) in group 1 and 308 (25.9%) cases in group 2. Sex distribution in group 1 was 59.6% boys and 40.4% girls ($p < 0.05$). In group 2, there were 13.6% boys and 86.4% girls ($p < 0.05$). In group 1, the average age was 14.77, and in group 2 – 15.22 ($p = 0.09$). In group 1, the dominant season was winter (30.4%), and in group 2 it was autumn (29.1%). Severity of intoxication was compared by GCS: in group 1 the average score was 11.00 ± 2.6, and in group 2 13.32 ± 2.0 ($p < 0.05$). The average length of hospitalization was 1.15 days. In the majority of cases of group 1 the cause of intoxication was alcohol 81.8%. In the majority of the cases of group 2 the main cause of intoxication were medications, most commonly benzodiazepines (22.18%). Conclusions: Girls are more likely to self-poison with the aim of suicide, and boys to get inebriated. Most adolescents attempt suicide in autumn, while in winter most adolescents try to get inebriated. GCS scores were lower between adolescents who tried to get inebriated; the most commonly used substance was alcohol. The most commonly used medications to commit suicide were benzodiazepines.

Oral presentation

A CASE OF MUMPS PAROTITIS COMPLICATED WITH MENINGITIS.

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Key words: mumps meningitis, mumps parotitis, mumps virus, vaccine BACKGROUND: After implementation of 1 dose mumps vaccine recommendation in 1981, the incidence of mumps in Estonia declined from an incidence of 300-700 cases per 100 000 in the prevaccine era to 10 per 100 000 in 1991. After implementation of 2-dose measles-mumps-rubella (MMR) vaccine recommendations in 1994 mumps further declined with an incidence of less than 2 cases per 100 000 since 2006. Only 6 mumps cases (5 possible cases and 1 confirmed case) were reported in 2017. CASE REPORT: A 12-year-old girl presented to our hospital with a history of fever, earache, swelling and pain of both parotid glands. According to Estonian immunization schedule, she was vaccinated with first dose MMR vaccine at the age of 1 year. She had not got the second dose of MMR vaccine yet. Parotitis was clinically diagnosed and was later confirmed with positive anti-mumps virus IgM test. She was discharged without any complaints. After one week, she was hospitalized for a second time due to 1 day history of headache, nausea and malaise. Her neurologic examination was normal apart from neck stiffness and photophobia. A lumbar puncture was performed and cerebrospinal fluid (CSF) revealed WBC 220 cells/mm3 (96% lymphocytes). CSF PCR assay for the mumps virus is not available in Estonia, but testing for anti-mumps virus IgG demonstrated remarkable elevation in serum. Clinical condition of the patient rapidly improved and she recovered completely. CONCLUSION: Routine vaccination has proven highly effective in reducing the incidence of mumps and its complications. However, in a setting of high vaccination coverage like in Estonia, waning immunity to MMR vaccine and the absence of natural boosting could be the reason for mumps cases. It is important to consider mumps-virus parotitis in children presenting with parotitis symptoms despite the high vaccination rate of MMR vaccine.

Oral presentation

STILL'S DISEASE WITH MACROPHAGE ACTIVATION SYNDROME AND HYPOTHYROIDISM

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KEYWORDS Systemic juvenile idiopathic arthritis, Still's disease, Macrophage activation syndrome, Hypothyroidism, Fever BACKGROUND Patients with systemic-onset juvenile idiopathic arthritis (sJIA) or Still's disease are at risk for a rare and life-threatening complication called macrophage activation syndrome (MAS) characterized by inflammatory multi-organ failure, hyperferritinemia and hemophagocytosis. Autoimmune thyroid disease sometimes is found in rheumatologic patients but there is not enough knowledge about coexistence of Still's disease and hypothyroidism. CASE REPORT A 6 years old girl was transferred to Children's Clinical University Hospital from regional hospital with history of intermittent fever up to 39.5 degrees Celsius for 21day, herpes labialis, macular rash and abnormal gait pattern. Initial approach included antibacterial therapy and acyclovir. However, deterioration in the patient's condition was observed presenting as daily episodes of high fever, fatigue, macular rash, petechiae on chest and extremities, lymphadenopathy, hepatosplenomegaly, polyserositis. Laboratory findings revealed anemia, thrombocytopenia, changed coagulation profile. Levels of lactate dehydrogenase, aspartate aminotransferase and triglycerides were remarkably increased with extremely high level of ferritin (20 428 ng/ml). Therefore, new classification criteria (2016) for sJIA with MAS were met. Bone marrow examination confirmed hemophagocytosis. Hypothyroidism was discovered by incidence based on family history of hypothyroidism. Little but still not prominent improvement in patient's condition was reached with treatment of methylprednisolone and cyclosporine. Finally, tocilizumab was introduced resulting in patient's faster recovery and additional positive effect on hypothyroidism laboratory findings. CONCLUSIONS Despite its rarity, development of macrophage activation syndrome should be considered in patients with diagnosed or suspected Still's disease. Targeted investigation and laboratory criteria play the main role in early diagnosis. There is still not enough knowledge about all organs potentially damaged by Still's disease and this case with coexisting hypothyroidism could initiate further discussion.

Oral presentation

CASE REPORT OF UNEXPLAINED HYPEREOSINOPHILIA IN PAEDIATRIC PATIENT

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Keywords: children, hypereosinophilia, hypereosinophilic syndromes. Objectives. Hypereosinophilia (HE) is currently defined by a peripheral blood absolute eosinophil count of ≥1,500 cells/microL. Although mild blood eosinophilia is observed relatively frequently within the pediatric population, persistent HE is uncommon. The evaluation of HE in children can be challenging given the broad differential diagnosis, which includes allergic, infectious and neoplastic disorders. The clinical manifestations can range from benign, self-resolving elevations to life-threatening disorders with the potential for significant end-organ damage. Case Presentation. A previously healthy 31-month-old boy was admitted to the hospital with the history of fever for a week and cough for last 2 days. His blood analysis showed 44.190 leukocytes/microL of whom 11.630 were eosinophils. On admission, he underwent chest x-ray and initial left-side pneumonia was confirmed. Over the next days, his leukocyte count went up to 97.000 cells/microL with 60.000 of eosinophils. Also bone marrow inspection showed massive eosinophilia of 79%. Malignancy and Philadelphia chromosome was excluded. Other tests showed higher lactate dehydrogenase (657U/L), vitamin B12 (1352pq/ml), IgA (1.10g/L), IgG (15.6g/L), IgM(6.05g/L) and IgE (>2000g/L) levels. Allergic causes and immunodeficiency were excluded. Patient was repeatedly tested for different parasites, including Toxocara canis and Toxoplasma gondii, but found negative. To exclude end-organ damage, imaging studies were performed, pulmonary ground-glass opacities was found in lung CT. Patient underwent anti-parasite treatment ex juvantibus. After a one month his eosinophil count was 12.75 cells/microL. Conclusions. The patient has unexplained hypereosinophilia so far. Either his acute illness is due to undiagnosed parasitic infection or there is another reason for severe eosinophilia, is still a diagnostic mystery. The patient could possibly have idiopathic hypereosinophylic syndrome, therefore child requires careful observation and recurrent severe eosinophilia may require urgent hospitalisation.

