BOOK OF ABSTRACTS

International Scientific and Practical Pediatric Conference
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International Scientific and Practical Pediatric Conference

On 2017 11 24 at Children's Hospital (Santariškių g. 7), Vilnius

PROGRAM

10:30 Registration. Beverages and snacks

11:30 Opening ceremony

11:45 Infectious diseases session. Moderators: Prof. Vytautas Usonis MD PhD, Assoc. Prof. Ilze Grope MD PhD, Assoc. Prof. Jana Pavare MD PhD

1. Control of children infectious diseases: challenges and achievements. Prof. Vytautas Usonis MD PhD
2. Meningococcal sepsis clinical case. Prevention and complications. Audra Vyšniauskaitė, Vilnius University (LT)
3. Perinatal varicella episode in the non-vaccinated family: a case report. Anna Leiko, Rīga Stradiņš University (LV)

13:00 Pediatric surgery session. Moderator: Gintas Pošiūnas MD

1. A rare case of multiple post-liver transplantation complications including diaphragmatic hernia in 2 years old child. Laura Bajāre, Rīga Stradiņš University (LV)
2. Diagnostic challenges of abdominal tuberculosis in children: cases report. Inga Dekerytė, Kamilė Donielaitė, Lithuanian University of Health Sciences (LT)
3. Hirschprung's disease – delayed diagnosis and treatment in 8 years old male: case report. Timurs Zurmutaī, Rīga Stradiņš University (LV)

14:00 Lunch

15:00 Pediatrics session. Moderators: Sigita Burokienė MD PhD and Doc. Vaidotas Urbonas MD PhD

1. Children and adolescents deliberate self-poisoning in Vilnius city clinical hospital children reanimation and intensive care unit. Augė Lesinskaitė, Rokas Šambaras, Vilnius University (LT)
2. The reasons why parents first seek help at the emergency department observation unit (EDOU) in Children's Clinical University Hospital. Kateryna Bulavkina, Rīga Stradiņš University (LV)
3. Robertsonian Translocation (21;21) in Down Syndrome: a report of two rare cases. Viltė Gabrielė Samsonė, Vilnius University (LV)
4. Intussusception: common diagnosis with an uncommon presentation. Polina Popeiko, Rīga Stradiņš University (LV)

16:00 A break

16:15 Neonatology session. Moderator: Prof. Nijolė Drazdienė MD PhD

1. N. peroneus damage as a complication of birth injury. Sandija Skribāne, Rīga Stradiņš University (LV)
2. Opitz-Frias syndrome: a case report. Lauma Vasiļevska, Rīga Stradiņš University (LV)
3. Addison crisis due to salt-wasting form of congenital adrenal hyperplasia (CAH). Rūta Vosyliūtė, Vilnius University (LT)
4. Developmentally supportive care of premature infants. Viktorija Gurskytė, Agnė Matuolytė, Vilnius University (LT)

17:30 Closing remarks. Tour around Children's Hospital.

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INFECTIOUS DISEASE SESSION

ORAL PRESENTATIONS

1. PERINATAL VARICELLA EPISODE IN THE NON-VACCINATED FAMILY: A CASE REPORT

Author: Anna LEIKO, Rīga Stradiņš University, Latvia

Supervisors: Assoc.prof. Ilze GROPE MD Children's Clinical University Hospital, Rīga, Latvia; Assist. Inga ZIEMELE MD Children's Clinical University Hospital, Rīga, Latvia

Background: "Vaccinate or not?" for some parents still is a controversial question. This study reviews statistics of immunisation and infectious diseases in Latvia. In addition, a case report about varicella infection in a newborn baby whose mother hasn’t received varicella vaccine is presented.

Case report: A family consists of 3 children (one had varicella vaccine) and a pregnant woman. Non-vaccinated child gets ill in the kindergarden, as a result everyone in the family gets ill (except the one who had vaccine). A mother, who never had any infectious exanthems in her childhood, developed some elements of rash/vesicles on her body and scalp 5 days before labour. The baby girl was born at 38 week of gestation (4th pregnancy and 4th labour). On the first day of the baby’s life the mother notices 2 vesicles on her forehead, on the 2nd day one vesicle on the abdomen is noticed. On 8th day of life the girl rapidly developed more elements of rash, covering her head, including scalp, body and extremities. On the 9th day of life the rash progressed and the child was hospitalised with a diagnosis – neonatal chicken pox. RESULTS. The girl received I/v Acyclovir from the 2nd to 6th day of illness, developed complications that were treated. The last elements of rash appeared on the 3rd day of illness and the child was discharged on the 6th day of illness. Everyone in the family who did not have varicella vaccine got ill.

Conclusions: Complications of varicella are various and dangerous, especially in non-vaccinated pregnant woman. Depending on the pregnancy time intrauterine varicella infection can result with intrauterine death, congenital varicella syndrome or severe neonatal varicella (with 30% mortality). All pregnant women who have never had chicken pox (or if it is unknown) and that have been exposed to chicken pox must be screened for VZV IgG to avoid these complications. As well it is important to explain to parents the role of immunisation in their and their children lives: the positive sides of vaccine, how it can prevent from getting ill and what dramatic complications can cause chicken pox in non-vaccinated person.

2. MENINGOCOCCAL SEPSIS CLINICAL CASE. PREVENTION AND COMPLICATIONS

Author: Audra VYŠNIAUSKAITĖ, 6th course, Vilnius University

Supervisor: Doc. dr. Virginija ŽILINSKAITĖ, Children‘s Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos, Clinic of Childrens' Diseases

Background: Meningococcal infection is an urgent, life-threatening disease caused by the bacteria Neisseria meningitidis. While best known as a cause of meningitis, widespread blood infection can result in sepsis. This is a fast progressing disease. Usually a victim of menigococcus becomes well developed, healthy child, during his first years. The first symptoms of meningococcal infection are non-specific and imitate a simple flu. Meningococcal infection is the main and possibly avoidable reason of death and disability. Antibiotics can reduce the risk of death, but the most effective way is vaccination.

Case report: 1,5 years old boy develops a fever of 40 °C at 8pm. He is taken to primary health care center because of ear pain and fever at 9pm. He was consulted by the otorynolaringologist and findings of consultation were: no otitis. The patient was released from hospital with prescribed treatment: liquids and antipyretics. 6-7 hours after the start of fever – hemorrhagic rash appeared (at 3am). 4.45h the boy was hospitalized because of the state of decompensated septic shock. Preliminary diagnosis: Meningococcemia. Septic shock. Treatment upon arrival: intravenous liquids, cefotaxime 500mg intravenous x 4 per day, intubation and ventilation, dopamine 5 µg/kg/min, hydrocortison 50mg. Blood test results: ph 7,18, HCO3-12.0, BE (-14.7), lactate – 8.3mmol/l. aPTT - 125.8s, INR - 1.77, fibrinogen – 0.66g/l. Hb 105g/l, PLT 76 x 109/l. PCT 191,4ng/ml, CRP 57,68mg/l. PCR blood test: Neisseria meningitidis. Blood culture: Neisseria meningitidis B, susceptible to penicillin and cefotaxime. Endotracheal culture: Enterococcus faecalis. Diagnosis: Meningococcemia. Septic shock. DIC. MODS. Treatment during hospitalization: ventilation, inotropes, transfusions, clindamicine, meropenem, vancomicine. Necrectomy and implantation of artificial skin. On the 2013.02.21 child was discharged from the hospital.

Conclusions: As this case shows, meningococcal sepsis can cause serious complications such as skin necrosis, brain damage, loss of hearing or even extremities. Nota bene! In order to treat sepsis, we have to recognize sepsis! Stay alert – do not release child with fever. Trust parents – they know their child the best. Every hour you win reduces mortality to 8%.

POSTERS

1. CONGENITAL CYTOMEGALOVIRUS INFECTION SPREAD ON CHILDREN COCHLEAR IMPLANT USERS

Author: Gabrielė ČERNYTĖ, 6th course, Vilnius University, Faculty of Medicine

Supervisors: Jekaterina BYČKOVA, Vilnius University, Faculty of Medicine, Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos; Margarita GROMOVA, Vilnius University, Faculty of Medicine, Institute of Biomedical science; Silvija KIVERYTĖ, Centre of Laboratory Medicine, Vilnius University Santaros Klinikos

Introduction: Congenital cytomegalovirus (cCMV) infection is the major cause of newborns' congenital infection in developed countries. This infection is asymptomatic ~ 90 % of all cases related to infected infants, but ~ 15 % of them have got severe sensorineural hearing loss even with an asymptomatic form of infection. The gold standard for the diagnosis means positive results for viral isolation from urine and/or saliva collected during the first 3 weeks of life. Despite this, the early diagnosis is not being given for infants with no viral symptoms due to not performing the tests routinely. Therefore, we tested cCMV from dried blood spots (DBS).

