



University
Children's Hospital
of Latvia



RĪGA STRADIŅŠ
UNIVERSITY

Final programme and abstracts

The 12th Conference of the Baltic
Association of Paediatric Surgeons

May 17-19, 2012, Riga, Latvia

UDK 616

The 12th Conference of the Baltic Association of Paediatric Surgeons: Conference
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Organizers:

Baltic Association of Paediatric Surgeons (BAOPS)
Rīga Stradiņš University
Latvian Association of Paediatric Surgeons
Lithuanian Association of Paediatric Surgeons
Estonian Association of Paediatric Surgeons
University Children's Hospital

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International Organizing Committee:

Aigars Petersons (Latvia)
Vidmantas Barauskas (Lithuania)
Matis Martson (Estonia)

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Dear Colleagues and Friends,

*We are here for the 12th Conference of the Baltic Association of Paediatric Surgeons.
It is a great pleasure to welcome all of you in Riga.*

Riga, the capital of Latvia and the geographical centre of the Baltic region, is situated on the crossroads between Eastern and Western Europe, Russia and Scandinavia. Its favourable position has fostered the development of the city.

Since ancient times the name of Riga has been well known because Riga was a member of the Hanseatic League. From a small Liv village Riga grew into a famous export port of Eastern Europe. Foreign invaders have always been tempted to conquer Riga, yet, the city quickly recovered after the destructive wars.

Riga is named after the Ridzene or Riga River, which once flew through the town and discharged into the Daugava River. In the year 2001 Riga celebrated its 800 year anniversary.

The city is famous for its architecture and culture, its skilled labour force and well-developed infrastructure. Riga is not only the backbone of economy of Latvia, but also the centre of science and education. Various cultural events, international exhibitions, scientific conferences and seminars held in Riga every year serve as good evidence of this.

We hope you will enjoy Riga and get better acquainted with its history, architecture and culture.

We wish you all a highly productive meeting as well as a memorable stay in Riga.

Aigars Petersons

President of BAOPS,

Chairman of the Organizing Committee

Organizers

Baltic Association of Paediatric Surgeons (BAOPS)
Riga Stradiņš University
Latvian Association of Paediatric Surgeons
Lithuanian Association of Paediatric Surgeons
Estonian Association of Paediatric Surgeons
University Children's Hospital

International Organizing Committee

Aigars Petersons, Riga, Latvia
Vidmantas Barauskas, Kaunas, Lithuania
Matis Martson, Tallinn, Estonia

Local Organizing Committee

Aigars Petersons, Chairman
Arnis Engelis, Vice-Chairman
Aleksandrs Zakis
Janis Dobelis
Zane Abola
Inese Svekle
Inguna Stirbovica
Janis Upenieks
Valts Ozolins
Mohit Kakar
Ilona Berzina

Conference Venue

The Conference Venue is Radisson Blu Daugava Hotel, Riga (Kuģu str. 24, Riga)

Invited Lecturers

Devendra Gupta (India)
Michael Hollwarth (Austria)
Pascal de Lagausie (France)
Goran Lackgren (Sweden)
Andrew Pinter (Hungary)
Risto Rintala (Finland)
Klaus Schaarschmidt (Germany)
Jurgen Schleef (Italy)
Juan Tovar (Spain)
Zacharias Zachariou (Switzerland)

Conference Language

The language of the conference is English.
Translation into Russian is provided at request.

Oral Presentations

The time for oral presentation is 6 minutes and 4 minutes for discussion. Slides, overhead and multimedia projectors are available. If specific programmes are needed for demonstrating certain applications (sound applications, video applications), information should be provided in advance. Each presentation will be installed locally on our server. The deadline for handing in the presentation disc is one hour before the session. Laptops are not accepted in the congress rooms. Please, download your presentation to USB memory stick or CD.

Poster Presentations

Posters will be displayed during all the conference time. They can be mounted May 18, 09.00 and dismounted May 19, 12.00.

Poster size: 0.90 m x 1.20 m.

Exhibition

An exhibition of pharmaceutical products and surgical equipment will be arranged. It will be held in the entrance hall of the conference centre.

Name Badge

All registered delegates are requested to wear their name badge when attending sessions, meals and social events. In case of emergency, please, call Dr. Kakar Mohit, Secretary of the Congress (+371 28769660).

Coffee Breaks and Lunch

Refreshments and coffee will be served in the exhibition area during breaks. Lunch will be served on the 1st floor of the **Radisson Blu Daugava Hotel**.

Programme for Accompanying Persons

Excursion for Accompanying Persons – May 18th, 2012

10.00–12.00 Bus excursion to **Art Nouveau architecture** and **Old Riga** (departure from the **Radisson Blu Daugava Hotel**)

12.30–13.30 Lunch in **Restaurant “LIDO”**

13.30 Departure for **Rundale Palace**

14.30–16.00 Excursion in **Rundale Palace**

16.30 Departure for the **Radisson Blu Daugava Hotel**

Price for other interested persons – EUR 100.

Registration Fees (EUR)

<i>Participants</i>	250
<i>BAOPS Members</i>	200
<i>Residents</i>	100
<i>Nurses</i>	100
<i>Accompanying Persons</i>	150

The Fee cover

For participants, residents and nurses: participation in the sessions, the conference welcome reception and gala dinner. For accompanying persons: the sightseeing tour including lunch, the conference welcome reception and gala dinner.

Acknowledgement

The Conference organization is supported by the ERDF Project “Promotion of International Cooperation Activities of Riga Stradiņš University in Science and Technologies”, agreement No. 2010/0200/2DP/2.1.1.2.0/10/APIA/VIAA/006: programme/abstracts, certificates, coffee-tea breaks, lunch, conference venue.

Payments

All payments should be made in Euro (EUR) or in Latvian Lats (LVL).

1 EUR = 0.7028 LVL.

Payment can be made at the time of registration.

Cancellation Policy

Registration fees are not refundable.

Insurance

Please, make your own insurance arrangement in respect of health, travel, cancellation and damage or loss of property.

Conference Secretariat

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PROGRAMME FOR PAEDIATRIC SURGEONS

May 17, 2012 – Thursday

14.00–18.30

REGISTRATION

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

20.00–22.00

WELCOME RECEPTION

*(In the Museum of the History of Riga and Navigation, Old Riga, Riga Dom ensemble,
Palasta Street 4, Riga)
Dress code: informal*

May 18, 2012 – Friday

08.00–17.00

REGISTRATION

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

08.30–09.00

OPENING OF THE CONFERENCE

*WOFAPS President-Elect Gupta D.K. (India)
EUPSA President-Elect Zachariou Z. (Switzerland)
BAOPS President Petersons A. (Latvia)*

09.00–11.00

NEONATAL SURGERY

Chair persons: Gupta D.K. (India), Nemilova T. (Russia)

09.00–09.30

ESOPHAGEAL REPLACEMENT IN CHILDREN
Gupta D.K. (India)

09.30–10.00

LUNG SURGERY IN CHILDREN – THE MINIMAL INVASIVE APPROACH (INDICATIONS,
TECHNIQUE, LIMITS)
Schleef J. (Italy)

10.00–10.10

O.1. TREATMENT OF LIVER MASSES IN NEWBORNS AND INFANTS
Nemilova T., Karavaeva S., Kotin A., Borisova N., Golubeva M.. (Russia)