Oral presentation

TREATMENT OUTCOMES OF GASTROSCHISIS IN CHILDREN'S CLINICAL UNIVERSITY HOSPITAL

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Key words: Gastroschisis, primary closure, secondary closure Objectives. To compare primary and secondary defect closure outcomes. Methods. The analysis of data (2006-2016) from CCUH patients' histories using Microsoft excel. Results. A total 33 newborns with a diagnosis gastrochisis. Overall, in 70% (23) of the cases the primary closure (PC) was performed, but the secondary closure (SC) – in 30% (10). The time after the birth when the PC was done was 6h 22 minutes, but the SC – 5h 23 min. On average, the abdominal wall was completely closed secondarily after 19 days. The duration of the mechanical ventilation(MV) in the PC was 121 h, but in the SC – 285 h. PC the average number of operations per child were 2, but SC – 4 operations. For both methods, the causes of re-operations were the creation/closure of ileostoma, creation of anastomosis, adhesiolysis, unsuccessful the first PC or SC done. Associated anomalies in the PC – foramen ovale 17% (4), meconium ileus 4% (1), intestinal atresia 4% (1), but in the SC – intestinal malrotation 10% (1), colon ascendens atresia and polydactyly of both hands 10% (1), occurred in 8 (24%) patients in total. Duration of hospitalization in case of the PC were 49 days, but in the SC – 66 days. Conclusions. Newborns undergoing the PC in comparison with the SC had a shorter period of MV, shorter days on hospitalization and a fewer number of experienced operations, the causes of additional operations were similar. The most common associated anomaly in the PC was foramen ovale. Time after the birth when operation was done was shorter in the SC.

Oral presentation

THE GREATEST IMPACT ON PARENTS OPINION ABOUT CHILDRENS VACCINATION IS MADE BY HEALTH CARE SPECIALISTS

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Keywords: Immunization, parents' opinions, vaccines Objectives: To evaluate the opinion about vaccines of parents raising pre-school children and opinion shaping factors. Methods: A questionnaire survey was conducted in Vilnius kindergartens in the period from 2017.12 to 2018-05. 329 parents of children aged from 1 to 4 participated in the survey. The respondents were compared by gender, education level, age, number of children in the family and which healthcare specialist they usually apply to. The data are processed by SPSS 22.0 program, the difference between the compared groups is considered significant when $p \leq 0.05$. Results: 250 (75.99%) of the respondents assessed the benefit of the vaccine by 8 points or more in the scale from 1 to 10. Parents who at least once have visited homeopath to value vaccines benefit only 6.33 out of 10 points. Parents with lower education are more likely to believe that it is better for their children to gain immunity by illness than get vaccinated (lower - 41.33%, and higher education - 24.39%). 52 (38.24%) mothers and 13 (9.35%) dads state that their children do not need vaccinations from diseases that are not common now. Most parents, 175 (94.09%) mothers and 121 (85.21%) dads came across negative information about vaccination. Most parents have received negative information from the Internet 229 (69.60%). However, such parents tend to rate benefits of vaccines much better (8.24 out of 10 points), than respondents (57 (17.3%)), who at least once received negative information from health care specialists (6.40 out of 10 points). Conclusions: The common respondents' opinion on the vaccines is good. Gender and education have a significant influence on the perception of vaccines, but the biggest impact on the opinion is shaped due to an insufficient amount of the reliable information and the negative information received from healthcare specialists.

Oral presentation

FRACTURE HEALING IN PEDIATRIC OSTEOGENESIS IMPERFECTA (OI) PATIENTS, THEIR PARENTS' OPINION ON USING 3D PRINTED FRACTURE FIXATION DEVICES OVER REGULAR CASTS

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Keywords. Osteogenesis Imperfecta, fracture fixation, casts, CastPrint Introduction. Children affected by OI experience many fractures in childhood years due to a mutation in genes that are responsible for collagen production. Regular casts (plaster, fiberglass) have been the gold standard for fixation of simple fractures. However, usage of heavy, non-breathing, non-waterproof casts is not comfortable and early rehabilitation is not possible. With the development of 3D technologies, new solutions are available such as CastPrint that provides light, waterproof, personalized casts for patients. Materials and methods. A total of 26 OI patient (type I – 10, II – 2, III – 4, IV – 7, V – 2, n – 1) parents from 5 countries (USA, Canada, Australia, Turkey, Latvia) were interviewed in September, October 2018 using a questionnaire. They were asked about OI affected person's age, type, frequency of fractures, most common location of fractures and causes, commonly used fracture fixation techniques, their satisfaction with these and opinion on CastPrint 3D printed fixation devices, their preference between regular casts and CastPrint and possible preventive scanning of their extremities. Results. Patients were aged 2 - 15 years with the average age of 8,9. Patients have had from 1 to more than 150 fractures in their lives. Average - 28. Most common causes of fractures – falling, tripping, weight bearing. Locations – wrist, lower arm, lower leg, ribs. 21 of 26 (80.77%) patients have used casts for fracture healing, 38.46% – splints, 26.92% – surgeries. 38 % have not been satisfied with regular casts. 88.46 % would choose CastPrint over regular casts. 88.46% would be ready to preventatively scan their child's extremities to print CastPrint when needed. Conclusions. The number of bone fractures in OI affected children is very high but satisfaction of treatment is not. Convincing majority would choose CastPrint over regular casts if they were offered and parents would be ready to scan the most common child fracture locations prophylactically. CastPrint devices could be considered to be implemented as a new fracture healing method for OI patients.

Oral presentation

KNOWLEDGE ABOUT CONTRACEPTION AMONG VISUALLY AND HEARING IMPAIRED LATVIAN STUDENTS

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Key words. Hearing impaired, visualy impaired, contraception, students. Aim. The aim of the study was to investigate the understanding of contraception usage,unprotected sex and the consequences of risky sexual behavior of hearing and visually impaired students and compare results to regular students. Materials and methods. This prospective study observed visually(n=18) and hearing impaired(n=19) scholars (aged 16 - 21)from Latvia.Control group was conducted from 38 regular students(RS) who attend regular school in the same region. An originally created questionnaire was used to collect data from respondents about their sexual experience and behavior and knowledge.Data were analyzed by IBM SPSS Statistics23.0,compared by Chi-squared test.Comparison was observed between impaired student group and control group. Results. Within the last year 54,1 %(n=20) of impaired students(IS) had had sexual intercourse.RS had similar amount-55,3%(n=21) of sexually active students.During the last year more than three different sexual partners had 16,21%(n=6) of IS and 5,3 %(n=2)of RS.On the question „Have you had a sexual relationship in an inebriated state?''27%(n=10)of IS and 31,6%(n=12)of RS have had that kind of relationship.As well, 24,3%(n=9) of IS and 18,4% (n=7)of RS have experienced one night stand relationship.Only 29,7%(n=11) of IS use contraception every time, while 21,6%(n=8) never use it during sexual intercourse.Whereas 42,1%(n=16)RS use contraception at all times and 5,3%(n=2) never use any contraception.Most common used contraception was male condom (IS-48,6%,n=18, RS-50%,n=19).Although, 24,3%(n=9)of IS used emergency contraception.Third part(IS-35,1%,n=13,RS-31,6%,n=12)of all students were completely unsure if their preferred contraceptive method was effective at preventing pregnancy and STDs. Conclusions. The study revealed that impaired students were as sexually active as regular students. All carried out statistical analysis showed no statistical significance($p>0,05$), which means that impaired students have the same sexual education issues as their counterparts. There is a pressing need for comprehensive sexuality education including counseling on safer sex practices for students.

Oral presentation

PHARMACOLOGICAL TREATMENT OF PATENT DUCTUS ARTERIOSUS (PDA) IN PREMATURE INFANTS: WHAT TO CHOOSE?