Aim of the study: To evaluate an occurrence of cCMV infection among cochlear implant users.

Materials and methods: The research consists of 44 children who were implanted with cochlear implants. The main criteria for selected patients were two: deaf children who were implanted in VULSK and a possibility to get their biological samples. The samples of the DBS on Guthrie cards, which were taken during the infancy, were used for the research. DNA was extracted from every drop and was determined using a PCR method. The results were evaluated using a PCR curve only by quality.

Results: During the study 22 boys and 22 girls were examined. Age ranged from 3 to 16 years (average 7,86 ±3,05 year old). From 44 samples tested by DBS 7 (16%) were positive for cCMV. According to the previous study's information 21 children (48 %) have not been tested genetically, 15 children (34 %) had GJB2 gene mutations, 8 children (18%) had no mutations at all. For all cCMV positive children no GJB2 gene mutation were identified.

Conclusions: 16% of all children were cCMV positive when it comes to examination in DBS, however the tests were only examined qualitatively. Results were positive for only high viremia infected children, therefore, there is a slight possibility of false negative results. The study confirms findings of global researches that cCMV infection is the second most common deafness' cause after GJB2 mutation.

2. DOES THE ROUTINE DTAP VACCINATION CAUSE ATOPIC DISEASES?

Author: Agnė KRŽIVICKYTĖ, 5th course, Vilnius University

Supervisor: Agnė JAGELAVIČIENĖ, Clinic of Children's Diseases, Vilnius University Faculty of Medicine

Introduction: Prevalence of atopic dermatitis and asthma is increasing all over the world. The removal of provocative factors is important to reduce the severity of atopic diseases in early childhood. Availability and spread of information is growing and the opinion in modern society that routine vaccination could exacerbate or even promote allergy is rising. Therefore, it is a demand for new studies regarding vaccination and its connection to allergic disorders.

Aim of the study: To explore the association between children DTaP vaccination in the first 6 months of life and development of atopic dermatitis and asthma up to 2 years old.

Material and methods: In April and May of 2016 a retrospective case-control study was conducted. 200 children, born in 2009, were selected from the electronic database of "Centro poliklinika", 100 of them had asthma and/or atopic dermatitis diagnosis and 100 had no atopic diseases. Each patient information was gathered by a pre-compiled original questionnaire. The data of children DTaP vaccination up to 6 months in the study population was classified as follows: Ist group- completely vaccinated, IInd group- partially vaccinated, IIIrd group- not vaccinated.

Results: The study consisted of 200 patients (99 boys and 101 girls). All 100 children who had atopic disease diagnosis had atopic dermatitis and 49 of them also had asthma. Ist group consisted of 98 children (49,0 %), IInd group – 81 (40,5 %), IIIrd group- 21 (10,5 %). We found no association between DTaP immunisation in the first 6 months of life and increased risk of atopic dermatitis and/or asthma manifestation up to 2 year of age.

Conclusions: The current regular childhood vaccination with DTaP does not promote atopic diseases. Effective protection against potentially life threatening or disabling infectious diseases by vaccination should be offered to every child - atopic or not.

3. DO ANTIBIOTICS PROMOTE CHILDHOOD ASTHMA?

Author: Justina KUČINSKAITĖ, 5th course, Vilnius University

Supervisor: Agnė JAGELAVIČIENĖ, Clinic of Children's Diseases, Vilnius University Faculty of Medicine

Introduction: The rising prevalence of atopic diseases during last decades brings concern for doctors and patients. Asthma is one of the most common atopic disease particularly in children. There are a lot of factors which can increase the risk of asthma development. Lately there are publications with evidences, that excessive use of antibiotics can lead to greater number of atopic diseases, in most cases, asthma.

Aim of the study: To explore the relationship between antibiotic exposure before 2 years of age and development of asthma in childhood up to 6 years of age and to analyse additional factors impact on asthma development. .

Material and methods: In April and May of 2016 a retrospective case-control study was conducted. 179 children born in 2009 were selected from the electronic database of "Centro poliklinika", 79 of them had asthma diagnosis and 100 had no asthma diagnosis. Each patient information was gathered by a pre-compiled original questionnaire. The data of antibiotics administration up to 2 years old in the study population was classified in to four groups.

Results: The study consisted of 179 patients (88 boys and 91 girls). Asthma was not significantly associated with gender. However, asthma diagnosis was associated with atopic dermatitis diagnosis. We found an association between administration of antibiotics in first two years of life and increased risk of asthma manifestation up to 6 year of age. There was a dose-response relationship as every added antibiotic course increased asthma development probability. Later administration of antibiotics was associated with less frequent asthma diagnosis. No association between asthma diagnosis and asthma types, routine vaccines (up to 6 months of age) and breastfeeding were found.

Conclusions: Our study provides evidence that the use of antibiotics in the first two years of life is associated with an increased risk of asthma development up to 6 years old, and this risk increases with the number of courses of antibiotics prescribed. Antibiotic prescription in the early age is a prognostic factor for asthma diagnosis.

4. VACCINE PREVENTABLE DISEASES IN CHILDREN'S CLINICAL UNIVERSITY HOSPITAL FROM 2005 TO 2016

Authors: Tīna SPARĀNE, 6th course, Riga Stradiņs University; Anija MEIERE, resident doctor, Children's Clinical University Hospital

Supervisor: Asoc. prof. Ilze GROPE, Children's Clinical University Hospital

Introduction: The National Immunization Program is a successful example of effective preventive care for children. The NIP helps to reduce morbidity and mortality of vaccine preventable diseases (VPD), but despite that parents more often choose to skip or partly skip the vaccination.

Aim of the study: The aim of the study is to collect statistics of VPD in the Children's Clinical University hospital (CCUH) in Riga, Latvia from 2005 to 2016 year and to prove that VPD still emerge among children quite often in CCUH.

Materials and methods: The retrospective study took place in CCUH. The statistical data were collected in CCUH about period 2005-2016. Medical histories of pediatric patients and questionnaire to the parents of unvaccinated patients were used to collect data.

Results: Despite the NIP 883 cases of VPD conformed to selection criteria in CCUH in the time period from 2005 to 2016. During the period there were 0 cases of tetanus or poliomyelitis, more detailed information was collected of patients with diphtheria and pertussis. All together 64 patients with diphtheria and 80 patients with pertussis were hospitalized at CCUH. From all the patients 39.64% were girls, 60.36% were boys. The mean age was 65.72 ± 65.01 months, with an interval 1- 215 months. Confidence interval (CI 95%) of age mean value is from 52.75 to 78.68 months. 10% patients with diphtheria and 8.2% patients with pertussis received treatment in ICU. Results show that diphtheria is observed on mean for older children, and the difference is significant. For all VPD average length of treatment in hospital was 12.45 ± 7.10 days, with an interval from 2 to 31 days. The study also included questionnaire that was sent to parents whose child was hospitalized in CCUH in 2014 with VPD. 52% answered that child was not vaccinated according to vaccination calendar.

Conclusions: 1. VPD are important issue to deal with in Latvia because during 12 year period 883 patients received medical treatment in CCUH with the mean length for 12.45 ± 7.10 days. 2. Every hospitalization with VPD is painful, e.g., full blood count was taken in 90%. 3. In 2014th 52% of patients with VPD were not vaccinated according to vaccination calendar.

PEDIATRIC SURGERY SESSION

ORAL PRESENTATIONS

1. A RARE CASE OF MULTIPLE POST – LIVER TRANSPLANTATION COMPLICATIONS INCLUDING DIAPHRAGMATIC HERNIA IN 2 YEARS OLD CHILD

Author: Laura BAJĀRE, 5th course, Rīga Stradiņš University, Latvia

Supervisors: Dr.med. Ieva PUĶĪTE, Rīga Stradiņš University, Children's Clinical University Hospital, Rīga, Latvia; Doc. Ilze APINE, Rīga Stradiņš University, Children's Clinical University Hospital, Rīga, Latvia

Background: A diaphragmatic hernia (DH) is a rare complication of pediatric liver transplantation (LT). It is a serious and potentially life-threatening condition, if not early recognized and surgically treated. At King's College Hospital in London 10 DH cases were identified after 1032 pediatric LT procedures, in Children`s Clinical University Hospital in Riga 1 case of DH was identified among 12 children who have undergone LT.

Case report: A 2 years old girl was admitted to the Children`s Clinical University Hospital in Riga with icterus. US of abdomen demonstrated signs of hepatitis, splenomegaly, biochemistry tests showed elevated liver damage (LD) markers. After excluding metabolic causes of LD, positive EBV IgG antibodies were found. On the 3d day it was decided to do LT, and on 4th day she was acutely sent to University Medical Centre Hamburg-Eppendorf, Germany, because of the rapid progress of liver failure. Patient returns back to Latvia in good state 2 months later.