- 10.10–10.20
O.2. TREATMENT AND POSTNATAL OUTCOME IN NEONATES WITH GASTROSCHISIS:
INFLUENCE OF ANATOMICAL TYPES
Canarelli J.P., Borrego P., Haraux E., Mercier A., Leke A. (France)
- 10.20–10.30
O.3. PARENT ASSESMENT OF THEIR CHILDREN'S STATE OF HEALTH AND COSMETIC
EFFECT AFTER CORRECTION OF GASTROSCHISIS
Varik K., Mannik P., Varik I., Kirsimagi U. (Estonia)
- 10.30–10.40
O.4. PLATELETS COUNT IN NEWBORNS WITH NECROTIZING ENTEROCOLITIS
Shakhov K., Pereyaslov A., Kolivoshka Y., Sheremeta O., Mandzyuk R. (Ukraine)
- 10.40–10.50
O.5. ROLE OF INFLAMMATORY MEDIATORS IN DIAGNOSIS OF NEC
Meldere I., Abola Z., Tretjakovs P., Petersons A. (Latvia)
- 10.50–11.00
O.6. TREATMENT OF TRACHEOESOPHAGEAL FISTULA
Gudaviciute M., Gurskas P., Trainavicus K., Strupas S., Mickeviciene L. (Lithuania)
- 11.00–11.30
COFFEE BREAK
- 11.30–13.00
THORACIC AND MINIMAL ACCESS SURGERY
Chair persons: Schaarschmidt K. (Germany), Engelis A. (Latvia)
- 11.30–12.00
PECTUS EXCAVATUM: THE NUSS PROCEDURE (COMPLICATIONS AND RESULTS)
Hollwarth M. (Austria)
- 12.00–12.30
20 YEARS OF ENDOSCOPIC PAEDIATRIC SURGERY IN BERLIN BUCH (1991–2011)
Schaarschmidt K. (Germany)
- 12.30–12.40
O.7. MINIMALLY INVASIVE METHOD OF SURGICAL TREATMENT OF FUNNEL CHEST
DEFORMATION IN CHILDREN
Yakimova S., Kirghizov I., Alexandrov A., Dudarev V. (Russia)
- 12.40–12.50
O.8. VIDEOTHORACOSCOPIC TREATMENT OF PURULENT PLEURITIS IN CHILDREN
Vakulchyk V. (Belarus)
- 12.50–13.00
O.9. SURGICAL OUTCOME AFTER CORRECTION OF THE AORTIC COARCTATION IN
NEONATES AND INFANTS
Ozolins V., Ligere E., Lacis A., Smits L., Lubaua I. (Latvia)

13.00–14.00

LUNCH

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

14.00–15.30

ABDOMINAL SURGERY AND COLOPROCTOLOGY

Chair persons: Rintala R., (Finland), Barauskas V. (Lithuania)

14.00–14.30

SURGERY OF BILIARY TRACT IN CHILDREN

De Lagausie P. (France)

14.30–14.40

O.10. EXPERIENCE OF SURGICAL TREATMENT IN CHILDREN WITH GERD
COMPLICATED BY CHRONIC ASPIRATION SYNDROME

Dzilavyan M., Kirghizov I., Shishkin I, Alexandrov A.

(Russia)

14.40–14.50

O.11. CLINICAL FACTORS PREDICTING UNSUCCESSFUL CONSERVATIVE
TREATMENT AND INDICATING ANATOMIC REASON OF INTUSSUSCEPTION IN
CHILDREN

Malcius D., Kurlaviciute S., Pankratjevaite L., Barauskas V. (Lithuania)

14.50–15.00

O.12. TERMINAL ILEUM ANASTOMOSIS: HOW CLOSE TO THE ILEOCAECAL VALVE IS
TOO CLOSE?

Baglaj M., Rysiakiewicz K., Patkowski D. (Poland)

15.00–15.10

O.13. ONE – TROCAR TRANSUMBILICAL LAPAROSCOPIC ASSISTED
APPENDECTOMY (TULAA) IN CHILDREN

Polivavicius J., Gemanaitė L., Trainavicius K., Strumila A., Jatkauskas E. (Lithuania)

15.10–15.20

O.14. OPEN AND LAPAROSCOPIC APPENDECTOMY IN CHILDREN WITH
COMPLICATED APPENDICITIS: WHAT IS BETTER?

Troshkov O., Pereyaslov A., Bobak A., Dvorakevych A. (Ukraine)

15.20–15.30

O.15. IS DETERMINATION OF CRP NECESSARY IN DIAGNOSTIC OF ACUTE
APPENDICITIS?

Azarau Y., Vakulchik V., Rachkouskaya I. (Belarus)

15.30–15.45

COFFEE BREAK

15.45–17.15

UROLOGY AND COLOPROCTOLOGY

Chair persons: Lackgren G. (Sweden), Pinter A. (Hungary)

15.45–16.15

19-YEARS EXPERIENCE WITH THE ENDOSCOPIC TREATMENT WITH *DEFLUX* OF CHILDREN WITH HIGH GRADE VESICoureTERAL REFLUX. SAFETY AND EFFICACY IN THE LONG-TERM

Lackgren G. (Sweden)

16.15–16.45

LONG TERM OUTCOMES OF HIRSCHSPRUNG'S DISEASE IN ADULTS

Rintala R. (Finland)

16.45–16.55

O.16. RESULTS AFTER CORRECTION OF DISTAL HYPOSPADIAS

Ardelean M.A., Kubarsepp V., Schimke C., Varik K. (Austria, Estonia)

16.55–17.05

O.17. INFERTILITY INDICATORS IN THE BIOPSIES FROM UNDESCENDENT TESTES IN BOYS OF DIFFERENT AGES

Kutanovaite O., Bilius V., Verkauskas G., Puzinas A., Dasevicius D. (Lithuania)

17.05–17.15

O.18. ACUTE SCROTUM SYNDROME IN CHILDREN: TREATMENT AND RESULTS

Kakar M., Zviedre A., Engelis A., Svekļis J., Laizans P., Petersons A. (Latvia)

19.30–23.30

CONFERENCE GALA DINNER

(House of the Blackheads, Old Riga, Ratslaukums 7, Riga)

Dress code: formal

May 19, 2012 – Saturday

09.00–10.30

PAEDIATRIC TRAUMA

Chair persons: Zachariou Z. (Switzerland), Hollwarth M. (Austria)

09.00–09.30

LIVER INJURIES AND EMBOLIZATION

Zachariou Z. (Switzerland)

09.30–09.40

O.19. PAEDIATRIC VASCULAR INJURIES: OUR EXPERIENCE IN AMIENS

Ricard J., Haraux E., Gouron R., Borrego P., Buisson P. (France)

09.40–09.50

O.20. MANAGEMENT OF PAEDIATRIC BURNS IN SOUTH-EAST ENGLAND: AN EVIDENCE BASED APPROACH BASED ON HEALING TIME

Smith M., Kishikova L., Cubison T. (UK)

09.50–10.00

O.21. EVALUATION OF FUNCTIONAL AND VISCOELASTIC PARAMETERS IN CHILDREN AFTER DIAPHYSEAL FOREARM FRACTURES

Upenieks J., Petersons A., Villerusa A., Kurmina E. (Latvia)

10.00–10.10

O.22. THE ROLE OF THE MRI IN THE DIAGNOSIS AND TREATMENT OF THE PELVIC OSTEOMYELITIS

Martson M., Rebane I. (Estonia)

10.10–10.40

COFFEE BREAK

10.40–12.10

ONCOLOGY

Chair persons: Tovar J. (Spain), Schleef J. (Italy)

10.40–11.10

SURGICAL TREATMENT OF NEUROBLASTOMA

Tovar J. (Spain)

11.10–11.20

O.23. THYREOIDECTOMY IN CHILDREN: 18 YEARS SINGLE INSTITUTION EXPERIENCE

Baglaj M., Gerus S., Dorobisz U., Wlkiera B. (Poland)

11.20–11.30

O.24. PHEOCHROMACYTOMA IN CHILDREN: SINGLE CENTRE EXPERIENCE

Pereyaslov A., Dvorakevich A. (Ukraine)

11.30–11.40

O.25. ADRENOCORTICAL CARCINOMA IN CHILDREN: THREE CASES

Simanauskiene E., Posiunas G., Verkauskas G. (Lithuania)

11.40–11.50

O.26. OCCURRENCE OF MALIGNANT TUMOURS OF THE ABDOMINAL CAVITY IN TARTU UNIVERSITY HOSPITAL

Varik K., Dmitrieva N., Mikkel S. (Estonia)

11.50–12.00

O.27. IS LITTORAL CELL ANGIOMA OF THE SPLEEN REALLY SO RARE IN PAEDIATRIC POPULATION?