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Keywords: Patent ductus arteriosus, paracetamol, ibuprofen. Objectives: Patent ductus arteriosus (PDA) is the most common congenital heart defect among premature infants. However, clear guidelines for the management of PDA have not been established yet. Thus, the aim of this study was to assess the efficacy of different treatment options. Methods: A retrospective analysis included 44 premature (<32 weeks of gestation) very low birth weight infants diagnosed with PDA and treated in Vilnius University Children‘s Hospital. Demographic data, clinical status and test results done before and after prescribed treatment were analyzed using MS Excel and R-3.2.2. A significance level of 0.05 was chosen. Results: 31 patients (70,5%) who received pharmacological treatment were divided into two groups: I - treated with paracetamol (n=7) and II – treated with ibuprofen (n=24). A significant difference between mean PDA diameter before and after treatment was observed in group II (p=0.0194). Treatment results did not differ significantly between the groups (p=0.135). There was also no significant difference in PDA diameter reduction between patients treated with oral (n=8) and intravenous (n=16) ibuprofen (p=0.69). A moderate correlation was observed between PDA diameter and the number of treatment courses needed to close it (r=0.453, p=0.004). No cases of ibuprofen-induced oliguria were observed. Conclusions: According to the results, paracetamol and ibuprofen seem to be equally effective in treating PDA. Larger initial PDA diameter correlates with higher numbers of treatment courses needed to close it. Larger sample sizes are needed to confirm the findings.

Oral presentation

CONGENITAL CYTOMEGALOVIRUS INFECTION

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Keywords: Cytomegalovirus; ileus, intestinal dysfunction Background: Congenital cytomegalovirus (cCMV) is known to cause childhood deafness, neurodevelopmental disorder and death. Limited evidence exist for the safety and efficacy of established CMV antivirals to treat neonatal consequences of CMV infection, but toxicity and lack of randomised clinical trials data remain major issues. Case report: 39 weeks of gestation boy. After birth: evacuated with meconium, but presented respiratory distress symptoms and vomiting with bile. Suspecting a congenital neonatal sepsis, antibiotics were prescribed. Patient was transported to LUHS KC NU ileus was diagnosed. During the surgery intestinal atresia was found and removed, ileostomy was formed. Patient was moved back to NU were enteral nutrition was started. The next day, patient's condition deteriorated: patient started vomiting with bile, his abdomen was distended and a little amount of stools with blood came out from ileostomy. Antifungal treatment was prescribed, then vomiting ceased. Blood culture was positive with Klebsiella pneumoniae therefore sepsis was diagnosed and antibiotics were prescribed. 29 days old infant was moved to LUHS KC PICU. Due to gastroparesis and insufficiency of ileostomy at the age of 1 month and 7 days Santuli operation was performed, during it the biopsy was taken (pathology report results: intestinal aganlionosis). Patient was nourished nasogastrically, the breastfeeding was aimed later on. At age of 3 months and 7 days ileostomy closure was performed and biopsy taken from fragment of small intestine. Results: CMF infection, intestinal aganglionosis. 4 months old patient was moved to pediatric unit. CMV IgM test was positive therefore congenital CMV infection with intestinal disfunction and intestinal aganglionosis was diagnosed. Due to increasing symptoms of infection patient was moved back to PICU. Despite all the treatment brain death was admitted and at age of 5 months and 6 days patient died. Conclusions: Even though CMV is highly associated with hearing loss, it is possible, that it might have the connection with intestinal aganglionosis and severe clinical symptoms.

CLINICAL AND DIAGNOSTIC FEATURES OF LYMPHADENOPATHY IN CHILDREN

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Keywords: lymphadenopahty, pediatric, child Objectives: 1.To determine the etiology, clinical and diagnostic features of pediatric lymphadenopathy. 2.To find out the necessity of lymphadenopathy treatment. Methods The retrospective study of 104 outpatient medical records of children (<18 years) who had enlargement of lymph nodes was conducted in the Hospital of Lithuanian University of Health Sciences Kauno Klinikos in the Department of Pediatrics in 2017. Demographics, lymph node involvement sites, serological tests values, radiological examination and treatment options were collected. Data were analyzed with SPSS 23.0. A p value of <0.05 was considered significant. Results The average age of patients was 5.8±4 (3mo -17yrs), 64.4% were male (n=67) and 73.1% (n=76) of children were younger than 7 years. There were more cases (n=94, 91.4%) of bilateral lymphadenopathy. Cervical lymph-nodes were the most affected region (n=82, 78.8%). Almost all children (n=93, 89.4%) had history of frequent viral upper respiratory tract infections (URTI). Others had bacterial infections (n=13, 12%), allergies (n=11, 10.6%), noticed enlarged lymph nodes after chickenpox (n=4, 3.8%) and 2 (1.9%) were scratched by a cat . Ultrasound (US) was performed for 66 (63.5%). An average diameter of a lymph nodes using US was significantly larger (2.2±0.9cm) than evaluated by palpation (1.7±1.1cm), p<0.05. Chest X-ray was performed for 26 (25%) children. Only one X-ray showed specific changes consistent with tuberculosis. Serological tests were performed for 62 (59.6%) children. IgG against Epstein-Barr virus (EBV), Cytomegalovirus (CMV) or Toxoplasma was positive in 94.6%, 61.4% and 7.9% of them. Almost all EBV positive cases (95%) had history of URTI, p<0.05. Most patients (n=96, 92.3%) did not require any specific treatment. Conclusions Lymphadenopathy is more common in younger than 7yrs old male children. The majority had IgG against EBV or CMV. Ultrasound is more accurate method for the measurement of lymph nodes diameter. Usually, lymphadenopathy does not require specific treatment.

Oral presentation

NOONAN SYNDROME – MOST COMMON UNCOMMON DIAGNOSIS

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KEYWORDS: Noonan syndrome, NICU, coloboma, congenital heart disease, laryngomalacia BACKGROUND: Noonan syndrome is associated with autosomal dominant inheritance and presents in about 1 in 1,000 to 1 in 2,500 people. Alterations in four genes - PTPN11, SOS1, RAF1 and KRAS - have been identified to date. This misregulation can result in heart defects, growth problems, skeletal and hematological abnormalities. CASE REPORT: Patient was born from IV pregnancy, III childbirth at 34th week by an acute caesarean section for preterm premature rupture and placental abruption. First twin- APGAR score 3/5/6, weight 2104 g. During pregnancy first twin had a polyhydramnios of 10l, mother had insulin dependent gestational diabetes, preeclampsia, urinary tract infection and a common cold three times. Amniocentesis was done, but showed no abnormalities. After birth patient was delivered to NICU due to asphyxia and progressive respiratory insufficiency. Objective findings included generalized edema and petechiae, dismorphic features as wider nasal root, low ears, excessive helix, transverse palmar crease on the right palm. Patient was diagnosed with chylothorax, congenital heart disease - pulmonary artery stenosis, atrial and ventricular septal defects, additional left superior vena cava. Iris coloboma was discovered. Patient was diagnosed with right side pneumonia and late onset S.Epidermidis neonatal sepsis. After worsening of patient's neurological condition sinus transversus thrombosis and spontaneous intraventricular and subdural hemorrhage was diagnosed which caused postnatal occluding hydrocephalus. Analysis shows thrombocytopenia and possible protein C deficiency thrombophilia. Due to progressive ventricular dilatation patient underwent ventriculoperitoneal shunting and pulmonary artery balloon dilation due to progressive congestive heart failure. After permanent inspiratory and expiratory apnoea episodes,frequent pronounced head retractions and several unsuccessful extubation attempts bronchoscopy was done and laryngomalacia was diagnosed. Genetic analysis results show mutation c.854T>C, p.(Phe285Ser) in PTPN11 gene as described previously in patients with Noonan syndrome. CONCLUSIONS: Because of wide range ofmanifestations Noonan syndrome can often be hard to diagnose. In our case there were several rare symptoms associated with the syndrome like iris coloboma, laryngomalacia and protein C deficiency thrombophilia. It is important to report and discuss cases of Noonan syndrome in order to recognize and treat patients with Noonan syndrome more effectively. It is also important to do genetic analisys in the patients family to determine wheter or not this was a sporadic case or autosomal dominant inherited. Follow up programme would be benefitial for this patient so that the long-term outcomes and patients life quality could be evaluated.