The patient presented in Children`s Clinical University Hospital with periodic hyperthermia episodes, tachycardia, no respiratory distress signs 5 months later. In lab tests - elevated direct bilirubin, ALP and GGT. Lung RTG was made to exclude possible pneumonia, and it showed separate 3 air-fluid levels. MR for chest and abdomen was made to reveal stenosis of bile ducts, but it also showed defect of diaphragm right arch and protrusion of intestines in right side of chest cavity and lung compression 2/3 of volume. Thanks to good cooperation with University Medical Centre Hamburg- Eppendorf patient was swiftly sent back to do correction of DH, result is successful.

Conclusions: Although the condition demands early recognition and treatment, it is not always an easy task for clinicians, when there are no obvious clinical signs like in this case. Till today there are only few reported cases of DH cases after LT in children. It appears that there is underreporting of cases, so it is important to raise awareness of this rare post-transplantation complication.

2. DIAGNOSTIC CHALLENGES OF ABDOMINAL TUBERCULOSIS IN CHILDREN: CASES REPORT

Authors: Inga DEKERYTĖ, 6th course, LSMU, Kaunas, Lithuania. Kamilė DONIELAITĖ, 6th course, LSMU, Kaunas, Lithuania

Supervisors: Aušra URBONIENĖ, LSMU, Department of Paediatric surgery; Ass. Prof. Artūras KILDA, LSMU, Department of Paediatric surgery; Prof. Vidmantas BARAUSKAS LSMU, Department of Paediatric surgery

Background: Tuberculosis (TB) still remains a public health issue. Growing migration rates increase the risk of spreading TB from endemic countries. Early detection is important for successful treatment especially in children who are particularly susceptible to developing severe forms of TB disease. Abdominal tuberculosis is uncommon form of TB and it is rarely found in children. It accounts for less than 1% of all tuberculosis cases in children.

Case report: The aim of our study was to present diagnostic challenges dealing with abdominal TB in children. Clinical data of 3 children with abdominal tuberculosis during the past 10 years in Lithuanian University of Health Sciences, Kaunas Clinics Pediatric Surgery department were collected and analysed. Patients manifested unspecific symptoms such as abdominal pain, persistent fever, nausea and fatigue. After standard investigations such as blood test, CRP, urine analysis, abdominal ultrasound and X-ray the diagnosis remained unclear. After some additional examination, patients underwent diagnostic laparoscopy. Diagnosis of abdominal tuberculosis was confirmed by peritoneum biopsy and histopathological examination. They recovered fully after anti-tuberculosis therapy.

Conclusions: Early diagnosis is challenging and appropriate treatment often is delayed because of the non-specific and deceptive clinical presentation of abdominal TB.

3. HIRSCHPRUNG'S DISEASE - DELAYED DIAGNOSIS AND TREATMENT IN 8 YEARS OLD MALE: CASE REPORT

Author: Timurs ZURMUTAĪ, 6th course, Riga Stradiņš University

Supervisor: Astra ZVIEDRE MD, Children's Clinical University Hospital, Riga.

Background: Hirschprung's disease is a developmental disorder presenting as a functional obstruction due to absence of ganglia in distal colon. It is a common disease with reported rates of 1 case per 1500-7000 newborns. Approximately 9 of 10 patients are diagnosed in the newborn period and treated during the first year of life.

Case report: A now 8yo boy, presented with incomplete bowel emptying and periodically encopresis and constipations since the age of 2, successfully responded to lactulose therapy. At the age of 4, with the same complaints, an EGDS was performed, which showed positive urease test, and a chronic superficial duodenitis. At the age of 6 the complaints are still the same, and boy was admitted to a GE department, also presenting delayed physical development. Irrigography showed a dolichosigma, but rectoscopy was unsuccessful even after all the preparations, due to thick fecal mass in rectum. At the age of 8 boy was acutely admitted to the hospital with complaint of 2 weeks without defecation (prior received no therapy and consumed wheat containing food). After 4-day long preparation, a rectoscopy was performed, but again unsuccessful, and after 4 more days another one is performed, also without success. After a couple of months, another rectoscopy is performed, finally successful, and biopsy confirmed Hirschprung's disease. In another couple of months boy undergoes a successful Soave Georgeesson surgery with 40cm of rectosigmoid colon removed. Patient discharged 9 days following the surgery. After couple of weeks on an outpatient examination, no significant complaints are mentioned, regular spontaneous defecation is achieved, with occasional encopresis episodes, which are common after such surgery and reduce during the first year post-op.

Conclusions: Even advanced diagnostic capabilities may not preserve us from underdiagnosis of Hirschprung's disease during infancy, and this leads us to such delayed diagnosis and treatment – it took almost 4 years from the first admission to the op. Probable causes may be the low compliance of parents, low parent education level on basic children physiology and poor quality of preparation for rectoscopy procedure.

POSTERS

1. ROPE SWING HIGH ENERGY MULTIPLE TRAUMA IN 15 YEAR OLD ADOLESCENT- A CASE REPORT

Author: Eleonora AVIŽIENYTĖ, 5th course; Vilnius University

Supervisor: Pediatric surgeon Vidas MISEVIČIUS; Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos

Background: Trauma is the leading cause of death among young people and remains one of the major public health problems in every country. High kinetic energy trauma can be caused by falls from height, motor vehicle accidents and crushing forces. Physicians must be aware of the multiple injuries and diagnostic difficulties that can occur in such situations. We present a case report of 15-year-old boy whose rope swing fall resulted in polytrauma.

Case report: The 15-year-old boy admitted to the trauma department with the injuries obtained due to the rope swing fall. Clinical examination, X-ray and subsequent surgery revealed multiple injuries: open fragmental right humeral supracondylar fracture and medial epicondyle fracture, associated with the mm. flexor carpi radialis, brachioradialis, brachialis lesions. Supracondylar fracture resulted in complete tear of right brachial artery as well. In addition, there was dislocated fragmental fracture of right distal forearm. Blood serum creatine kinase level was extremely high (38751,0 U/L, norm<270) because of the extensive arm's muscles traumatic damage. The open reduction and K-wire fixation of supracondylar humeral, medial epicondyle fracture and the fracture of distal radius and ulna were performed. The autovenous grafting from the safenous great vein for torn brachial artery was made. The day later on the basis of physical examination and patient's complaints of numbness and weakness in both legs, diagnosis of spinal cord contusion was made. In addition, the CT showed the fracture of L1 transverse processus. In two weeks, due to the food intolerance, nausea, abdominal pain, cramps and high levels of liver enzymes in blood serum patient underwent several ultrasound examinations. Hepatic contusion and traumatic gallbladder perforation was diagnosed, consequently, laparoscopic cholecystectomy was performed. Now patient attends rehabilitative procedures.

Conclusions: The present case showed that rope swinging can cause high energy trauma with multiple injuries. Physicians must draw attention not only to the obvious injuries. Systematic approach to the pediatric polytrauma is necessary as other traumatic symptoms can reveal later.

2. THE COMBINATION OF CLINICAL PARAMETERS AND ULTRASOUND FOR THE DIAGNOSIS OF BILIARY ATRESIA

Author: Diana MALDŽIŪTĖ, 6th course, Vilnius University

Supervisor: Kęstutis TRAINAVIČIUS, Vilnius University Children's Hospital, Department of Child Surgery.

Background: Biliary atresia (BA) is a progressive, idiopathic, fibro-obliterative disease of the extrahepatic biliary tree. It is the most common cause of cholestasis in neonates. Current modalities and techniques for evaluating cholestatic jaundice include ultrasound, hepatobiliary scintigraphy, MR cholangiography, and liver biopsy. An early diagnosis is necessary, because in the absence of surgical correction or transplantation, biliary cirrhosis, hepatic failure, and death occur uniformly by age 18–24 months.

Case report: We report the biliary atresia case of a male neonate diagnosed with infectious hepatitis on his third day of life. Ultrasound showed hepatomegaly, but no sign of BA. Thus he was treated with penicillin and gentamicin for 7 days intravenously. Nevertheless, jaundice, acholic stools, dark urine was still present. ALT, AST and γ-GGT were elevated (164.1 U/l, 209.3 U/l, 397.3 U/l respectively). Conjugated bilirubinemia was 122.26 μmol/l. No contraction of the gallbladder was used to indicate a gallbladder that does not contract after feeding. MRI confirmed diagnosis of BA type III. Kasai operation was performed to establish adequate bile flow. Pathology revealed gallbladder fibrosis, chronic cholecystitis, cholestatic hepatitis with developing biliary cirrhosis.