Matuszczak E., Chyczewski L. (Poland)

12.00–12.10

O.28. SURGICAL TREATMENT OF BONE CYSTS WITH OSTEOGENESIS STIMULATION
IN CHILDHOOD

Sinyuk V., Dudarev A., Sinyuk I. (Russia)

12.10–12.30

COFFEE BREAK

12.30–13.30

VARIES

Chair persons: Ardelean M.A. (Austria), Martson M. (Estonia)

12.30–13.00

PERSPECTIVES ON PAEDIATRIC SURGERY IN EUROPE IN THE 21th CENTURY –
A PERSONAL VIEW

Pinter A. (Hungary)

13.00–13.10

O.29. TWO CENTER EXPERIENCE IN MULTIDISCIPLINARY TREATMENT OF DANDY-
WALKER SYNDROME

Posiunas G., Lukosevicius E., Drukteinienė A., Daugelavicius V., Barauskas V. (Lithuania)

13.10–13.20

O.30. RECONSTRUCTION OF THUMB HYPOPLASIA

Ozols Dz. (Latvia)

13.20–13.30

O.31. FACTORS INFLUENCING PORTAL VEIN FLOW IN PRETERM INFANTS IN THE
EARLY NEONATAL PERIOD

Lukosiute A., Palepaitis A., Uktveris R., Barauskas V., Visciulyte J. (Lithuania)

13.30–13.40

CLOSING OF THE CONFERENCE

BAOPS President Petersons A. (Latvia)

13.50

BAOPS MEMBERS MEETING

14.30–16.00

VISIT TO THE UNIVERSITY CHILDREN'S HOSPITAL OF LATVIA

(Vienibas Gatve 45, Riga)

PROGRAMME FOR NURSES

May 17, 2012 – Thursday

14.00–18.30

REGISTRATION

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

20.00–22.00

WELCOME RECEPTION

(In the Museum of the History of Riga and Navigation, Old Riga, Riga Dom ensemble, Palasta Street 4, Riga)

Dress code: informal

May 18, 2012 – Friday

08.00–13.00

REGISTRATION

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

08.30–09.00

OPENING OF THE CONFERENCE

WOFAPS President-Elect Gupta D.K. (India)

EUPSA President-Elect Zachariou Z. (Switzerland)

BAOPS President Petersons A. (Latvia)

09.00–11.00

SCIENTIFIC SESSION I

Chair persons: Dita Raiska (Latvia), Tatjana Oolo (Estonia)

09.00–09.10

OPENING OF THE NURSES PROGRAMME

Dita Raiska (Latvia)

09.10–09.30

IMPLEMENTATION OF CLINICAL INFORMATION SYSTEM IN THE PAEDIATRIC INTENSIVE CARE

Alita Kuzuma, Inita Sture-Sturina (Latvia)

09.30–9.50

PREPARATION OF THE PATIENT AND FAMILY FOR OPERATION *Triin Kaldoja (Estonia)*

- 9.50–10.10
SPECIFIC ASPECTS OF PERIOPERATIVE CARE FOR DELAYED ANASTOMOSIS IN
ESOPHAGEAL ATRESIA
Kristina Zarina (Latvia)
- 10.10–10.30
AWARENESS ABOUT ACID AND FOLIC ACID PROPHYLAXIS IN ESTONIA
Sire – Liis Haljaste, Kristi Soovik, Natalia Pavlova, Anna Paal (Estonia)
- 10.30–10.45
TRAUMA PATIENTS ATTENDANCE IN THE EMERGENCY DEPARTMENT AND THE
NATURE OF THEIR CARE
Laila Kudrjavceva (Latvia)
- 10.45–11.00
THE ROLE OF PARENTS KNOWLEDGE OF ESOPHAGEAL BURNS CAUSING HAZARDS
FOR CHILDREN
Indra Subača (Latvia)
- 11.00–11.30
COFFEE BREAK
- 11.30–13.00
SCIENTIFIC SESSION II
Chair persons: Dita Raiska (Latvia), Tatjana Oolo (Estonia)
- 11.30–11.50
ELECTRONIC CASE RECORD IN NURSING
Larissa Jaguson (Estonia)
- 11.50–12.10
IMPORTANCE OF NURSES AND PARENTS COOPERATION IN THE CARE OF PATIENTS
BEFORE AND AFTER HYPOSPADIA SURGERY
Agnese Starka (Latvia)
- 12.10–12.30
CARE OF BURN TRAUMA INJURIES IN CHILDREN
Aija Lielnora (Latvia)
- 12.30–12.45
NEONATAL NECROTIZING ENTEROCOLITIS
Olita Lase (Latvia)
- 12.45–13.00
PRECULIARITIES OF PATIENT CARE IN CHILDREN'S NURSING PRACTICE AFTER
EXTREMITY BONE FRACTURES
Inese Gredzena (Latvia)

13.00–14.00

LUNCH

(In the Radisson Blu Daugava Hotel, Kuģu str. 24, Riga)

14.00–15.45

SCIENTIFIC SESSION III

Chair persons: Dita Raiska (Latvia), Tatjana Oolo (Estonia)

14.00–14.15

NURSING CARE ON A PATIENT WITH GASTROSTOMA

Julia Potkina, Lydia Epelbaum (Estonia)

14.15–14.30

SPECIFIC CARE OF CHILDREN AFTER TRAUMATIC PANCREATIC INJURY

Sandra Narnicka (Latvia)

14.30–14.45

NURSING OF THE HYDROCEPHALUS PATIENT WITH EXTERNAL LIQUOR DRAINAGE

Lydia Epelbaum, Kristi Soovik, Erge Ois, Ann Paal (Estonia)

14.45–15.00

TRANSCULTURAL CONCEPT IN NURSING CARE

Sanita Krankale (Latvia)

15.00–15.15

Wound care documentation

Marina Fenin (Estonia)

15.15–15.30

TWO METHODS OF TREATMENT OF SEVERE HEAD TRAUMA

Arta Barzdiņa, Arnita Tomina, Inita Sture – Sturina (Latvia)

15.30–15.45

THE ROLE OF THE NURSING MANAGER IN ENSURING QUALITY NURSING CARE

Tatjana Oolo (Estonia)

19.30–23.30

CONFERENCE GALA DINNER

(House of the Blackheads, Old Riga, Ratslaukums 7, Riga)

Dress code: formal

May 19, 2012 – Saturday

11.30–13.30

**VISIT TO THE UNIVERSITY CHILDREN'S HOSPITAL OF LATVIA
(NURSES PROGRAMME)**

(Vienibas Gatve 45, Riga)

13.30–13.40

CLOSING OF THE CONFERENCE

BAOPS President Petersons A. (Latvia)