POSTER PRESENTATIONS

Poster presentation

SLEEP HYGIENE AND SELF-ASSESED SLEEP QUALITY IN LATVIAN ADOLESCENTS: DIFFERENCES BETWEEN BOYS AND GIRLS

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Keywords: sleep hygiene, sleep quality, sleep hygiene index. Objectives: Purpose: to analyse sleep hygiene using sleep hygiene index (SHI); to determine self-assessed sleep quality (SQ) and it influencing factors in Latvian adolescents; to compare SHI and SQ differences between boys and girls, as well as between different age groups. Methods: A prospective study was carried out in 11 schools from different regions in Latvia in 2017. Data collected included: general demographig data, SHI, self-assesed SQ and it influencing factors. Statistical analysis: ANOVA, Chi-squared test. Results: Final sample consisted of 973 respondents (402 (41,3%) male) aged 12 to 19 years (mean – 15,4 (SD±1,7); median –15). SHI increased with age: from the mean SHI 30,0 (SD ±6,7) in 13-years olds to 39,0 (SD±6,6) in 19-years olds ($p<0,001$). The mean SHI was significantly higher in girls: 33,7 (SD±6,2) versus 31,7 (SD±5,6). In total 20% (197/973) of adolescents thought their SQ was bad – significantly more girls compared to boys (65% (128/197) versus 35% (69/197), $p<0,001$). More boys mentioned not enough sleep as reason for bad SQ compared to girls: 14,5% (10/69) versus 3,9% (5/128), $p=0,07$. Other reasons mentioned were: disrupted sleep, stress before retiring, disrupted daytime function. SQ was assessed as bad in 14,0% of 13-years olds and in 21,0% in 18-years olds, $p=0,02$. The mean SHI was higher in adolescents with bad SQ compared to adolescents with good SQ: 36,05 (SD±5,60) versus 32,11 (SD±5,83), $p<0,001$. Conclusions: Younger adolescents and boys had better self-assessed SQ and lower SHI. This could be explained by higher social pressure, more responsibilities in school in older adolescents and higher stress levels in girls compared to boys.

Poster presentation

A CASE REPORT OF HIRSCHSPRUNG'S DISEASE IN A PATIENT WITH DOWN SYNDROME

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Supervisor: Prof. Loreta Cimbalistiene[1],[2] Affiliations: 1. Vilnius University, Faculty of Medicine. 2. Vilnius University Hospital Santaros Clinics, Centre of Medical Genetics.

Keywords: Hirschsprung's disease, Down syndrome, genetics, comorbidity. Background: Hirschsprung's disease (HSCR) is a congenital disorder arising in 1 per 5000 newborns worldwide. It is characterized by the absence of enteric ganglia along the varying region of the intestine, causing functional obstruction of the intestine where the aganglionic segment is tonically constricted, preventing passage of fecal material [1]. HSCR is explained by disrupted embryonic development or migration of enteric ganglion cells [2]. Down syndrome (DS) is a chromosomal abnormality associated with HSCR, as up to 10% of children with HSCR have Down syndrome and up to 1-2% children with Down syndrome have Hirschsprung's disease. Thus, Down syndrome increases the risk of HSCR, suggesting that one or more genes on chromosome 21 could contribute to HSCR etiology [3]. Case report: A 7-month-old infant, previously diagnosed with Down syndrome, presented with inability to defecate, irritability and tenderness of the abdomen. Defecation since birth was made possible only after osmotic laxative was administered. The baby was born for parents aged over 30, at 38th gestational week, weighted 3200 grams, with APGAR score of 9/10, with phenotypic characteristics of Down syndrome. Umbilical hernia was present at birth. No other congenital abnormalities were noted. Abdominal ultrasound showed enlarged loop of the intestine filled with gas and fecal material in the right iliac region. Aganglionic region of the colon was suspected after retrograde contrast radiography revealed a stenosis in the distal part of the sigmoid colon with suprastenotic dilatation. After sigmoidoscopy and biopsy, the histological examination confirmed a lack of ganglion cells in the submucosal ganglion plexus and a negative reaction of calretinin and synaptophysin. This confirmed the diagnosis of Hirschsprung's disease. Conclusions: The manifestation of Hirschsprung's disease in patients with Down syndrome is a rather uncommon, but alarming condition, requiring early diagnosis and a lifetime of treatment. Therefore, the identification of genes that are specific for HSCR and are related to 21 chromosome trisomy is of great importance not only for better understanding the etiology of the disease but also for establishing the risk of developing both Down syndrome and Hirschsprung's disease for the upcoming offspring.

Poster presentation

CONGENITAL LONG QT SYNDROME IN SIBLINGS: A CASE REPORT

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Lina;Matukynaitė;Lithuanian University of Health Sciences;Kaunas, Lithuania

Supervisor: Migla Žėbienė, II pediatric department, Hospital of Lithuanian University of Health Sciences Kaunas Clinics, Kaunas, Lithuania

Keywords: child, congenital, long QT syndrome, KCNQ1 Background: Congenital long QT syndrome is a hereditary cardiac electrophysiologic disorder, characterized by QT interval prolongation at ECG and by syncopal episodes in children, which typically present themselves during exercise and emotional stress. Holter monitoring is important for examination of QTc. Furthermore, this cardiac disease is linked to a mutation of at least 17 genes which cause prolongation of the action potential. Mutation in the KCNQ1 (LQT1), KCNH2 (LQT2) and SCN5A (LQT3) genes are the most common LQTS variant. About half of the genetically tested patients have a mutation of the KCNQ1 gene. Case report: in this report, we present 7 year old brother and 12 year old sister who have congenital prolonged QT syndrome that was confirmed by electrocardiogram, 24-hour Holter monitoring, exercise stress test and genotyping. LQTS was verified by a mutation of the KCNQ1 gene for patients, inherited in autosomal dominant way. For the female patient, the manifestation of LQTS was associated with physical stress and led to syncope when she was 4 years old. Another ten episodes appeared while treating with beta-blockers. For the male patient LQTS was asymptomatic for six years when the first episode of syncope and seizures appeared. Patients are currently treated by beta-blockers; electrocardiostimulators are recommended for both. We want to emphasize the importance of early diagnosis of LQTS in asymptomatic patients with family history and of treatment to avoid recurrent life-threatening events in this report. Conclusion: Children at risk of an inherited cardiac arrhythmias undergo ECG, Holter monitoring, exercise stress test and genetic counseling. Siblings have genetically verified LQTS due to pathological mutation in the KCNQ1 gene, manifesting with syncope.

Poster presentation

BRAIN METASTASES OF WILMS TUMOR IN A CHILD WITH NEUROFIBROMATOSIS TYPE I

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Keywords: Neurofibromatosis I (NFI), Wilms tumor (WT), metastases, molecular biomarkers
Background: Nephroblastoma is the second most common abdominal tumor in children. Survival is currently greater than 90%. Recurrence with metastases in the central nervous system is rare (<1%) so brain radiology is performed when symptoms occur. The NFI gene is located on the long (q) arm of chromosome 17. Loss of expression of NF1 could play a role in the evolution of various neoplasms associated with this familial cancer syndrome. Despite high overall survival, some relapses occur in patients without specific risk factors. We present a rare case of Wilms' tumour with late brain metastases and history of NF1. Case report: We aim to present the case of boy who was diagnosed with WT stage II, intermediate risk (focal anaplastic nephroblastoma) 02/2009 at age 3. Patient had a lot of ,,cafe au lait" spots in his skin and was diagnosed with NFI. He had nephrectomy with preoperative and postoperative chemotherapy. During the check-up's there were no recurrence sings. 06/2013 after the episode of generalized tonic-clonic seizures nephroblastoma metastases were found in the brain without local recurrence of WT. Neurosurgical treatment with radiotherapy and adjuvant chemotherapy were performed. Despite treatment 2 months after the surgery brain MRI showed multiple brain metastases. After ineffective treatment patient died 05/2014. Conclusion: Although the most common central nervous system tumor is a lowgrade pilocytic astrocytoma of the optic pathway in NFI, other malignant tumors can occur. We hope that this report will raise awareness of WT and NF1 possible association. Molecular biomarkers studies would greatly help to improve risk stratification and maximize event free survival.