Conclusions: Direct bilirubinemia, serum aminotransferases with a disproportionately increased γ-GGT and the liver size below the ribs should suggests biliary atresia diagnosis. A detailed ultrasound examination for the triangular cord sign and for gallbladder abnormalities could reduce the need for liver biopsies and hepatobiliary scintigraphy for infants suspected to have biliary atresia.

3. CLINICAL MANIFESTATION OF INTESTINAL VOLVULUS IN CHILDREN WITH DANDY –WALKER SYNDROME: A CASE REPORT

Author: Lauma PUTNIŅA, 5th course, Rīga Stradiņš University, Latvia

Supervisor: Dr.med. Ieva PUĶĪTE, Rīga Stradiņš University, Children's Clinical University Hospital, Rīga, Latvia

Background: Hirschsprung's disease is one of the most common causes of intestinal obstruction in neonates and infants because of gut motility disorder. It is characterized as a complex genetic heterogenous disorder with variable inheritance. Hirschsprung's disease occurs as an isolated phenotype in majority (70 %) of cases. In other cases it may be associated with syndromes (Down's syndrome, Waardenburg syndrome, Dandy-Walker syndrome) or with a spectrum of congenital anomalies involving neurological, cardiovascular, or urological systems or with sensorineural anomalies.

Case report: 10-year-old girl with Dandy-Walker syndrome was admitted to Children's Clinical University Hospital in with malrotation, volvulus intestine crassi and diffuse peritonitis. Acute laparoscopy operation and total colectomy were performed, after operation ileostomy and sigmostoma were inserted. After two weeks one more operation were performed due to dysfunction of ileostomy and internal hernia. Histology described necrotizing colitis. After one month due to unclear etiology of abnormal intestine motility aspiration biopsy for rectum was performed. Histologically lack of ganglion cells approved rectum aganglionosis (calretin negative). After a positive dynamics of enteral feeding and good ileostomy function, stomas closure was planned. Before operation laparoscopic biopsy was indicated with concerning's about rectum aganglionosis. Histologically in results described normal intestine innervation, and no any signs about Hirschsprung's disease. Reconstructive operation was planned.

Conclusions: In Hirschsprung's disease the affected segment lacks ganglion cells which aid in normal peristalsis. Without these ganglion cells, normal peristalsis is lacking, resulting in a functional obstruction. A case report shows that volvulus, necrotizing colitis can be acute manifestation of undiagnosed Hirschsprung's disease or complication of intestine malrotation. The determination of diagnosis and further histological investigation of intestine is important for further treatment.

4. OCULODENTODIGITAL DYSPLASIA: SYNDACTYLY TYPE III IN THREE UNRELATED LITHUANIAN PATIENTS

Author: Kamilė ŠIAURYTĖ, 5th course, Faculty of Medicine, Vilnius University

Supervisors: Aušra MATULEVIČIENĖ, Loreta CIMBALISTIENĖ, Birutė BURNYTĖ, Laima AMBROZAITYTĖ (Centre for Medical Genetics at Vilnius University Hospital Santaros Klinikos; Department of Human and Medical Genetics, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University); Raimonda MEŠKIENĖ (Centre for Medical Genetics at Vilnius University Hospital Santaros Klinikos); Vaidutis KUČINSKAS, Algirdas UTKUS (Department of Human and Medical Genetics, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University)

Introduction: Syndactyly is a common feature of more than 300 hereditary syndromes and it provides additional assistance in the differential diagnosis of these disorders. The term "syndactylies" covers a group of anomalies, in which digits fail to separate completely. Syndactylies are classified as cutaneous or osseous, complete or partial, and isolated or syndromic. In syndactyly type III (SDIII), a complete and bilateral syndactyly between the 4th and 5th fingers is observed. This malformation is characteristic digital anomaly in oculodentodigital dysplasia (ODDD), which is caused by heterozygous mutation in the GJA1 gene on chromosome 6q22. It is a rare autosomal dominant syndrome, presenting with a set of typical features and demanding specific medical care.

Aim of the study: To emphasize certain aspects of differential diagnosis and management of syndactylies.

Materials and methods: Three unrelated Lithuanian patients with molecularly confirmed ODDD, who show classic manifestations of SDIII, are reported in this presentation. A girl, now aged 10, a boy, now aged 9, and a girl, now aged 2, with typical features of ODDD exhibit bilateral epicanthus, prominent columella, hypoplastic alae nasi, and enamel hypoplasia. The first two have scarring on fingers of both hands after cutaneous SDIII corrective surgery (performed at the age of 6 months and 4 years, respectively), and the girl (aged 2) has cutaneous SDIII, which has not yet been corrected. Sanger sequencing was applied as a method of genetic assay.

Results: Molecular genetic analysis of the coding sequences of GJA1 (NM_000165.4, NP_000156.1) identified pathogenic variants c.412G>A (p.Gly138Ser) for the first, c.75G>T (p.Trp25Cys) for the second, and c.338T>C (p.Leu113Pro) for the third case.

Conclusions: SDIII is characteristic to ODDD specifically. Surgical treatment is usually necessary for this kind of malformation and is aimed at maintaining or improving function and appearance of the hand. The successful surgical correction of syndactyly greatly depends on the nature of digital involvement and on the right timing: cutaneous syndactyly surgery might be delayed until the child reaches 12-18 months, however, osseous syndactyly requires an early intervention before 6 months of age.

5. CASE REPORT: ISOLATED FALLOPIAN TUBE TORSION DUE TO HYDROSALPINX IN PEDIATRIC PATIENT

Authors: Rokas TRAINAVIČIUS, Matas MONGIRDAS, 5th course, Vilnius University

Supervisor: Kęstutis TRAINAVIČIUS, The Children's Hospital, Affiliate Of VUH Santaros Klinikos

Background: Isolated fallopian tube torsion due to hydrosalpinx is a rare cause of abdominal pain in adolescent patients. The incidence in reproductive age women is 1:1 500 000. Only few cases have been reported of isolated fallopian tube torsion caused by hydrosalpinx in pediatric patients. The clinical manifestation is non-specific and usually diagnosis is set during diagnostic laparoscopy

Case report: We present the case of 11-year-old virgin girl, presented with acute lower right-sided abdominal pain. No specific symptoms were identified. Ultrasound showed an elongated cystic mass, measuring 80 mm in length and 15 mm width in the pelvic cavity. Hydrosalpinx of the right fallopian tube was suspected. The patient was scheduled for a laparoscopic operation, during which an enlarged and twisted fallopian tube was found. Detorsion and puncture was performed. The postoperative course was uneventful. The patient was discharged on the 6 postoperative day and sent for further observation.

Conclusions: Isolated fallopian tube torsion is very rare in adolescent patients and it can be often misdiagnosed. Although uncommon, isolated fallopian tube torsion should be included in every case of abdominal pain differential diagnosis.

6. SOLITARY RENAL CYST WHICH IMITATED HYDRONEPHROSIS

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Supervisor: Dr. Vytautas BILIUS. Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos

Background: Simple solitary cysts of the kidney, mostly reported in adults, are very rare in children. The cause of simple kidney cysts is not fully understood, but they do not appear to be inherited. Some studies showed that there was only 0.007% solitary renal cyst among babies' ultrasound at their birth and that kidney cysts are extremely rare between birth and 20 years. Simple kidney cysts usually do not cause symptoms, however, they may cause pain in one's side, back, or upper abdomen if they enlarge and press on other organs. They may bleed, become infected, causing fever, chills or other signs of infection. Unlike simple solitary cysts, hydronephrosis is one of most common secondary condition that results from some other underlying disease. It occurs more often, about 1 case per 100 babies.

Case report: During a prophylactic ultrasound test, a healthy one-and-a-half-year-old boy's left kidney was found to be dilatated and looked like hydronephrosis. He was referred to Vilnius University Santaros Clinics for further tests and the final diagnosis. Ultrasound and intravenous urography indicated distension and dilation of the renal pelvis and calyces of the left kidney, which is a common sign of hydronephrosis. The medical team have decided to make an operative treatment due to kidney damage. To their amazement no signs of hydronephrosis were found, the cause was a simple 10 centimetres solitary cyst, which imitated hydronephrosis. Marsupialization with pyelostomy was performed with excellent result. The child was sent to postoperative care.

Conclusions: This case illustrates that even ultrasound and intravenous urography shows all indications for hydronephrosis, we cannot reject other, rarer pathologies. Furthermore, a prophylactic ultrasound kidney check-up is a good method for diagnosing early congenital kidney diseases in children.