POSTER SESSION

From May 18, 09.00 till May 19, 12.00

- PO.1. PREVALENCE OF SURGICAL CONGENITAL ANOMALIES OF NEWBORNS IN LATVIA (2000–2010)
Zile I., Kviluna D., Villerusa A. (Latvia)
- PO.2. RESULTS OF SURGICAL TREATMENT OF ESOPHAGEAL ATRESIA IN CHILDREN
Navasad V., Kovalchuk V., Navasad K. (Belarus)
- PO.3. TREATMENT OF THE TRACHEOESOPHAGEAL FISTULA IN CHILDREN
Troyan V., Grinevich Y. (Belarus)
- PO.4. NEONATAL GASTRIC PERFORATION: REVIEW OF 10 YEARS EXPERIENCE
Bagdzevicius R, Vadluginė D. (Lithuania)
- PO.5. OUR EXPERIENCE IN TREATMENT OF NECROTIZING ENTEROCOLITIS IN INFANTS
Hmelenko A., Kovalchuk V., Hmelenko M., Kovalchuk T. (Belarus)
- PO.6. CONGENITAL HIGH INTESTINAL OBSTRUCTION AND EXTRAORDINARY INTRAOPERATIVE FIND. TWO CASES
Navasad V., Navasad K. (Belarus)
- PO.7. INTESTINAL DYSBACTERIOSIS IN CHILDREN WITH CONGENITAL OBSTRUCTION OF ESOPHAGUS, STOMACH AND DUODENUM
Navasad V., Navasad K. (Belarus)
- PO.8. PURULENT PERICARDITIS IN CHILDREN
Vakulchyk V., Chesnov Y. (Belarus)
- PO.9. TREATMENT OF PLEURAL EMPYEMA IN CHILDREN
Govorukhina O., Makhlin A., Svirsky A. (Belarus)
- PO.10. MORPHOLOGICALLY BASED APPROACH TO THE SURGICAL TREATMENT IN CHILDREN WITH FUNNEL CHEST DEFORMATION
Yakimova Y., Kirgizov I., Talalaev A., Shahtarin A. (Russia)
- PO.11. TWO FATAL CASES OF SPONTANEOUS GASTRIC PERFORATION IN CHILDREN
Malcius D., Trumpulyte G., Barauskas V. (Lithuania)
- PO.12. LAPAROSCOPIC NISSEN FUNDOPLICATION WITH GASTROSTOMY IN NEUROLOGICAL IMPAIRED CHILDREN WITH GERD
Kakar M., Engelis A., Laizans P., Zviedre A., Svekļis J., Petersons A. (Latvia)
- PO.13. RESULTS OF LAPAROSCOPIC REPAIR OF HERNIA IN CHILDREN
Dvorakevich A., Pereyaslov A. (Ukraine)
- PO.14. ONE-PORT LAPAROSCOPIC TREATMENT OF INGUINAL HERNIA IN CHILDREN
Troyan V., Nikulenkov A. (Belarus)
- PO.15. LAPAROSCOPIC UNROOFING PROCEDURE OF HEPATIC CYST (CASE REPORT)
Posiunas G., Strumila A. (Lithuania)
- PO.16. DIAGNOSTIC AND THERAPEUTIC ASPECTS OF PAEDIATRIC PATIENTS WITH ACUTE GASTRIC DILATATION
Aleksejevs G., Petersons A. (Latvia)

- PO.17. ACUTE APPENDICITIS IN EARLY AND PRESCHOOL AGE CHILDREN IN CLINICAL UNIVERSITY CHILDREN'S HOSPITAL OF LATVIA DURING 2000–2009
Shurna D., Engelis A., Petersons A. (Latvia)
- PO.18. CANDIDA – RARE AND DANGEROUS PATHOGEN IN CHILDREN'S PERITONITIS
Malcius D., Barauskas V. (Lithuania)
- PO.19. CHRONIC CALCULOUS CHOLECYSTITIS IN CHILDREN
Vakulchyk V., Hryn A. (Belarus)
- PO.20. MODERN APPROACH TO THE SURGICAL TREATMENT OF PORTAL HYPERTENSION IN CHILDREN
Prudnikova T., Kirgizov I., Senyakovich V. (Russia)
- PO.21. DIFFERENT SURGICAL OVARIAN MASSES IN CHILDREN
Sonmez K., Turkyilmaz Z., Karabulut R., Can B., Kose F., Basaklar A.C. (Turkey)
- PO.22. OVARIAN TORSION
Geimanaite L., Trainavicius K. (Lithuania)
- PO.23. OMENTAL INCARCERATION MAY CAUSE HYDROCELE AND THIS HYDROCELE CONFUSED SIMPLE OR SCROTAL HYDROCELE
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ABSTRACTS

O.1. TREATMENT OF LIVER MASSES IN NEWBORNS AND INFANTS

Nemilova T., Karavaeva S., Kotin A., Borisova N., Golubeva M. (Russia)

OBJECTIVE

To generalize experience in diagnosis and treatment of newborns and infants with liver masses.

MATERIALS AND METHODS

In 2009–2011 there were treated 8 patients (age group: newborns till 9 months) with the following liver masses: hamartoma (2 pts), cavernous haemangioma (1), haemangioendothelioma (2), hepatoblastoma (2), non-parasitic cyst (1). All patients had timely birth. In 6 cases the masses were revealed by prenatal ultrasound in the 2nd–3rd trimesters. These babies were transferred to a surgical unit immediately after birth. In 2 cases there was no prenatal diagnosis and the babies were admitted with clinical manifestation of the pathology. Investigation included ultrasonography, contrast-enhanced multispiral CT, angiography (when needed), serum oncomarker tests, biopsy (when malignant mass was suspected). In several cases the final diagnosis was established on surgery. The type and volume of surgery was chosen according to the diagnosis and spreading of hepatic lesion. An endosurgical selective embolization of feeding vessels appeared to be effective in the patient with cavernous haemangioma. In one case of hepatoblastoma the surgery was limited by biopsy followed by chemotherapy, whereas in the other case a resection of hepatic lobe was performed. We performed selective vessels embolization with a following hepatic lobe resection for patients with haemangioendothelioma. The most “favorable” group of patients included babies with non-parasitic cysts and hamartomas, requiring only removal of masses.

RESULTS

There were no lethal outcomes. All children had a 3-year follow-up period. There was no recurrence of masses.

CONCLUSIONS

Types of liver masses in newborns and infants differ remarkably. Thus, such babies require an individual approach in diagnosis and treatment.

O.2. TREATMENT AND POSTNATAL OUTCOME IN NEONATES WITH GASTROSCHISIS: INFLUENCE OF ANATOMICAL TYPES

Canarelli J.P., Borrego P., Haraux E., Mercier A., Leke A. (France)

OBJECTIVE

Optimal management of neonates with gastroschisis is unclear but prognostic seems to be primarily determined by the degree of bowel injury. We evaluated our experience to determine predictive factors between anatomical types and treatment.

MATERIALS AND METHODS

From 2001 to 2011, we treated 20 neonates with gastroschisis in our center. We retrospectively reviewed outcome measures based on anatomical type, surgical procedure, length of hospital stay (LOS), days of parenteral nutrition (PN).

RESULTS

There was no death in our series. Mean gestational age and birth weight were respectively 35.7 weeks and 2 424g. Eighteen (90%) patients had an antenatal diagnosis, 8 (40%) had few intestinal coating, 10 (50%) moderate coating and bowel dilatation and 2 (10%) major coating and intestinal atresia. The anatomical type was not significantly correlated to the surgical procedure for closure (80% has a primary closure). Median LOS was 45 days and median duration on PN 20 days with no significant difference between the surgical procedure and thus with the anatomical types.

CONCLUSIONS

Outcome in our patients was favorable whatever the anatomical type. Primary repairs should be used whenever possible since it does not increase intra abdominal pressure.

O.3. PARENT ASSESMENT OF THEIR CHILDREN'S STATE OF HEALTH AND COSMETIC EFFECT AFTER CORRECTION OF GASTROSCHISIS

Varik K., Mannik P., Varik I., Kirsimagi U. (Estonia)

OBJECTIVE

Based on parent assessment, to analyse children's state of health, cosmetic result and complaints after correction of gastroschisis, and to compare the results obtained with primary closure and with two-stage closure of the abdominal cavity.