Poster presentation

PALIVIZUMAB IMMUNIZATION IN CHILDREN'S CLINICAL UNIVERSITY HOSPITAL DURING THE RESPIRATORY SYNCYTIAL VIRUS (RSV) SEASONS IN 2014/2015 AND 2015/2016

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Keywords: respiratory syncytial virus, RSV, palivizumab, RSV prophylaxis Objectives: Analyze immunization carried out in Children's Clinical University Hospital (CCUH) during the RSV seasons in 2014./2015. and 2015./2016., and it's indications with an aim to identify possible flaws and to prevent them in the high risk population. This is first such study performed in CCUH. Methods: We analyzed a journal fixing each time patients received palivizumab in CCUH and then used the Hospital's database to review patient histories and find the indications for immunization. Results: In the season of 2014./2015. - 65 infants received Palivizumab immunization, and 46 in the season of 2015./2016 (in total – 111 infants). Average gestational age was 28.51 ± 4.32 weeks (n=107). Average birth weight was 1351.81 ± 829.78g (n=109). Most common indication was low gestational age (<29 weeks) – for 77 patients (69,4%). There were 38 patients (34.2%) with bronchopulmonary dysplasia and/or chronic lung disease. Congenital heart disease with serious illness was diagnosed to 22 (19.8%) patients, but hemodynamically significant acyanotic heart disease for premature infants – 11 (9.9%) cases. The immunization was initiated for 111 infants of which 13 continued to receive it in other perinatal care centers. From rest only 67 infants (68.4%) received complete immunization – all 5 doses. In 29.7% of cases (n=33) the immunization was delayed (initiated after the 15th day of the first month of RSV season). Conclusions: Only two thirds of these high risk infants receive complete RSV immunization and for one third of the patients the immunization was initiated late. Consequently, it should be concluded that it is necessary to improve the organizational aspects of immunization and to conduct patient surveys to reduce incomplete immunization cases.

Poster presentation

PRESCHOOLERS ART ACTIVITIES: SURVEY OF PARENTS ATTITUDES

Lesinskaite, Auge, Faculty of Medicine, Vilnius University, Vilnius, Lithuania, Saules 23

Keywords: Drawing, materials, modeling, coloring, preschool children, parents engagement in visual arts. Objectives: To review aspects of drawing in preschool children and investigate their parents attitudes. Methods: Survey has been done using the questionnaire made for this purpose by the authors. Parents of the preschool children were interviewed in 6 public kindergartens in 2 Lithuania‘s cities: 4 in Vilnius and 2 in Šiauliai. Questionnaire consisted of 22 general and specific questions about the respondent and child comprising various aspects about drawing materials, time, type of visual art activities, parents attitudes towards drawing and their own experiences and engagement in visual arts. Data analysed using Microsoft Excel 2013 and SPSS 21 programs. Results: 361 parents have completed the survey questionnaires. Respondents parents had answered about their children: 195 (54,5%, mean age 5,1±1,1) girls and 163 (45,5%, mean age 5,0±1,1) boys, 3 did not specified their child‘s gender. 339 (93,9%) of children were drawing at home, 144 (83,3%) boys and 192 (98,5%) girls (p=0,00). 324 (89,8%) of parents noted that their child likes drawing. Drawing materials: colored pencils 289 (80,1%), liquid paint 173 (47,9%) , chalks 137 (38,0%), non-colored pencils 115 (31,9%), felt-tip pens 105 (29,1%). 245 (67,9%) of children were modeling at home, girls (75,9%) more often than boys (58,3%) (p=0,00). 312 (86,4%) of children colored books. Girls (93,8%) liked it more then boys (77,3%) (p=0,00). 79 (21,9%) parents were attending specialized art program in their childhood. Only 2,2% of fathers and 18,8% of mothers are attending art activities nowadays. 95,9% of the parents said that drawing is beneficial for their child‘s development (strengthens creativity and fantasy 53,9%, develops motorics 23,9%, develops thinking 15,4%, helps to understand and express emotions 11,7%, helps to relax 11,7%). The remaining part, who said that drawing is useless, pointed out why: children don't like it, other activities can educate them more. Conclusions: Majority of parents noted that their child likes drawing and noted that drawing is beneficial for their child‘s development. Most of the preschool children are drawing, modeling and filling coloring books at home, girls significantly more often than boys. Parents who participated in specialized art activities in their own childhood – their children were most often engaged in art activities at home. Data could be used for longitudinal and cross cultural comparisons.

Poster presentation

INTERACTION BETWEEN SYMPTHOMS OF DEPRESSION AND SIGNES OF VIOLENCE AMONG THE TEENAGERS

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Keywords: violence, teenagers,orphanage Objectives. The main aim of this research is to find out the symptoms of depression and signs of violence within the two Latvian boarding schools. Methods. Quantitative methods. In general, for data analysis 40 questionnaires filled by respondents. Results. In this survey 12 girls and 28 boys took part. The average age of respondents is 14 years old. 1) 83% of respondents have ever endured the emotional violence, 15% have not, 2% did not want to answer. 2) 70% have ever suffered from physical influencing by other teenager, or influenced other teenager physically by himself; 27% of respondents have never suffered from physical violence and have never took part in the process of violence; 3% did not want to answer. 3) 63% of respondents suffer from verbal violence, the answers of 35% of respondents were negative and 2% did not want to answer. 4) Boys suffer more from physical violence (60%) then girls (32%). Girls have more experience of sexual violence (50%) than boys (1%), also the suffering from emotional violence is defined more among girls (80%) than among boys (30%). The experience of verbal violence among girls is also wider than among boys. 5) 70% of respondents do not feel the changes of mood during the last time. 6) More than 50% of respondents have answered that sometimes a little bit suffer from insomnia lately, but 20% suffer from insomnia. 7) For 80% of respondents have problems of concentration. 8) 90% of respondents have never thought about the suicide and are glad about the life as it is. 9) The level of appetite has a little bit decreased lately for 55% of respondents. 10) 42% of respondents answers that they are irritable. Conclusions. Within the results of research can be observed the tendency, that for each respondent, who suffers from any type of violence have at least two symptoms of depression. According to this fact it is possible to confidently conclude that one of the consequences of violence are depression’s symptoms.