PEDIATRIC SESSION

ORAL PRESENTATIONS

1. THE REASONS WHY PARENTS FIRST SEEK HELP AT THE EMERGENCY DEPARTMENT OBSERVATION UNIT (EDOU) IN CHILDREN'S CLINICAL UNIVERSITY HOSPITAL

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Supervisor: Ilze GROPE, associate professor at Riga Stradiņš university, Children's Clinical University Hospital, Latvia

Introduction: Every day parents seek help at the EDOU due to their children's health issues, but only in about 20% of cases they actually need hospital treatment, otherwise help of a GP could be enough. This causes overcrowding at the ER, where parents and their children are waiting for a consultation of a pediatrician. The staff is busy and overworked due to the lower priority patients and the focus is shifted from those with a higher priority needs. It causes frustration and anger with the healthcare system from all parents and patients.

Aim of the study: To clarify possible reasons why parents prefer to seek hospital help.

Materials and methods: This prospective study was carried out in 2017 by a random survey of parents and their children (n=300 patients), who have received a lower priority (yellow, green, white) in the sorting process of EDOU, whose condition is more stable in comparison with higher priority (orange, red). Statistical analysis was performed using MS Excel.

Results: A total of 300 pairs of parents and their children (age 0-17) were surveyed. 53% (157) of parents came to the hospital without any referral from a GP or ambulance. The mean duration of illness at the hospital visit was 1.3 days (min-1; max -90). 41% (123) of the parents had not contacted their GP during this particular illness, and 64% (192) had not seen the GP prior to coming to the hospital. The most common reasons for not going to the GP were: in 45% (85) – GP does not work in this hour/date; 46% (87) "other" reasons (GP is on a sick leave, GP is not a pediatrician etc.) in 13.8% (26) parents thought they could handle this on their own. The most common reasons for coming to the Emergency department were: 45% (134) sudden deterioration; 35% (104) hospital provides more examinations, analysis and specialist consultations within a shorter time period; 19% (57) no improvement following GP recommendations. On a scale of 1 to 10 (1- the worst, 10-the highest) parents rated their trust in GP as an average of 7.8 (mode 9, median 8, min 1, max 10), trust to the hospital as 8.7 (mode 9, median 9, min 1, max 10) and the communication with their GP as 8.3 (mode 10, median 9, min1, max 10). 19% (57) of all patients were hospitalized, 81% (243) were classified as primary care patients and sent to home.

Conclusions: The majority of questioned parents (53%) prefer to seek the hospital help according to the higher hospital trust level comparing to GP (despite

their trust in GP (8)). The results underline the disadvantages in primary health care system in the field of child healthcare.

2. CHILDREN AND ADOLESCENTS DELIBERATE SELF-POISONING IN VILNIUS CITY CLINICAL HOSPITAL CHILDREN REANIMATION AND INTENSIVE CARE UNIT

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Supervisor: Doc.dr. Odeta KINČINIENĖ, Vilnius University Faculty of Medicine, Clinic of Children Diseases

Introduction: Adolescent alcohol or drugs intoxication is a growing problem with serious consequences. According to the Lithuanian Institute of Hygiene, statistics of death causes in 2016 show that about 20% of 10-19 year old adolescents in Lithuania die by suicide. ESPAD report in 2015 revealed that 87% of adolescents in Lithuania tried alcohol and 20% - drugs, while European countries average is lower (80% of alcohol, 18% of drugs). According to a study based in Lithuania, in 2009 7,3% of 15-17 year old adolescents poisoned themselves with medicines.

Aim of the study: to evaluate deliberate self-poisoning peculiarities and circumstances between two groups: I – self-poisoning with aim to get inebriated, II - with clear aim of suicide.

Materials and methods: The retrospective study that includes patients aged <18, with deliberate acute self-poisoning by medicaments, drugs or alcohol, hospitalized between 2014 and 2016 was performed in Vilnius city clinical hospital PICU. I and II groups were compared according to sex, age, season of intoxication, severity of intoxication (GCS), used substances, other self-harm.

Results: 390 registered cases were analysed, 34 patients were readmitted. In the I group there were 305 (78,21%) cases, in the II group - 85 (21,79%) cases. Gender distribution in the I group: 62% boys and 38% girls ($p<0,05$), in the II group - 13% boys and 87% girls ($p<0,05$). In group I the dominant season was winter (31,2%) and spring (30,9%) in group II. The severity of intoxication was compared by scores of GCS: in group I the average score was 11,46 (SD 2,7) and 13,42 (SD 2,2) in group II ($p<0,05$). In the majority of cases in group I the cause of intoxication was alcohol 72,8%, the second cause – drugs 22,7%. In the majority of the cases in group II the main cause of intoxication were medications 88,9%. Most commonly used medications were benzodiazepines 43%, second - NSAID 32%. Other self-harm made up: 14% in I group, 66% in II group ($p<0,05$).

Conclusions: Girls are more likely to self-poison with aim of suicide, and boys - to get inebriated. Mostly adolescents attempt suicide in spring, 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. Most common used medications to commit suicide were benzodiazepines.

3. INTUSSUSCEPTION: COMMON DIAGNOSIS WITH AN UNCOMMON PRESENTATION

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Supervisor: Asist. prof. Reinis BALMAKS MD, Children's Clinical University Hospital

Background: Intussusception occurs when a portion of the alimentary tract is telescoped into an adjacent segment. It is the most common cause of intestinal obstruction between 5 months and 3 years of age and the most common abdominal emergency condition in children under 2 years old. In typical cases, there is sudden onset of severe colicky pain in a previously healthy child. Other common symptoms are vomiting, normal stool for first few hours, then reducing in size until no defecation. Stool can also contain red blood and mucus. In approximately 70% of cases oblong mass can be palpated in the abdomen. But sometimes those common symptoms can occur later or are absent, which can lead to a totally different differential diagnosis.

Case report: Two previously healthy unrelated children presented to the emergency room via an ambulance. Patient Z (7 months old, male) was hospitalised in severe condition with reduced level of consciousness (Glasgow Coma Scale — 6) and sudden heart rate drop requiring admission to the Paediatric Intensive Care Unit. Computer tomography scan of the head demonstrated no abnormality. Diagnosis of intussusception was made by palpation of abdominal mass and ultrasound scan. Patient L (2-year-old, male) presented lethargic after having had liquid stool and little bit of fresh blood from rectum. He also had emesis in ER and he had positive meningeal signs. Lumbar puncture did not confirm meningitis, however intussusception was discovered on abdominal ultrasound.

Conclusions: Altered mental status as primary presenting symptom is not common in cases of intussusception. These cases demonstrate that intussusception should be considered as differential and emphasise the need for thorough clinical examination in child with low level of consciousness.

4. ROBERTSONIAN TRANSLOCATION (21;21) IN A DOWN SYNDROME: A REPORT OF TWO RARE CASES

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Supervisors: Beata ALEKSIŪNIENĖ, Aušra MATULEVIČIENĖ, Birutė BURNYTĖ, Algirdas UTKUS, Centre for Medical Genetics at Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania; Department of Human and Medical Genetics, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

Background: Down Syndrome (DS), also known as trisomy 21 is the most common chromosomal abnormality affecting approximately 1 in 800 live births worldwide. About 3% of cases of DS occur due to Robertsonian translocation which may be caused by transmission from carrier parent or may appear de novo. We report two rare cases of Robertsonian translocation (21;21) with different physical features and medical problems associated with DS.

Case report: A 6-month-old boy was referred to our department due to poor weight gain, low muscle tone and distinct dysmorphic features: cutis marmorata, muscle hypotonia, flat face, downslanted palpebral fissures, hypoplastic earlobe, palmar creases, fifth finger clinodactyly, hypertelorism and sandal gap. The second patient was a 4-day-old boy with inflammatory changes, thrombocytopenia and distinct dysmorphic features: downslanted palpebral fissure, epicanthus, depressed nasal bridge, low-set ears, low umbilical ring position and sandal gap. An abdomen and a cranial ultrasound were normal. Heart ultrasound showed a patent foramen ovale. Chromosome analysis of G banded metaphase chromosomes from blood cultures revealed an abnormal karyotype with Robertsonian translocation 46,XY,der(21;21)(q10;q10),+21 in both patients. Chromosome analysis of parents confirmed de novo origin of the translocation.

Conclusions: Robertsonian translocation is a chromosomal abnormality with an incidence of 1,21 in 1000 live births most commonly caused by translocation (14;21) whereas, other types of translocations are very rare cause of the syndrome. The evaluation of the origin of confirmed translocation in the family helped to offer direct risk assessment of DS in the family.

1. CASE REPORT: DIFFERENTIATION OF UNDIFFERENTIATED NEUROBLASTOMA AFTER CHEMOTHERAPY

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Supervisor: Dr. Kęstutis TRAINAVIČIUS, Vilnius University Santaros Clinics

Background: Neuroblastoma is a tumor, which arise from primitive sympathetic ganglion cells that originate from the neural crest. It is the third most common childhood cancer and the most common solid extracranial tumor. The median age at diagnosis is 17.3 months and the incidence rate is approximately 9.5 cases per million children.