MATERIALS AND METHODS

In the period 1991–2009, 65 children were operated for gastroschisis in Estonia (8 case records were inadequate for completing the questionnaire and 17 children had died). In January 2011, 40 questionnaires were sent to the parents of the children treated for gastroschisis, of which 32 (80%) were returned. The follow-up period was 2–15.6 years (median 5.8 yrs). Among the analysed cases, the abdominal cavity was closed primarily in 21 (65.6%) cases.

RESULTS

According to the parents' assessment, the state of their children was good or very good in 28 (87.5%) cases. The cosmetic effect was good or very good in 16 (50.0%) cases. In later life digestive tract complaints were reported in 15 (46.9%) cases, mostly moderate abdominal pain (8 cases). Nine children were operated later. The development of the children corresponds to age according to BMI. The assessment of the general state of health was significantly better in the case of primary closure compared to two-stage closure of the abdominal cavity, 100% and 63.6% of the cases, respectively ($p=0.0046$). The cosmetic effect was good or very good in 62% of the cases after the primary closure of the abdominal cavity and 27.8% ($p=0.0792$) after the two-stage closure of the abdominal cavity. Regarding digestive tract complaints, there was no difference between primary and two-stage closure, 42.9% and 54.5% of the cases, respectively ($p=0.7891$).

CONCLUSIONS

Based on the parents' assessment, the state of health of the children was good or very good in 50% of the cases. In later life almost half the children had digestive tract complaints. The state of health of the children and the cosmetic effect were better after primary closure of the abdominal cavity.

O.4. PLATELETS COUNT IN NEWBORNS WITH NECROTIZING ENTEROCOLITIS

Shakhov K., Pereyaslov A., Kolivoshka Y., Sheremeta O., Mandzyuk R. (Ukraine)

OBJECTIVE

Improvement of diagnostics and results of treatment of newborns with NEC with different stages of severity.

MATERIALS AND METHODS

The object of our study were 47 infants with NEC. Medium term of gestation was 33±1.4 weeks, medium body weight 1670 ± 325 gr. 23 patients had I-IIa stage NEC, 24 patients had IIb-III stage (classification by Walsh and Kleigman). 24 infants were operated, all with perforated bowel and peritonitis. 5 patients died. All patients had laboratory tests, platelets count was monitored when an infant was admitted to hospital and during different stages of conservative or postoperative treatment. We used as a control group (7) patients with obstructive colitis of different etiology (stenosis or dysganglionoses of large bowel).

RESULTS

Patients with I-IIa stage NEC when admitted to hospital had platelets count at $235 \pm 44 \times 10^9/l$. During conservative treatment on the 3rd-4th day platelets count elevated to $248 \pm 47 \times 10^9/l$ and reached a normal level on the 8-9th day. For patients with IIb-III stage NEC, bowel perforation, platelets count at admission was $187 \pm 38 \times 10^9/l$, it continued to lower to $166 \pm 34 \times 10^9/l$ by the 2nd-3rd postoperative day, and only by the 5-6th day we noticed a moderate constant elevation of platelets (up to $225 \pm 41 \times 10^9/l$), a normal level was reached by the 13-15th postoperative day. In the case of deceased patients the level of platelets did not elevate or the elevation was statistically not accurate, irrespective of the treatment.

CONCLUSIONS

Platelets count in peripheral blood could serve as an additional diagnostic criterion for evaluation of the severity of patient's condition, degree of NEC, prognosis of morbidity and evaluation of the treatment effectiveness.

O.5. ROLE OF INFLAMMATORY MEDIATORS IN DIAGNOSIS OF NEC

Meldere I., Abola Z., Tretjakovs P., Petersons A. (Latvia)

INTRODUCTION

Necrotizing enterocolitis (NEC) is among the most common and devastating inflammatory bowel diseases in neonates. Predisposing factors include prematurity, enteral feeding, infection. Pathogenesis of NEC is still obscure. Cytokine pathway plays an important role in the development of NEC. Various pro-inflammatory cytokines are present in the serum and intestine of infants with NEC, including tumor necrosis factor α ; (TNF- α); interleukin (IL)-1, IL-6, IL-8, IL-10, IL-11, platelet-activating factor (PAF), and nitric oxide (NO).

OBJECTIVE

The aim of the study was to investigate the panel of inflammatory mediators in neonates with NEC.

MATERIALS AND METHODS

It is a prospective study in the Neonatal Intensive Care Unit of the Children's Clinical University Hospital of Latvia. Level of epidermal growth factor (EGF), interleukin (IL)-1 β ; IL-6, IL-8, monocyte chemo attractant protein 1 (MCP-1), interferon-alpha (INF- α ;) were analyzed in the serum of neonates with severe stages of NEC (group I, n=6) and in the control group neonates without NEC (group II, n=8). In group I cytokines were analyzed 4 times: 24 hours after onset of NEC, 48 hours after onset of NEC, 72 hours after onset of NEC and 30 days after onset of NEC. The data were processed using Microsoft Excel 2010 and SPSS for Windows release 19. T-test, Spearman correlation analysis were used as well.

RESULTS

1. In group I (n=6) 20 samples of serum were analyzed; 30% (6) were obtained in NEC stage I, 40% (8) – in NEC stage II, 20% (4) – in NEC stage III. 2 samples of patients with 30 day anamnesis of NEC were collected.
2. Significant rise of inflammatory level in group I – IL-6 and IL-8
3. There were correlations of cytokine levels among NEC stages of IL-6 (rs=0.632, p=0.003), IL-8 (rs=0.712, p<0.001) and IL-10 (rs=0.717, p<0.001).

Cytokine	Group I (n=6)			Group II (n=8)			P value
	Mean (pg/ml)	Min. (pg/ml)	Max. (Pg/ml)	Mean pg/ml	Min. pg/ml	Max. pg/ml	
IL-6	1069,58	1,06	6204,65	1,91	1,60	4,12	0,035
IL-8	830,52	27,56	4119,15	22,63	10,02	41,10	0,007

CONCLUSIONS

- IL-1 β ; and IL-6 showed statistically reliable changes in NEC patients
- Level of IL-6, IL-8 un IL-10 rise accordingly the NEC stage

- The cause of poor reliability of statistical data on the levels of other inflammatory mediators is due to the small groups of patients
- Inclusion of patients in the study should be continued, thus enlarging the study group

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O.6. TREATMENT OF TRACHEOESOPHAGEAL FISTULA

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INTRODUCTION

Tracheoesophageal fistula (TEF) is a congenital or acquired fistula between the trachea and the esophagus. This condition usually leads to severe and fatal complications.

Isolated H-Type tracheoesophageal fistula (H-Type TEF) represents less than 5% of congenital esophageal anomalies. Recurrent fistula after primary repair of esophageal atresia is more common – it appears between 5 and 15%.

OBJECTIVE

To report the experience during the 16-year period of TEF diagnosis and treatment performed at the Children's Hospital, Affiliate of Vilnius University Hospital Santariskiu Klinikos.

MATERIALS AND METHODS

During the 16-year period 5 children with TEF have been managed, 2 of them with H-Type tracheoesophageal fistula and 3 with recurrent fistula after primary repair of esophageal atresia.

RESULTS

The symptoms that appeared were repeated cyanosis during feeding and pneumonia. The diagnosis was established by endoscopy, X-ray with contrast and CT.

All patients were operated: TEF was repaired by separating the trachea from the esophagus by placing muscle between the suture lines by an open cervical approach. For one patient TEF was managed endoscopically using laser, but after recurrence of the fistula one month later, it was also managed by open operation.

CONCLUSIONS

Irrespective of the fact that all children got better, TEF diagnosis and treatment still remains a great problem. One of the most severe complications after TEF plastic suture incontinence is recurrent TEF. It is necessary to place Fogarty catheter across the fistula during endoscopy before operation. In order to prevent recurrent TEF, it is necessary to separate the trachea from the esophagus by placing some type of tissue (pleura, pericardium, a muscle flap) between the suture lines.