Poster presentation

THE SPECTRUM OF PEDIATRIC BRAIN TUMOURS IN LATVIA (2004 – 2018)

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Keywords: brain tumours, paediatric tumours, oncology Objective: To analyse the spectrum of brain tumours in the paediatric population of Latvia. Methods: Consecutive, primary, histologically verified brain tumours, diagnosed within the preceding 15 years, were identified by a retrospective archive search in Children's Clinical University Hospital of Riga. The respective histological slides were reviewed to identify the presence and type of tumour. Secondary tumours and recurrences were excluded from further evaluation. The age and sex of patient were analysed as well. Descriptive statistics was carried out. Results: There were 108 histologically diagnosed primary brain tumours (2004 – 2018). The mean patients' age at the time of operation was 8.4 years (95% confidence interval (CI): 7.5 – 9.4). The youngest patient was three months old. There were 57 (53%; 95% CI: 43 – 61) males and 51 (48%; 95% CI: 39 – 57) female in the study group. Astrocytic tumours, comprising 66% (95% CI: 57 – 75) of all brain neoplasms, represented the most frequent histological type. Embryonal tumours s. medulloblastomas comprised 23% (95% CI: 15 – 31) and ependymal tumours 5% (95% CI: 1 – 9) of cases. In addition, 6% (95% CI: 2 – 10) of patients were affected by other/ uncommon neoplasms, including pineal or mesenchymal tumours. The distribution by grade was following: grade IV tumours (glioblastomas and medulloblastomas) were found in 32% (95% CI: 23 – 41) of patients, grade II in 27% (95% CI: 19 – 35), grade I in 23% (95% CI: 15 – 31) and grade III in 18% (95% CI: 11 – 25) of cases. Conclusions: 1. Astrocytic tumours represent the largest histological group of paediatric brain tumours in Latvia. 2. There is a slight albeit statistically insignificant male predominance among children diagnosed with primary brain tumours. 3. Grade IV tumours are the most frequent childhood brain tumours in Latvia.

Poster presentation

EARLY POSTOPERATIVE PERIOD COMPARISON BETWEEN DOWN SYNDROME PATIENTS AND PATIENTS WITHOUT DOWN SYNDROME WHO HAD UNDERGONE ATRIOVENTRICULAR SEPTAL DEFECT'S CORRECTION

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Esta;Līga;Rīga Stradiņš University, Latvia;Rīga,Latvia,
Lubaua;Inguna;Children's Clinical University Hospital, Latvia,Rīga Stradiņš University, Rīga,Latvia

Key words. Down syndrome, early postoperative period, atrioventricular septal defect. Introduction.21st chromosome trisomy is the most common genetic disorder in children. An atrioventricular septal defect (AVSD) is the most frequent congenital heart defect found in children with Down's syndrome(DS). The majority of cases of AVSD are suitable for surgical intervention; this generally takes place within the first six months of life. Aim. The aim of this retrospective study was to evaluate the impact of Down syndrome on the early postoperative period in patients who had undergone atrioventricular septal defects correction and compare results with patients who do not have Down syndrome. Methods. A retrospective study included the data of 51 patients who had undergone AVSD corrective open heart surgery till three years of age between the years 2007 and 2016 at the Latvian Children's Clinical University Hospital. The data were collected from electronic database Andromeda and medical histories. The analysis of gathered data was carried out using IBM SPSS 23.0 and MS Excel. Results.A total of 51 participants.34 (66.7%)had Down syndrome.Nine patients died,two during operation,seven during the early postoperative period.The early post-operative complications(56.86%):infection 33.03%(n=9),7 of patients were with DS (p>0.999);atelectasis in 17.24%(n=5)(p=0.064),four of them with DS.16.66% patients experienced atrioventricular block ,four of these patients were with DS (p=0.595). The average operation time was 345.32 minutes(min=103,max=650),for patients with DS-355.76 minutes and for patients without Down syndrome 323.13 min (p=0.037). Mean drainage time was 7.08 days (min=2 days, max=46 days),for DS patients -8.42 days; without DS –4.62 days (p=0.140).Avarage usage of antibiotic 10.81 days (min= 5 days, max=60 days),for DS patients 11.83 days;without DS - 8.92 days (p=0.232).Average hospitalisation time 22 days . For patients with Down syndrome 24.46 days and patients without Down syndrome -17.07 days (p=0.277). Conclusions. The presence of Down syndrome in patients with an atrioventricular septal defect is not a risk factor for surgical repair. There was no statistical significance between the groups.

Poster presentation

PREMATURE ARTERY AGING IN CHILDREN AGED 7-17 YEARS OLD WITH COARCTATION OF THE AORTA

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Key-Words: Coarctation of the Aorta; cIMT; intima media thickness Objectives: Assess one of the parameters associated with premature artery aging by measuring the carotid artery intima-media thickness in children with a history of coarctation of the aorta aged 6-17 years. Methods: In this retrospective cross-sectional study we performed ultrasound measurements of the carotid artery intima-media thickness in children with a history of coarctation of the aorta who have been treated at some point in the Children's Clinical University hospital in Riga, Latvia. Patients with other risk factors for premature artery aging, such as genetic syndromes (Marfan syndrome, Turner syndrome), endocrinological cnditions (hypopituitarism, Hyperthyroidism) were excluded, as well as all children with an acute recent illness were excluded. The cIMT of the right side was compared to measurements of the left side. Results: Out of 65 children who have been treated in the Children's Clinical University Hospital with the diagnosis coarctation of aorta and who met the inclusion criteria, 51 agreed to participate in the study and completed all measurements. The mean age of this study group was 12,0 years (SD-3,5 years), 33 were boys (64,7%) and 18 girls (35,3%). In 96,1% of children on at least one side the cIMT was increased. cIMT was increassed on the right side in 96,1% (n+49) of children, compared to 25% (n=13) on the left side ($p<0,0001$). Conclusions: in this group ultrasound measurements of cIMT show increased thickness, consistent with premature aging of blood vessels. cIMT of the right side was significantly thicker than cIMT of the left side in this study group.

Poster presentation

SEPSIS CAUSED BY LISTERIA MONOCYTOGENES

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Keywords: Listeria monocytogenes, congenital neonatal sepsis. Background: Sepsis is one of the most common cause of mortality during neonatal period, especially if it is caused by Listeria monocytogenes (LM). Case report: 38 weeks of gestation, male newborn was born in regional hospital. Anamnesis. There were no anamnestic risk factors for early onset sepsis. A green colour of amniotic fluids were confirmed. At age of 6 hours, due to clinical instability, he was transferred to a third level hospital Clinical signs. Respiratory distress, poor perfusion. Due to suspection of early onset sepsis, empiric antibiotic treatment was prescribed (penicillin and gentamicin). At age of 1 day blood test showed signs of bacteriological infection (CRP 90 mg/l; I/T 0,35; WBC 4,86 x 109/l). Clinical condition decreased. Due to insufficiency of cardiorespiratory system was started mechanically pulmonary ventilation (MPV) and inotropic support. Preliminary information about listeria in blood culture was received after 24 hours. Penicillin was changed to ampicillin. Lysteria monocytogenes was confirmed in blood and trachea cultures, congenital pneumonia and sepsis was diagnosed. Antibiotic treatment lasted for 10 days. Patient was moved to NU where oxygen requirement and symptoms of respiratory distress decreased. At age of 23 days patient was discharged from hospital. Conclusions: Despite the aggressive pathogen and severe neonatal condition, early suspicion of etiological factor and correct atibiotical treatment saved patient's life.