We report a case of an undifferentiated neuroblastoma in the retroperitoneal cavity of a 3-year-old child. Chemotherapy by LINES protocol was initiated. After 3-months, histology of excised tumor transformed to differentiated neuroblastoma.

Case report: 3-year-old girl, presented with abdominal pain and loss of appetite. On examination deformed, bloated, painful abdomen and firm mass in the left lumbar region was noted. Abdominal sonography showed heterogeneous retroperitoneal mass with clear margins and stasis in the left kidney. Urinary Homovanilic acid level was raised (157.8, normal limits <25.0 mg/g creatinine). Urinary Vanillylmandelic acid level was raised (93.9, normal limits <16.0 mg/g creatinine). CT of the abdomen disclosed a large, heterogeneous, contrast positive pelvic mass from several fused nodes and multiple calcifications, partially obstructing S1/S2 canal (88x69x75 mm) and additional left paravertebral node (33x28 mm) at L4, L5 height. Tumor biopsy showed poorly differentiated neuroblastoma with less than 5% differentiated neuroblasts. Amplification of N-MYC gene was negative. Trepanobiopsy from hip bones showed no evidence of metastatic disease. Patient was diagnosed with stage 2L (INRGSS), inter-mediate risk undifferentiated neuroblastoma. Chemotherapy was started following LINES protocol. After 3 months MRI showed no significant tumor changes. Patient had surgery and whole tumor was removed. Histology evaluation of the excised tumor revealed a differentiated neuroblastoma with more than 5% differentiated neuroblasts.

Conclusions: Although there are similar cases reported in literature, undoubtedly it is still a rare finding for malignant neuroblastoma to differentiate to a benign ganglioneuroma.

2. VENTRICULAR TACHYARRHYTHMIAS FOLLOWING BLUNT THORACIC TRAUMA

Author: Agata NEDELKO, 5th course, Medical Faculty of Vilnius University

Supervisors: Vilija ČERNIAUSKIENĖ, Žaneta DRIŽIENĖ, Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos

Background: An important complication of blunt thoracic trauma is serious cardiac problems. According to different data sources, the incidence of blunt cardiac injury (BCI) after blunt thoracic trauma is about 4.6%. BCI may manifest as a new arrhythmia with or without hemodynamic compromise. Ventricular fibrillation and sudden cardiac death as a result of a blunt, and often apparently innocent, chest wall blow is known as commotio cordis. Commotio cordis is one of the main causes of the sudden death in young athletes.

Case report: We present 3 cases of blunt thoracic trauma followed by life threatening ventricular rhythm disturbances. All three patients (two – previously thought being healthy, one – with known heart disease) were admitted to the hospital because of the ventricular tachyarrhythmia (VT) following after a blow to the chest wall. After further investigation (ECG, Holter's monitoring, MRI, genetic testing) various electrical and structural changes of the heart were revealed.

Conclusions: VT can be a serious complication of the blunt thoracic trauma. The outcome of the trauma may depend not only on the hit strength, but also on the preexisting heart conditions.

3. DIAGNOSTIC CHALLENGES OF RECURRENT PNEUMONIA CAUSED BY GASTROESOPHAGEAL REFLUX IN CHILDREN

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Supervisor: Dr. Violeta RADŽIŪNIENĖ**,** Clinic of Children's Diseases, Faculty of Medicine, Vilnius University

Background: Recurrent Pneumonia (RP) is diagnosed when there are 2 or more episodes of pneumonia in 12 months or 3 episodes over any time frame with radiographic clearance of densities between episodes. Children with recurrent pneumonia pose serious diagnostic issues. Analysing these children is challenging: close attention to the history is needed, as well as extensive examination. Wide range of disorders including cystic fibrosis, immunodeficiency syndromes, congenital abnormalities of the respiratory tract, aspiration syndrome or gastroesophageal reflux can cause RP. Accurate and well-timed diagnosis is a key to ensure that proper treatment is provided while also minimising the risk of irreversible or progressive lung damage. We aim to prevent delayed diagnosis by implementing systemic approach by differentiating possible causes of RP.

Case report: We present the case of a 6 year-old girl who came to hospital complaining of fever, dyspnea, cough, and abdominal pain. The patient had a history of 5 episodes of pneumonia, the first at age 3 and the most recent 5 months before admission. Complete Blood Count showed neutrophilic leukocytosis. A plain chest radiograph demonstrated bilateral polisegmental pneumonia. Abdominal ultrasound and Computed tomography of the chest were without changes. Tuberculosis Skin Test and Sweat tests were negative. Bronchoscopy showed left side purulent endobronchitis. Microbiology analysis of bronchoalveolar lavage fluid presented incremental growth of Moraxella catarrhalis and Streptococcus alfa – heamolyticus. Finally, it was decided to perform videoesophagogastroduodenoscopy. It revealed erosive reflux esophagitis A and gastroesophageal reflux disease (GERD). The GERD treatment using Omeprazole and Ranitidine was started for 2 months. The girl did not complain of any symptoms during this treatment but six months after the end of the treatment pneumonia recurred again. Thus it can be pressumed that the GERD treatment is an effective measure to prevent RP in this case. Scientific research on usage of this method is lacking, however.

Conclusions: RP is a diagnostic challenge requiring a complex set of measures to identify a cause of it. This case provides a basis for further studies about preventing RP among children.

4. OUTCOME OF WILMS TUMOUR IN CHILDREN TREATED AT VILNIUS UNIVERSITY HOSPITAL SANTAROS KLINIKOS, LITHUANIA

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Supervisors: Rolanda NEMANIENĖ, MD, Children Oncohematology Center, Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania; Jelena RASCON, MD, PhD, Children Oncohematology Center, Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania

Introduction: Renal tumours in children comprise approximately 7% of all childhood cancers. Wilms tumour (WT) is the most common childhood abdominal malignancy accounting for 90% of cases, with an average annual incidence of 1 in 100,000 children. With current multimodal treatment, approximately 80-90 % of children with WT survive.

Aim of the study: To assess current diagnostic approach and treatment results of patients with WT treated at the Center for Pediatric Oncology and Hematology of Children's Hospital, Affiliate of VULSK and to compare the results the previously published study.

Materials and methods: A retrospective analysis of patients records was performed. Patients with WT registered at the institutional database were enrolled. Patients data were retrieved from paper and electronic patients records (when available). Totally we identified 48 children diagnosed and treated for WT from 2000 to 2017 at our institution. We analyzed the prevalence of patients by age, sex, stage of the disease, clinical presentation at the diagnosis and histological type, implying classification of the cases into the risk groups: low, intermediate, high. An estimated 5-year overall survival by stage and risk groups was calculated IBM SPSS v.20 work package.

Results: Among the 48 cases, girls were more frequently affected than boys. The most common patients' age at the time of diagnosis was 2-4 years (52%). The most frequent symptoms were pain (48%), fever (33%), palpable abdominal mass (30%), abdominal swelling (28%). At the time of diagnosis stage I was found in 37,5%, II in 25%, III in 25% and IV in 12,5% of children. Risk groups according histological type were distributed as follow: 15% were considered as low risk, 77% were intermediate risk and 8% were high risk. The overall 5-year survival of all analysed children was 86,4%. The 5-year OS according to the stage was 100% in stage I, 91.7% in stage II, 81.8% in stage III, 50% in stage IV. With regard to the risk group the 5-year OS was 100% in low risk group, 90.9% in intermediate risk group, and 25% in high risk group.

Conclusions: We conclude that WT was diagnosed at early stages in most cases. The survival depends on the stages at the time of diagnosis and the risk group –

OS was better among the patients diagnosed in earlier stages and with favourable risk group.

5. P. AERUGINOSA COLONIZATION IMPACT ON PULMONARY FUNCTION AND INFLAMMATORY MARKERS IN CHILDREN WITH CYSTIC FIBROSIS

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Supervisor: Lecturer Violeta RADŽIŪNIENĖ, Clinic of Children's Diseases, Faculty of Medicine, Vilnius University

Introduction: Cystic fibrosis (CF) is an inherited disorder that causes severe damage to the lungs, digestive system and other organs. Pulmonary disease or infection could accelerate CF condition. Therefore it is important to research their interactions and preserve pulmonary function as long as possible.

Aim of the study: The purpose of this study is to identify P. aeruginosa (PsA) colonization significance to pulmonary function and inflammatory markers in children with CF.

Materials and methods: 22 patients 5-18 years old with CF from 'Vilnius City Clinical Hospital's Clinic of Children Diseases' were enrolled in this study from January 2015 to October 2017. The pulmonary function was measured with spirometry test during ambulatory care visits and hospitalizations. Spirometry measurements included forced volume vital capacity (FVC) and forced expiratory volume in one second (FEV1). The information about PsA colonization were collected and markers of inflammation (C-reactive protein (CRP) and white blood cell (WBC) count) were measured during hospitalizations.