O.7. MINIMALLY INVASIVE METHOD OF SURGICAL TREATMENT OF FUNNEL CHEST DEFORMATION IN CHILDREN

Yakimova S., Kirghizov I., Alexandrov A., Dudarev V. (Russia)

OBJECTIVE

Operations performed to patients with funnel chest deformation (FCD) are traumatic and demand long postoperative rehabilitation. The aim of the study was optimization of surgical treatment of FCD in children and teenagers, development of a new miniinvasive way of surgical treatment of FCD.

MATERIALS AND METHODS

Investigation and treatment of 28 children, aged from 3 till 17 years, with FCD of the II–III degree was carried out. Previously for the purpose of surgical correction of FCD there was used the Nuss method, or opened thoracoplasty with installation of nikelid-titanic plates with a self-regulated compression (metal with memory) in children aged 3–10 years, or titanic plates in children over the age of 10.

RESULTS

The offered procedure represents updating of the above-stated methods. Operational access is carried out by the Nuss technique. Two vertical cuts of skin 3–5 cm in size on a frontaxillary line on the left and on the right at the level of maximum chest retraction are performed with a subsequent formation of a retrosternal tunnel in the obtuse angle through which the metal string at first is installed, which serves as a conductor and to which the nikelid-titanic plate is attached to later. Further on the plate goes through the retrosternal tunnel. In the described modification there is no moment of the plate rotation that considerably reduces traumatization and the risk of damage of an internal and an intercostal neurovascular bunch. The plate is left for 2–3 years.

CONCLUSIONS

The described modification refers to miniinvasive and minitraumatic surgical methods of FCD correction. This method reduces blood loss during operation and traumatization risk of mediastinal organs and intercostal vessels. It allows to reduce the bed rest time and to begin rehabilitation actions for 3–4 days earlier, reducing hospitalisation time. The plate does not limit the growth of thorax. Relapses have not been observed.

O.8. VIDEOTHORACOSCOPIC TREATMENT OF PURULENT PLEURITIS IN CHILDREN

Vakulchyk V. (Belarus)

INTRODUCTION

Purulent pleuritis has been a well-known disease for quite a long time. It became especially topical in the 1960s, when the growth in the number of patients with pleural complications of staphylococcal pneumonia was identified.

OBJECTIVE

To demonstrate the results of thoracoscopic decortications of lungs as a way of treatment of purulent para- and postpneumonic pleuritis in children.

MATERIALS AND METHODS

Within the period 2009–2011 we performed thoracoscopic interventions to 9 children (4 of them were male). The age of the patients was from 22 months to 12 years (mean age 4 years). Duration of illness prior to admission of the child to hospital was 1–10 days (Me = 4.0). The diagnosis of pleuritis was established on the basis of physical data, chest x-ray, USI. The reasons for pleuritis were the following: pneumonia in 8 children, penetrating wound in bronchus in one case. Localized pleuritis was diagnosed in one child, total – in 8 patients. Further tactic was based on the results of the pleural puncture and analysis of received aspirate. Ph, glucose concentration, activity of lactate dehydrogenase were determined, also a bacterioscopy of Gram stained samples was performed. To clarify the extent and complexity of pleuritis a spiral computer tomography was performed.

RESULTS

All the children underwent surgery. During the operation all the adhesions between visceral and parietal pleura were dissected, all abscesses were drained, and interlobular sulci freed. A great amount of fibrin was removed mechanically. In 18–24 hours after the operation instillation of streptokinase solution into the chest cavity was started. Dose of streptokinase was from 32600 up to 100,000 IU/kg of body weight (median Me = 68000).

CONCLUSIONS

The first experience of application of thoracoscopic decortications of lungs in treatment of purulent pleuritis allows recommending it as a method of choice.

O.9. SURGICAL OUTCOME AFTER CORRECTION OF THE AORTIC COARCTATION IN NEONATES AND INFANTS

Ozolins V., Ligere E., Lacis A., Smits L., Lubaua I. (Latvia)

OBJECTIVE

To evaluate the short and long term surgical results of the aortic coarctation (AoCo) repair within the first year of life.

MATERIALS AND METHODS

Analysis of the results after primary AoCo repair in our department within the first year of life during the years 2000–2005 and 2006–2011 and the follow-up data in short and long term (3–140 months follow-up) were done.

RESULTS

In total 82 patients (46 boys, 36 girls) underwent AoCo repair, out of them 62% at neonatal age n=51. 2000–2005 53% neonates (n=15), 2006–2011 67% neonates (n=36) (p=0,004). Diagnosed antenatally in 24%: 2000–2005 11%, but 2000–2011 31% (p=0,032). In both groups – infantile coarctation 82%, hypoplastic transverse arch 16%. AoCo as an isolated pathology in 57 % (n=47), AoCo+VSD 25% (n=20), complex pathology 18% (n=15). The weight at the time of procedure was 4.124+/-1.6kg, the mean age 2000–2005: 63.18+/-64.3days, 2006–2011: 39.69+/-52.4 days, p=0,038. The methods of the correction: anastomosis end-to-end 26% (n=21), subclavian flap aortoplasty (SFA) 61% (n=50), extended anastomosis end-to end 12% (n=10), balloon angioplasty 1% (n=1). There were 6 cases of early postoperative death: 10.7% in the years 2000–2005, 5.5% in the years 2006–2011, 10 cases of late death in both groups. Recoarctation occurred in 15 (22.7% at all ages, and 57% during the first year after the repair), no correlation observed between the methods of correction and later all underwent successful transvascular treatment. There is a correlation between lethal cases and concomitant intracardiac pathology (p=0.002). Arterial hypertension observed in 15% in long term follow-up.

CONCLUSIONS

Infantile aortic coarctation still carries high morbidity and mortality, but early mortality gradually decreases and surgery was performed at an earlier age after the year 2005. Long term mortality is mainly connected with concomitant pathologies. Surgical correction is a treatment of choice in the first year of life.

O.10. EXPERIENCE OF SURGICAL TREATMENT IN CHILDREN WITH GERD COMPLICATED BY CHRONIC ASPIRATION SYNDROME

Dzilavyan M., Kirghizov I., Shishkin I, Alexandrov A. (Russia)

OBJECTIVE

To analyse our experience of surgical treatment for children with GERD, with chronic aspiration syndrome

MATERIALS AND METHODS

We studied 37 children from 0 to 8 years with organic disorders of CNS, causing dysphagia. All children were fed through nasogastral probe before our treatment. 33 children had episodes of aspiration pneumonia 2–3 times a year in spite of the basic treatment. Our main methods of research were: 24 hour pH monitoring, esophagography, esophagogastroduodenoscopy (EGDS).

RESULTS

In 11 cases we had classic signs of GERD on esophagogram. In 30 cases the signs of GER were found out by 24 hour pH monitoring with frequency of refluxes up to 4–56 – 69 times during 24 hours. 7 children had sliding hiatal hernia, EGDS revealed reflux-esophagitis in 19 children.

In 31 cases conservative treatment was not effective. Expressed disorders of CNS required gastrostomy in 35 cases. In 25 cases we also performed laparoscopic fundoplication by Nissen for those children. Analysing the results of operative treatment we had 4 cases of pneumonia and 6 cases of recurrent endobronchitis in 2 years.

CONCLUSIONS

Surgical treatment for children with GERD, with chronic aspiration syndrome, was effective in 73 %. In 27% there were different complications because of the hypodynamia and hypoventilation in children with organic disorders of CNS.