Poster presentation

INCOMPLETE KAWASAKI DISEASE IN 3-MONTH-OLD INFANT

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Keywords: Kawasaki disease, infant, IVIG. Background: Incidence of incomplete Kawasaki disease (KD) appears to be greater in infants younger than 6 months old. Children with incomplete KD whose diagnosis is delayed are more likely to develop coronary artery abnormalities. Case report: 3-month-old male presented on day 2 of illness with a 24 h history of irritability, fever, frequent bowel movements with mucus in feces. Physical examination revealed red palatoglossal arches, abdominal distension. Complete blood count (CBC) revealed neutrophilic leukocytosis: white blood cell count (WBC) of 22,09x10e9/L, neutrophil count of 14,10x10e9/L. Elevated C-reactive protein (CRP) levels of 17,5 mg/L was observed. Treatment with amoxicillin and ibuprophen was prescribed for presumed bacterial infection. Fecal analysis reflected inflammatory process. On day 5 of illness patient developed thrombocytosis: increased platelet count (PLT) of 518x10e9/L. Urinalysis showed microscopic hematuria. Subconjunctival hemorrhage was observed in both eyes. Ceftriaxone was prescribed on day 10 of illness. On days 7-11 of illness disease progressed: CRP increased to 69,90 mg/l, WBC - 26x10e9/L, PLT - 832x10e9/L, hemoglobin level decreased to 86 g/L, erythrocytes sedimentation rate (ESR) increased to 57 mm/h. His full septic work-up and viral studies were negative. On Day 12 of illness, after 11 days of fever, with no other obvious diagnosis, he was given intravenous immunoglobulin (2 g/kg) along with medium-dose aspirin treatment (50 mg/kg/day) for suspected incomplete KD. Over the next 24 h, his symptoms, including fever, resolved. Echocardiography and electrocardiography showed no abnormalities. Thrombocytosis persisted: PLT - 1065x10e9/L on day 16. In the subacute phase, he was prescribed with low-dose aspirin (5 mg/kg/day). Repeated echocardiography was recommended in 4-6 weeks. Conclusions: In this case, patient was thoroughly examined and treated with antibiotics until diagnosis of incomplete KD has been taken into consideration. Patient was susceptible to treatment with IVIG, therefore fever resolved. Although no coronary abnormalities were found, risk of cardiac complications remains.

Poster presentation

ATTACHMENT STYLE AND PEER RELATIONSHIP QUALITY IN SAMPLE OF MIDDLE CHILDHOOD PRIMARY CARE ATTENDERS WITH FUNCTIONAL SOMATIC SYMPTOMS

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Keywords middle childhood, attachment, peer relationship, functional somatic symptoms, mental disorder risk factors Objectives Early detection of children with moderate signs of mental disturbances and risk for development mental disorders may provide opportunities for more focused intervention to eliminate risk factors. Functional Somatic Symptoms are common complaint in pediatric primary care practice and heavy burden to health care system . There are few theoretical models explaining why psychological distress is experienced by somatic complaints. Social learning perspective stress the role of social relationships. Developmental psychopathology theories suggests that Attachment style insecurity is associated with latter internalizing and externalizing psychopathology. In the middle childhood intensity of social relationships with peers increase saliently Peer relationship start gradually replace infantile attachment relationship with parents . The recent research proof that children attachment change from middle childhood to adolescence when peers become new attachment figures . Aim of our study is to detect does increased functional somatic symptom representation and impaired peer relationships is associated with Attachment insecurity . Methods Child Somatization Inventory (CSI 24) was used to assess multi symptomatic somatization in sample 8 to 12 year old primary care attenders In Riga . Child Attachment interview was used to evaluate child's state of mind (mental representations of self and others) regarding attachment . Parental rating of child peer relationship quality was obtained in the parental questionnaire. Fischer Exact test was used to compare categorical variables. Results Study sample is 43 cases, Mean age of sample is 10,2 year. Secure attachment was assessed in 17 cases , Insecure Attachment in 24 cases. High somatization rate was assessed in 2 cases in secure attachment group (11, 76%) and in 7 cases in Insecurely attached group (29,17%) . Impaired peer relationship was reported in one case in Securely attached group (5, 88%) and in 11 cases in Insecure attached group (45,88%) . High somatization and impaired peer relationship was observed in one case in Securely attached child group and in five cases in Insecure attached child group. High somatization in Securely attached versus Insecure attached Fischer exact test p =0, 179 . Peer relationship Securely attached/ Insecure attached Fischer exact test p= 0,006 Conclusions Insecurely attached children are more likely have both high functional somatic symptom and worse peer relationships. They both are risk for child adjustment

Poster presentation

CHALLENGES RELATED TO CANDIDA ALBICANS NEONATAL SEPSIS: A CASE REPORT

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Keywords: Candida, premature infants, neonatal sepsis Background: Candida infection can be a cause of neonatal septicemia and is associated with high morbidity and mortality rates. Low birth-weight preterm infants are especially vulnerable to these infections. The symptoms of candidiasis in neonates are not specific and may be similar to bacterial infections. Therefore, the correct diagnosis is often delayed. Case report: A 32-year-old woman with candidal colpitis, fever and leukocytosis (22.32x109/l) gave birth to a 600g male at 23 weeks of gestation. Newborn resuscitation, intubation, ventilation and phototherapy were performed. Surfactant, antibacterial medications (penicillin, amikacin cefotaksim) and insulin for hyperglycemia were prescribed. The patient was admitted to Vilniaus Santaros Clinics Neonatology Center intensive care unit (ICU) due to respiratory failure, impaired microcirculation and signs of infection on the 6th day of life. Blood tests revealed hyperglycemia (11.1mmol/l), leukocytosis (42.43x109/l, NEU 26.12x109/l, MONO 4.06x109/l, EOS 1.54x109/l, BASO 2.45x109/l). Chest X-ray showed possible lung atelectasis in upper segments. No pathological changes were observed in abdominal and heart ultrasound. On the 10th day of life leukocytosis increased to 53x109/l, CRP reached 23mg/l, PCT – 1.67ng/ml. Meropenem was prescribed and blood culture was taken, which revealed C. albicans septicemia. A course of fluconazole was added. However, even after the antifungal treatment leukocytosis remained high and the overall condition of the patient did not improve. The patient remains in the NICU for close monitoring. Conclusions: In order to prevent neonatal invasive candidiasis, risk factors should be carefully evaluated. In this case, the patient might have got infected from the mother with untreated candidal colpitis. Timely diagnosis is essential for successful treatment.

Poster presentation

DIAGNOSTIC SPECTRUM OF ACUTE ABDOMINAL PAIN AND VISUAL DIAGNOSTIC INVESTIGATION RESULTS IN CHILDREN HOSPITALIZED TO CHILDREN'S CLINICAL UNIVERSITY HOSPITAL

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Keywords. Acute abdominal pain, visual diagnostic, children Introduction. Abdominal pain is one of the leading complaints in patients of all ages who are presenting at the emergency departments (ED). The reason of pain in most of the cases is self-limiting and benign. Visual diagnostic methods (VDM) is a part of an investigational plan that helps to evaluate if cause of pain is a life threatening condition. USA Food and Drug Administration has outlined an actuality to review and evaluate criteria of VDM use as 20-50% of them do not give benefit to diagnosis. Aim. The aim of the study was to analyse a diagnostic spectrum of acute abdominal pain (AAP) in children of all ages presenting to Children's Clinical University Hospital Emergency department (CCUH ED) with abdominal pain as the main complaint and to evaluate frequency and importance of VDM (abdominal x-ray, ultrasound (US)). Materials and methods. The retrospective data analysis from CCUH information system Andromeda by using key words ''abdominal pain'' as data selection criterion. Results. 41 261 ED visits during year 2015 occurred. Hereafter 6.4% (n=2626) of all visits were analysed – first time visits with the main complaint ''abdominal pain''. In 11.76% (n=309) of cases children were hospitalized. Primary abdominal x-ray was performed in 28.3% (n=743) of all visits and 36.9% (n=114) in hospitalized children. Coprostasis was detected in 29.8% of hospitalized children and the final diagnosis was appendicitis in 47% of those cases. X-ray without pathology was in 25% of children with appendicitis. When correlation between US findings and diagnosis in hospitalized children was analysed, the results were statistically significant ($r=0.578$, $p<0.001$) – US finding ''appendicitis'' was in 88% (n=77) of cases. Conclusion. 1. Majority of children with AAP do not require hospitalization. 2. US is the method of choice in AAP diagnostics 3. Abdominal x-ray in ED is helpful in ileus, gut perforation or foreign object diagnostic.

Poster presentation

WHAT TAKES LONGEST IN A PEDIATRIC EMERGENCY DEPARTMENT?