Results: FVC and FEV1 at the time of hospitalization depend on PsA colonization (p-value 0,012 and 0,043), but there was no difference between groups during ambulatory care visits (p-value > 0,05). Carriers of PsA have higher number of WBCs than non-carriers respectively 12,11 ± 4,25 * 109/L and 8,44 ± 1,67 * 109/L (p-value 0,027).The carriers have also significantly (p-value 0,028) higher CRP levels (13,67±6,42mg/L) than the patients without PsA colonization (4,23 ± 1,61 mg/L).

Conclusions: The physicians should pay attention to PsA colonization because it may cause exacerbations of CF. Decreasing of lung function in children with CF might be slowed down if PsA infection will be diagnosed early and adequate treatment will be prescribed.

6. DELETION IN 8Q22.2Q22.3 AND ITS CLINICAL CHARACTERISTICS

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Supervisor: Neringa BUROKIENĖ, MD PhD, Clinic of Internal Diseases, Family Medicine and Oncology, Faculty of Medicine, Vilnius University.

Background: There are very little known data about deletion in 8q22.2q22.3. Only 6 cases with the deletion involving 8q22.2q22.3 were described worldwide. In this case, we present clinical and molecular data of three years old patient who has been diagnosed with the deletion mentioned above.

Case report: The girl was born on 1st of August 2014. It was the 2nd pregnancy and 2nd delivery. Growth retardation (2-3 weeks) was observed in the 32nd week of gestation. She was born full-term during vaginal birth without complications. Her weight was 2670 grams (below 3rd percentile), height – 50 cm (at 25 percentile), head circumference – 32 cm (below 3rd percentile). Diagnosis after birth: Congenital hypotrophy, hip dysplasia.

Three weeks after birth she was hospitalised due to a runny nose, dyspnea and perioral cyanosis. Thrombocytosis, lymphocytosis, patent foramen ovale, signs of bronchitis in the chest X-ray, laryngomalacia, both side hip dysplasia, congenital foot stoop out and radioulnar synostosis were confirmed after laboratory and instrumental tests.

Three months after birth a geneticist consulted the patient. The conclusion: karyotype 46,XX, no changes in the number of chromosomes and no significant structural abnormalities have been identified, a molecular karyotyping was indicated. Molecular karyotyping by SNP (single nucleotide polymorphism) microarray identified the deletion in 8q22.2q22.3. Real-time PCR analysis of the proband and her parents confirmed the deletion only in the proband and revealed its de novo origin. The deletion involves ZNF706, SNX31 and ABRA genes.

According to the literature, this deletion is associated with hearing impairment, progressive external ophthalmoplegia, developmental retardation and epilepsy. That is why regular neurologist, otorhinolaryngologist and ophthalmologist care, also a psychologist, speech therapist, physiotherapist and ergotherapist consultations would be expedient for this patient.

Conclusions: The most modern genetic analysis let us identify many rare mutations like deletion in 8q22.2q22.3. Clinical and molecular findings emphasize the importance of interdisciplinary communication and modern tests.

7. MEDIA USE AND SLEEP. A SYSTEMATIC LITERATURE REVIEW

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Supervisor: Rūta PRANINSKIENĖ, MD, PhD, Children's Hospital, Affiliate of Vilnius University Hospital Santariškių Clinics, Vilnius, Lithuania

Introduction: Insufficient sleep, delayed sleep-wake behavior, and sleep disturbances are common among youth and adolescents around the world. Electronic media have often been considered to have a negative impact, but there are no comprehensive reviews of research in this area. It have investigated the relationship between sleep and electronic media in school-aged children and adolescents, including television viewing, use of computers, electronic gaming, and/or the internet, mobile telephones and music.

Aim of the study: To describe the impact of media content, timing, and use behaviors on child sleep.

Materials and methods: I performed a systematic literature search in MedPub for original scientific research publications about screen time and sleep. I used the following keywords to conduct the search „media use AND sleep", „screen time AND sleep", „media AND sleep", „computer AND sleep", „phone AND sleep", "television AND sleep" and "video game AND sleep." I reviewed 36 studies published from 1999 to 2016.

Results: There is a significant association between screen time and reduced sleep duration and increased sleep problems, across a range of screen types and sleep outcomes in 90% of the studies. Some of the results varied by type of screen exposure, age of participant, gender, and day of the week.

Conclusions: Many variables have been investigated across these studies, although delayed bedtime and shorter total sleep time have been found to be most consistently related to media use. And youth should be advised to limit or reduce screen time exposure, especially before or during bedtime hours to minimize any harmful effects of screen time on sleep and well-being. It is important for parents, educators, policy makers, and scholars to work on designing, implementing, and evaluating messages and interventions. That might reduce harmful forms and timing of screen exposure and analyzing the consequences for sleep and wellbeing for children and adolescents.

NEONATOLOGY SESSION

ORAL PRESENTATIONS

1. N. PERONEUS DAMAGE AS A COMPLICATION OF BIRTH INJURY

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Supervisor: Ilze MELDERE, Riga Stradins University, Children`s Clinical University Hospital, Neonatal intensive care unit, Latvia

Background: Neurologic injury during labor and delivery may occur because of traction, compression or vascular injury. Compression or traction on a nerve can result in compromised perineural blood flow and resulting ischemia, which can cause focal demyelination and conduction block. N. peroneus injury due to compression during the labor is a rare condition (0,92%) and typically associated with an instrument-assisted delivery or prolonged time spent in a certain position, also clinician applied traction may be the cause of injury. N. peroneus injury may result in foot drop and diminished sensation on the dorsum of the foot. Most of the nerve injuries spontaneously resolve, but in more serious cases it can cause permanent impairment of nerve function.

Case report: A male infant born as second twin at 25th week of gestation. During the delivery, internal rotation and fetal extraction behind the right upper leg was made. Primary resuscitation was performed after birth. The patient had an edema, extensive subcutaneous hematomas on the right hand, corpus and legs, especially on the right leg. Due to infant`s condition, patient was moved to Children`s Clinical University Hospital`s NICU. During the first day, cyanosis and necrosis marked out on the right foot and toes. Diagnosis of thrombosis was considered, which threatened with amputation of right leg but was not made due to patient`s settled condition. In period of month discrepancy in size reduction of right leg was detect, as well as contracture of ankle joint and internal rotation of right leg was discovered caused by n. peroneus damage. Right foot correction was started with cast immobilization, it was interrupted due to progressing edema of the right upper leg and foot. Correction and stabilization was continued with orthosis.

Conclusions: Internal rotation and extraction can be traumatic and cause n. peroneus injury during the delivery.

2. OPITZ-FRIAS SYNDROME: A CASE REPORT

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Supervisor: MD Ilze MELDERE, Children's Clinical University Hospital, Riga, Latvia

Background: The Opitz-Frias syndrome is a rare congenital midline malformation syndrome diagnosed on the basis of clinical findings. It is characterized by laryngotracheoesophageal abnormalities, hypertelorism, hypospadias, imperforate anus and developmental delay. Molecular genetic testing is difficult due to the complicated etiology.

Case report: A ten-day old male infant was referred to Children's Clinical University hospital (CCUH) with right sided pneumonia and esophageal fistula suspecta. He was born at the 39th gestation week by a Caesarian section due to the uterine scar after first labor. Apgar score 8/9. Examination reveals severe respiratory insufficiency, no swallowing movements, salivation. Massive, thick mucus suctioned from upper respiratory tract. Ectopic anus, hypospadia, hypertelorism also remarked. At the age of twelve days transferred to the CCUH ICU with the diagnosis of traheoesophageal fistula, ectopic anus. Sigmostoma duplex was made. Videobronchoscopy and EGDS reveals congenital laryngeal anomaly, tracheal cleft, anomaly of bronchi and tracheal bronchomalacia. In a CT scan no posterior wall of trachea and anterior wall of esophagus are differentiated. Tracheal cleft type IVa confirmed. Due to the rare congenital pathology, consilium was called to decide further tactics. The operation planned in Finland, Helsinki (no previous operations of this kind has been done in Latvia). Karyotyping and FISH 4q was performed; a normal male karyotype (46, XY) was reported and Opitz-Frias syndrome was suspected. No chromosomal abnormalities reported. At 2-months of age a tracheal cleft closure in cardiopulmonary bypass and tracheostomy was performed in Helsinki. Discharged from the hospital 2 months after operation– prolonged stay due to the opiate abstinence, complex care, tracheobronchomalacia, oxygen dependency, feeding difficulties.

Conclusions: The fenotype of the infant matches criteria for Opitz-Frias syndrome. It is a rare pathology, which demands complex care because of the tracheostoma and sigmostoma, several operations and increased risk for hospital-acquired infections.