O.11. CLINICAL FACTORS PREDICTING UNSUCCESSFUL CONSERVATIVE TREATMENT AND INDICATING ANATOMIC REASON OF INTUSSUSCEPTION IN CHILDREN

Malcius D., Kurlaviciute S., Pankratjevaite L., Barauskas V. (Lithuania)

INTRODUCTION

Intussusception is one of the most common emergencies of pediatric surgery. Pneumatic reduction under x-ray control (“air enema”) is a treatment of choice in our department, in case of failure surgical treatment is required. In some of the cases there is an anatomical reason of intussusception and surgery is unavoidable.

OBJECTIVE

The aim is to detect clinical factors which can predict unsuccessful conservative treatment and the presence of anatomical reason of intussusception.

MATERIALS AND METHODS

Retrospective analysis of medical records of the patients with confirmed intussusception during last 9 years in the Department of Paediatric Surgery was carried out. Age, gender, hospitalization time and clinical symptoms were compared between two groups – those treated conservatively and operated on. The proportional difference was evaluated by chi-square criterion. Logistic regression method was used calculating odds ratios. Values of $p < 0.05$ were considered as significant.

RESULTS

188 patients were treated in the Department of Paediatric Surgery due to intussusception. Median age was 2 years and 3 months. 64% were boys, 36% – girls, median time before hospitalization – 12 hours. 91% of them had abdominal pain, 48% – vomiting, 26% – palpable tumor, 14% – “currant jelly” stool. 79% were successfully treated conservatively and 21% were operated when conservative reduction was unsuccessful. In 28% of operated patients (6% of total number of patients) the anatomic reason was found – polyp, Meckel’s diverticulum or tumor. “Currant jelly” stool is statistically significant factor for unsuccessful conservative treatment (odds ratio is 3.39 (95% CI 1.19–9.7)). When there was the palpable mass, the odds ratio for the presence of anatomic reason was 3.91 (95% CI 1.05–14.53).

CONCLUSIONS

According to our data, blood in the stool is a predicting factor of unsuccessful conservative reduction and the palpable mass is a predicting factor for the presence of anatomical reason of intussusception.

O.12. TERMINAL ILEUM ANASTOMOSIS: HOW CLOSE TO THE ILEOCAECAL VALVE IS TOO CLOSE?

Baglaj M., Rysiakiewicz K., Patkowski D. (Poland)

OBJECTIVE

Intestinal anastomosis is an integral part of surgical management of terminal ileum pathology. When the distal ileal stump is very short, a surgeon faces a dilemma whether to proceed with a high-risk anastomosis or to perform ileo-colonic anastomosis. A retrospective analysis of results of terminal ileum anastomosis was undertaken in order to evaluate the safety of such procedure in children.

MATERIALS AND METHODS

A review of all children treated between 2000–2011 and requiring terminal ileum anastomosis was undertaken. The patients with extremely short stump of terminal ileum of length less than 4 cm were identified and their clinical data analysed.

RESULTS

Among 22 children included into the study group intestinal atresia, necrotizing enterocolitis, and meconium ileus were the most common pathology. Age of the patients ranged from 2 days to 12 years. Eighteen of them were less than one year of age at final surgical operation. It was performed as emergency procedure in 10 children. Fourteen patients had history of previous intraabdominal operations, including 12 with ileostomy. In 6 children segmental resection of the distal ileum was performed immediately prior to intestinal anastomosis. In 8 patients enteroplasty of the dilated proximal portion of the ileum was carried out. Eight patients underwent elective closure of ileal stomy. The distance between the line of intestinal anastomosis and the ileocaecal valve range from 0.5 cm to 4 cm, being less than 2.5 cm in 10 patients. In all but one patients the postoperative course was uneventful.

CONCLUSIONS

Terminal ileum anastomosis, even in cases of a very short distal intestinal stump, seems to be a safe operative procedure allowing for preservation of the ileo-caecal valve. We suggest that in babies with complicated terminal ileum pathology single end-stomy or Santulli stomy should be considered as a preferable option because of the lowest risk of subsequent ileo-caecal sacrifice.

O.13. ONE – TROCAR TRANSUMBILICAL LAPAROSCOPIC ASSISTED APPENDECTOMY (TULAA) IN CHILDREN

Polivavicius J., Gemanaitė L., Trainavicius K., Strumila A., Jatkauskas E. (Lithuania)

INTRODUCTION

Appendectomy is one of the most commonly performed surgical procedures in pediatric surgery. We present the transumbilical laparoscopic assisted “one-trocar” appendectomy (TULAA) as an alternative procedure for appendectomy and our experiences with this technique.

OBJECTIVE

To review complications of TULAA within the period 2009–2011. To evaluate the rate of open and laparoscopic appendectomies performed during 2009–2011. To evaluate the rate of one and more than one trocar laparoscopic appendectomies.

MATERIALS AND METHODS

A retrospective review of all pediatric patients surgically treated for appendicitis over a 3 year period was performed.

RESULTS

987 appendectomies were performed in 2009–2011. 294 (29.78%) were laparoscopic appendectomies. 111 (37.75%) out of the 294 laparoscopic appendectomies were performed using TULAA technique. Appendicitis acuta phlegmonosa was the most common form in TULAA group (88 cases). In 96 cases of TULAA the age interval was 8–18 years. The most common complications were: rupture or appendix and wound infection.

CONCLUSIONS

Laparoscopic appendectomy was performed in 1/3 of children. 37.75% of all laparoscopic appendectomies were performed using TULAA technique. TULAA is safe and “esthetic” operation and it can be performed in all children age groups.

O.14. OPEN AND LAPAROSCOPIC APPENDECTOMY IN CHILDREN WITH COMPLICATED APPENDICITIS: WHAT IS BETTER?

Troshkov O., Pereyaslov A., Bobak A., Dvorakevych A. (Ukraine)

INTRODUCTION

Mini-invasive surgery has become the gold standard in the management of various surgical pathologies. Irrespective of that, the benefits of laparoscopic appendectomy (LA) remain unclear. LA is not generally recommended as a method of choice for complicated appendicitis.

OBJECTIVE

The goal of this work was to compare the results of open appendectomy (OA) and LA in children with complicated appendicitis.

MATERIALS AND METHODS

823 children with acute appendicitis were operated during the years 2009–2011. Among these patients complicated appendicitis was established in 201 (24.4%) children.

RESULTS

OA was performed in 123 (61.2%) and LA – in 78 (38.8%) children. Duration of OA was 41.6 ± 4.2 min and LA – 48.9 ± 6.7 min ($p > 0.05$). Conversion rate was 10.2% (8 patients). Presence of the dense mass in ileo-cecal zone in 6 patients and retroperitoneal localization of inflamed appendix in 2 children determined the conversion. Postoperative antibiotic treatment was applied in all patients. Intra-abdominal abscesses were noted in 12 (9.8%) patients of the OA group and in 4 (5.1%) patients of the LA group ($p < 0.05$). The wound infection was in 7 (5.7%) of the OA group. The length of hospital stay was shorter in the LA (10.2 ± 2.1 days) than in the OA group (17.3 ± 3.6 days).

CONCLUSIONS

Thus, LA is feasible in children with complicated appendicitis and accompanied by lower frequency of intra-abdominal abscesses formation and wound infection.

O.15. IS DETERMINATION OF CRP NECESSARY IN DIAGNOSTIC OF ACUTE APPENDICITIS?

Azarau Y., Vakulchyk V., Rachkouskaya I. (Belarus)

OBJECTIVE

To determine the diagnostic significance of CRP in acute appendicitis in children.