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Keywords: Emergency Department, child, waiting time Objectives The purpose of this study was to assess the length of stay (LOS) in Pediatric Emergency Department (PED) and determine the longest processes during visits. Methods This was a prospective study of children aged ≤18 years who were admitted to the PED of the Hospital of Lithuanian University of Health Sciences (HLUHS) Kauno Klinikos from 1st to 31st of July, 2018. Registration time of 40 children and total LOS of 50 patients was assessed. The PED nursing staff in this hospital uses the pediatric Triage Acuity Scale to divide patients into five categories according to their medical condition: level 1 - immediate evaluation and care, level 2 – evaluation and care within 15min, level 3 – 30min, level 4 – 60min, and level 5 – 120min. Data were analyzed with SPSS 23.0. A p value of <0.05 was considered significant. Results The median LOS in PED was 95.5±85.81min (10 – 525min). All patients were examined within the limit according the initial triage category. There were 42 (84%) level 4 and 8 (16%) level 3 patients. There was no significant difference in LOS between these groups. Median registration time was 6.60±5.57 min (2 – 37min). Preparation of medical documentation during the registration process took the longest (median time – 2min). The shortest part of registration was dividing patients into Triage categories – 4.2s on average. Waiting for the lab results was the longest procedure during the visit to ED – 69.41±26.81min (32 - 121min), while consultation with other doctors was the shortest part – 6.65±7.37min (1 - 29min). There was no relation between LOS and categories of the patients or further treatment decisions. Conclusions The Triage Acuity Scale is implemented in HLUHS and patients in PED are evaluated according to Triage categories. This model works in this hospital properly. Median LOS was approximately 1.5 hours and the longest process was waiting for the lab results.

Poster presentation

SICK SINUS SYNDROME IN CHILD WITHOUT STRUCTURAL HEART DISEASE

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Author: Svetlana Žukova1 Scientific research supervisors: Dr. med. Inga Lāce1, 2 1Rīga Stradiņš university, Latvia 2Children's Clinical University Hospital, Latvia Key words. Sick sinus syndrome, syncope, sinus arrest. Introduction. Sick sinus syndrome has been reported rarely in pediatric patients with structurally normal hearts. It is characterized by sinus node dysfunction with an atrial rate inappropriate for physiologic requirements. Case report. Two-year-and-seven-month-old girl admitted in hospital for detailed examination with syncope attacks and episodes of weakness. During episodes child at first cries, then retracts the head, stops breathing, loses consciousness and falls backwards. Episode lasts maximum 5 minutes, usually occurs when child is tired and always associated with crying. First episode occurred at 17-month age, few months after acute viral infection. Episode frequency variable – every day or less. Seven months before was hospitalized with syncope, no specific features were found. On physical examination no abnormalities were detected. Echocardiography, sleep electroencephalogram, chest X-ray, blood tests revealed normal results. Electrocardiogram showed sinus arrythmia 90-105 bpm, incomplete right bundle branch block. MRI of the head detected slight inflammatory changes in maxillary sinus. To clarify the etiology of syncope attacks, 24-h Holter monitoring was performed. It showed sinus arrhythmia with minimum heart rate 37 bpm, maximum 176 bpm and repeated episodes of sinus arrest with pauses, longest 4,7 s and 12 bpm, when child is sleepy. Few premature ventricular beats detected. Findings were interpreted as sick sinus node syndrome. Permanent pacemaker implantation was performed, and the patient has been free of symptoms since. Conclusion. This case presents a child with syncope attacks. Episodes of sinus arrest were detected and interpreted as sick sinus syndrome. Patient remained free of symptoms after permanent pacemaker implantation was performed. Summary. Sick sinus syndrome may be a life-threatening condition in childhood for which the insertion of a permanent pacemaker is indicated. It should be considered in the differential diagnosis whenever a child is seen with episodes of weakness or syncope.

Poster presentation

WOLFF-PARKINSON-WHITE SYNDROME IN A NEONATE PRESENTING WITH SUPRAVENTRICULAR PAROXYSMAL TACHYCARDIA

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Keywords. Supraventricular paroxysmal tachycardia, WPW syndrome, children Introduction. Supraventricular paroxysmal tachycardia is a type of "short- circuit" arrhythmia. It may occur as part of the Wolff-Parkinson-White (WPW) syndrome. WPW syndrome occurs when there is an extra connection between the atria and ventricles. The heart rate during episodes is frequently in the range of 240-300 beats/min. The prevalence of WPW syndrome varies between 0.68 and 1.7/1000. Patients with WPW syndrome have a small, but real risk of sudden death. Case report description. A patient was born at 39 weeks of gestation and her birth weight was 3 kg. The umbilical cord was 3 times wrapped around baby's neck. Mother notes that since the birth baby has breastfeeding problems. On day 16 of life mother felt that baby has suddenly developed a rapid heartbeat. She called the doctor, who recommended going to the hospital, however, parents decided to stay at home, because of their belief that the baby just has colics. On a subsequent day, the patient's clinical status deteriorated. The girl was transported to Children's university hospital of Riga. Physical examination showed that patient`s condition was serious: she was grayish, tachycardic at 270 beats/ minute, and restless. ECG showed a narrow complex supraventricular tachycardia, short PQ interval, and a delta wave. WPW syndrome was suspected. Therapy was initiated with Midazolam and Adenosine, which was given 3 times repeatedly with no persistent effect. After that Cordarone was started in continuous infusion for 3 days. Propranolol was added as the maintenance therapy. Patient condition soon improved. Following ECG and Holter monitor tests confirmed WPW syndrome. After 10 days the patient was discharged. Summary. WPW syndrome is a severe and rare disease. Clinically, symptoms are often mistaken, especially in neonate and infants. The basis of pharmacological treatment of WPW syndrome includes anti-arrhythmic medication.

Poster presentation

PEDIATRIC PATIENT WITH RECURRENCE OF CUSHING'S DISEASE. A CASE REPORT

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Keywords. Cushing's syndrome, Cushing's disease, children. Background. Pediatric Cushing's syndrome is rare in childhood and adolescence. The condition is caused by prolonged exposure to excessive glucocorticoids which can be secreted endogenously or administered exogenously. The most common cause of endogenous Cushing's syndrome is Cushing's disease, defined as hypercorticism caused by an ACTH-secreting pituitary adenoma. Most pediatric patients with this condition have typical cushingoid appearance. Young children are more likely to present with poor growth and obesity without the classical features. Case report. 7 years old female patient was referred to Children's Clinical University hospital for further investigation due to slow growth velocity and overweight (12.07.2015.). Objective examination: weight 31,3kg (+1,3SD), height 116cm (-1,5SD), BMI 23,3kg/m2 (>95.pc), increased subcutaneous fat throughout the body, especially in the torso and face area, stretch marks on the thighs. Laboratory studies revealed elevated cortisol level and MRI - microadenoma in adenohypophysis in right side, thus confirming the diagnosis of Cushing's disease. After 2 months endoscopic transsphenoidal pituitary adenoma resection was performed in Gunzburg (Germany). After surgery, patient was regularly seen by endocrinologist. She received substitution with hydrocortisone 20 mg/m². The dose was gradually decreased until discontinued in 26.08.2016. The patient growth velocity improved, weight gain was appropriate. Hormonal screenings were stable. In 19.02.2018. patient was hospitalized because of suspicious of recurrence of Cushing's disease. The results of the hormonal tests suggested hypophyseal hypercorticism. Imaging diagnostic tests did not point to ACTH secretion tumor's precise localization. For further investigation and therapy, patient was sent to Karolinska University hospital in Sweden. Conclusions. The case demonstrates how challenging are diagnostic and treatment of Cushing's disease, which requires multidisciplinary approach and close collaboration with colleagues.