3. ADDISON CRISIS DUE TO SALT–WASTING FORM OF CONGENITAL ADRENAL HYPERPLASIA (CAH)

Author: Rūta VOSYLIŪTĖ, 5th course, Faculty of Medicine of Vilnius University.

Supervisor: Dr. Robertas KEMEŽYS, Children's Hospital, Affiliate of Vilnius University Hospital Santaros Clinics.

Background: CAH is a group of inherited genetic disorders that affect synthesis of adrenal gland hormones. CAH salt–wasting form is the most common form and can lead to Addison crisis. A newborn screening program (17-hydroxiprogesterone (17-OHP) measurement) in Lithuania was introduced in 2015 to recognize CAH early.

Case report: A 3510 g, 50 cm length male infant was delivered at 40 weeks of gestation. Blood for newborn screening program was taken and the patient was released home on postnatal day 2. Test determined 17-OHP level was increased more than 30 times. Parents were immediately informed and endocrinologist consultation was scheduled at an age of 2 weeks, but the patient did not arrive. Few weeks later ambulance brought a 15 days old infant to a hospital due to paleness and flaccidity. Hypotrophy (3200 g), marbled skin was observed. After endocrinologist consultation CAH with Addison crisis was suspected and electrolytes, pH, hormonal tests were prescribed. 15 hours since arriving to hospital the newborn condition began to deteriorate, SpO2 90-93 %, bradycardia (60-80 bpm), hyperkalemia (9.5 mmol/l), hyponatremia (114 mmol/l), metabolic acidosis (pH=7,289; HCO3=12,8 mmol/l; SBE=-12,5) was established. The patient was transferred to neonatal intensive care unit. Ventricular extrasystoles, couplets, ventricular permeability disorder were observed in electrocardiogram, therefore cardiologist prescribed 10% calcium gluconate, furosemid and Sol. NaHCO3 i/v. Based on hormonal test results: ACTH >1250 ng/l (<46 ng/l), 17-OHP 7165,9 nmol/l (1,5-9,1 nmol/l), Cortisol 971,1 nmol/l (64-327 nmol/l), endocrinologist diagnosed CAH salt–wasting form with Addison crisis and prescribed hydrocortisone (10 mg / 15 min. → 25 mg / d. → 20 mg / d. i/v) and fludrocortisone (0,1 mg 1 time / d. p/o) treatment. Due to positive dynamic, hydrocortisone and fludrocortisone doses were reduced and patient was transferred to infant unit 3 days later. Recommendations for hormonal therapy were given and the patient was released home at 1 month age.

Conclusions: Though 1/15000 infant in the world has CAH salt–wasting form, newborn screening program is necessary in addition to prevent Addison crisis and deaths of infants.

1. THE CHANGE IN THE TREATMENT OF CONGENITAL DIAPHRAGMATIC HERNIA IN LITHUANIA

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Introduction: Congenital diaphragmatic hernia (CDH) occurs in 1 of 2000-3000 live births. Mortality due to the CDH reaches 40-62%.

Aim of the study: To determine the prevalence of congenital diaphragmatic hernias in Lithuania from 1990 to 2015 and to examine the changes in their diagnosis and treatment.

Materials and methods: First of all data collected for the years 1990 to 2015: congenital diaphragmatic hernia (CDH) frequency and mortality from CDH. The prevalence of CDH was compared with the European Perinatal Health Reports (EURO-PERISTAT 2010). Retrospectively analyzed newborn case-history, born in 1992-1996 (I gr.) and 2011-2015 (II gr.) and was treated at the VUL SK branch at the Children's Hospital Neonatology Center. All newborns with CDH from Lithuania are being operated here. Estimated arrival time, objective condition on arrival, operation time and tactics, prescribed medication treatment. Data is processed by MS Excel and SPSS 20.0 programs, when the statistical significance condition is $p < 0.05$.

Results: From 1990 to 2015, 33.3% increased the number of diagnosed CDH. Newborn mortality during this period decreased by 53.5%, mortality due to the CDH -33.3%. The prevalence of CDH in 1000 live births: 1990-0.07, 1995-0.1, 2000-0.26, 2005-0.03, 2010-0.11, 2015-0.19. The prevalence was compared to the data of EURO-PERISTAT 2010, this indicator was 0.21. Group I consisted of 14 cases, group II-21. Average arrival date (in days): I- 8, II - 2. Average day of operation execution I-13, and II-4. Antibiotic therapy is for I-92%, II-100%. Most commonly, gentamicin (I-64%, II-76%) and penicillin (I-0%, II-76%) were used. Bed-days average :I-35, II-19 days. 79% of cases in I group were given for donor blood infusion, II-5%. In both groups, mechanical ventilation (100%) was assigned in all cases.

Conclusions: 1. As a result of improved diagnostics, the number of CDH cases per 1000 live births in Lithuania in the period from 1990 to 2015 is increasing. As a result of the improvement in treatment, mortality due to CDH decreases between 1990 and 2015. 2. Comparing the data for the years 1992-1996 and 2011-2015, newborns from 2011-2015 were previously diagnosed and operated injecting drug use. Despite the heavier and more unstable condition, the number of bed-days was lower, changing the tactics of treatment.

2. INFLUENZA INFECTION IN NEONATE: A CASE REPORT

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Background: Influenza is an infectious disease caused by Influenza virus. It is common among children but very rare among infants younger than 6 months-old. Infant studies during epidemics have shown that most of newborn influenza infections are asymptomatic. For infants who present with symptoms, the most common are sudden fever and upper respiratory tract infection. However, sometimes the clinical signs of Influenza infection may be non-specific and misleading.

Case report: A 4 weeks-old newborn was hospitalized for the erythematous merging rash localized in palms and feet and swollen ankles, knees and wrists. He also presented with increased nasal secretion. From the birth a baby often backs up breast milk and has not gained any weight. Both of the parents were infected with viral upper respiratory tract infection 3 weeks ago. The doctors suspected food allergy and prescribed oral Clemastin 1,5 ml once a day. Since the treatment did not give any improvement and even worsen the erythematous rash and swelling, the viral infection was suspected on the basis of anamnesis and clinical signs. Influenza type A was confirmed by laboratory findings. Treatment with Oseltamivir was started right away and revealed its efficacy after the first dose.

Conclusions: This case highlights the need for a detailed and careful clinical and laboratory assessment in newborns who often present confusing symptoms.

3. EVALUATION OF BENEFIT FROM RESPIRATORY SYNCYTIAL VIRUS (RSV) INFECTION IMMUNOPROPHYLAXIS IN HIGH RISK INFANTS

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Introduction: It is known that there is no effective treatment for RSV – associated lower respiratory tract infections (LRTI) in young children (Caballero M.T.et al, 2017). RSV immunoprophylaxis with monoclonal antibody is the only way to prevent serious LRTI for infants of the risk groups (Prais D. et al., 2016).

Aim of the study: The aim of this study was to reveal the results of RSV immunoprophylaxis and evaluate the benefit of immunization between immunised infants.

Materials and methods: There were evaluated 86 infants in 2014 – 2015 RSV season in Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos. Indications for immunization were as follows: a) gestational age (GA) <29 weeks, age at the start of immunization <1 year; b) GA 29–30 weeks + 6d., age at the start of immunization <6 months; c) bronchopulmonary dysplasia (BPD), age at the start of immunization <1 year; d) hemodynamically significant congenital heart disease (HS CHD), age at the start of immunization <1 year; e) other indications concluded by the consillium. There was collected data about the immunization and hospitalization rates and performed a descriptive analysis.

Results: There was immunized 78 (90,7%) premature infants and 8 (9,30%) full term infants; the average GA of premature infants – 28,6 weeks (range: 24 – 36 weeks). The 69,77% of all newborns were immunized completely, 30,23% do not received 1 or more dose of immunoprophylaxis. Indications for immunization were as follows: a) prematurity ≤30 weeks + 6 d. – 59 infants (68,6%); b) BPD - 13 premature infants (15,12%), average GA – 27,8 weeks (range: 25 – 32 weeks); c) HS CHD – 12 newborns (13,95%), average GA – 37 weeks (range: 33 – 41 weeks). 10 neonates (11,63%) were diagnosed with lower respiratory tract infection, 8 of them (9,3%) were hospitalised; the etiology of RSV was confirmed in 2 cases (2,33%). This result is alike with the results published in the literature of other countries (Simon A. et al., 2011; Mitchell I. et al., 2011).

Conclusions: The RSV immunoprophylaxis is beneficial in prevention of severe lower respiratory tract infections for newborns and young infants. Infants of the risk groups have a significant reduction in the risk of RSV-associated hospitalization with the use of immunoprophylaxis (Morris S. K. et al., 2009).

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