MATERIALS AND METHODS

Prospective randomized controlled, double-blind clinical study. Inclusion criteria: children with pain in the right lower quadrant of the abdomen. Exclusion criteria: children with obesity. 92 patients (22 male) of the age from 4 to 16 years were examined and divided into 2 groups: the 1st group – the diagnosis of acute appendicitis was excluded (60 children) as a result of dynamic observation (40) or diagnostic laparoscopy (18), in one case appendix was not found at laparoscopy and typical appendectomy was performed (histologically – superficial appendicitis), in one case simultaneous appendectomy was made; the 2nd group – histologically verified diagnosis of destructive appendicitis (32). CRP was determined by turbidimetric method using “SPINREACT” reagents. Statistical processing: nonparametric statistics (median, 25th and 75th percentiles, Mann-Whitney criteria). The diagnostic significance: sensitivity (Se); specificity (Sp); predictive value of negative result (-Pv); predictive value of positive result (+Pv) and other.

RESULTS

A statistically significant difference in the levels of CRP between the children of the 1st and 2nd group was observed. Taking into account the results of the control group, the concentration of CRP 0.006 g/l was taken as the dividing point in the analysis. Se = 0.84; Sp = 0.45; (-Pv) = 0.156; (+Pv) = 0.45. If we accept the concentration of CRP 0.012 g/l as the dividing point, than Se = 0.47; Sp = 0.7; (-Pv) = 0.29; (+Pv) = 0.45 accordingly.

CONCLUSIONS

CRP may not be used as a stand-alone test in the differential diagnosis of acute appendicitis in children.

O.16. RESULTS AFTER CORRECTION OF DISTAL HYPOSPADIAS

Ardelean M.A., Kubarsepp V., Schimke C., Varik K. (Austria, Estonia)

INTRODUCTION

The aim is to evaluate the outcome after correction of distal hypospadias by tubularisation of the urethral plate (TUP).

MATERIALS AND METHODS

166 patients with hypospadias (18 glandular, 101 coronal, 47 penile) corrected by TUP are included in this study. Incision/dissection were started 1–3 cm proximal to the meatus. Dorsal plication was necessary in 15 cases. Reconstruction of the urethra was performed after preserving or obtaining of a wide urethral plate: by Tiersch-Duplay- (TDT) in 24, by Orkiszewski-Snodgrass- in 118 and by “Snodgraft”-technique in 24 patients. In coronal and penile forms the neourethra was covered with a dartos flap. The foreskin was reconstructed in 42 patients.

RESULTS

Fistulas, meatal stenosis, glandular dehiscence and persistent curvature occurred in 9/166 (5.4%) patients. In 11/42 (26%) patients the foreskin was too narrow in 2/42 (4.6%) or dehiscent in 9/42 (21.4%). There were no complications in the TDT group.

The complications were corrected by a second intervention in 16 patients (9 foreskin complications). All patients were followed-up by clinical examination one to 5 years and 38 patients by uroflowmetry and sonography 4 to 5 years postoperatively.

Cosmesis is good in 160 (96%) patients. The maximal flow rates are very good in 15/38 (39.4%) patients with 15–18ml/s, good in 22/38 (57.8%) with 8–15ml/s, poor in 1/38 (2.6%) with <7ml/s. No patient has post-void residual.

CONCLUSIONS

A tension-free closure of a wide and good vascularised urethral plate and a good vascularised dartos flap are the mainstays of successful reconstruction of the urethra. The foreskin reconstruction in hypospadias is demanding.

O.17. INFERTILITY INDICATORS IN THE BIOPSIES FROM UNDESCENDENT TESTES IN BOYS OF DIFFERENT AGES

Kutanovaite O., Bilius V., Verkauskas G., Puzinas A., Dasevicius D. (Lithuania)

OBJECTIVES

To compare the risk of infertility in boys operated for cryptorchidism at different ages.

MATERIALS AND METHODS

24 patients underwent orchidopexy and were subjected to unilateral testicular biopsy in the years 2010–2012. Biopsies were fixed in 2% glutaraldehyde, stained with toluidine blue, sectioned and analyzed by light microscopy at 400× magnification. The number of Ad spermatogonia was assessed. Patients were classified into 3 groups according to their age: I – < 2 years of age, II – 2–5 years of age, III – > 5 years of age.

RESULTS

There were 9 boys in group I, 7 boys in group II, and 8 boys in group III. 19 of the 24 patients had unilateral cryptorchidism and 5 had bilateral cryptorchidism. In the biopsies of 11 (45.8%) patients we found Ad spermatogonia with a count 0.09–0.86 Ad spermatogonia per tubule. Ad spermatogonia were absent in 13 (54.2%) biopsies of cryptorchid boys: 3 boys in group I, 4 boys in group II and 6 boys in group III. Patients with no Ad spermatogonia had a lower tubular density.

CONCLUSIONS

The best results of testicular histology were in group I. These boys had the lowest risk of infertility. The majority of group III were the boys with poor testicular histology and the highest risk of infertility. Earlier detection of patients with increased risk of infertility could prevent irreversible damage of spermatogenesis.

O.18. ACUTE SCROTUM SYNDROME IN CHILDREN: TREATMENT AND RESULTS

Kakar M., Zviedre A., Meiksans R., Engelis A., Sveklis J., Laizans P., Petersons A. (Latvia)

OBJECTIVE

The aim of the study was to evaluate the incidence of acute scrotal syndrome in children of all age groups, diagnosis, new treatment algorithms and outcomes.

MATERIALS AND METHODS

This paper compares retrospective results from 2004 to 2009 with preliminary results from the ongoing prospective study since 2011. Data concerning the diagnosis, clinical symptoms and treatment were reviewed and analyzed using confidence interval (CI) analysis and standard deviation method.

RESULTS

The retrospective group included 377 patients. 285 had torsion of a testicular appendage, 92 patients had torsion of testis. 249 or 66% (CI=61.1–70.6%) had undergone operative therapy. 31 or 8% (CI=5.8–11.4%) patients had testis torsion with necrosis with pre-hospital anamnesis of 12 to 168 hours and had undergone orchectomy. The prospective group included 46 patients. Out of 46 patients 41 or 89% (CI=76.9–95.2%) were operated. 34 had torsion of testicular appendage and 12 patients had testicular torsion. 2 or 4% (CI=1.2–14.5%) patients had testicular necrosis with pre-hospital anamnesis of 12 to 46 hours and orchectomy.

CONCLUSIONS

Our preliminary results reveal that although by increasing the total number of operations in boys with acute scrotal syndrome the incidence of testicular necrosis did not change. In our opinion the focus should be on awareness raising among the public and doctors about this problem with a view to shortening the pre-hospital period and improving the patients' quality of life.

O.19. PAEDIATRIC VASCULAR INJURIES: OUR EXPERIENCE IN AMIENS

Ricard J., Haraux E., Gouron R., Borrego P., Buisson P. (France)

OBJECTIVE

This study evaluated vascular injuries in a paediatric trauma population. The aim of the present project was to investigate the epidemiology, diagnosis and therapeutics modalities used.

MATERIALS AND METHODS

A retrospective review of children treated in our center between 1980 and 2010 for peripheral, truncal vascular and cardiac injuries, included iatrogenic vascular injuries.

RESULTS

During this study period there were 47 vascular injuries identified. The average age was 7.1 years with 68% in males. The mechanism was distributed between cateterism 6/47 (14.8 %), blunt trauma 20/47 (42.5 %), penetrating trauma 3/47 (6. 3%), humeral supra condylar fractures 2/47 (4. 2%), elbow luxation 1 /47 (2. 1 %), deep wound 14/47 (29.7 %).

Overall 21.2 % of patient underwent artériography. The most common were peripheric vascular injuries 59.5 %, abdominal vessels 27.6 %, thoracic vessels 10.6 % and cardiac injuries 4.2%. Amputation was required in 3 patients with peripheral injuries and crush lesion (10.7%)

14.8 % were managed by vascular or thoracic surgeon and 85. 2 % by paediatric surgeons.

CONCLUSIONS

Traumatic paediatric vascular injuries are rare. The most common situation of vascular lesions in our experience was blunt trauma. Actually we use color Doppler scan and CT an-gio scan less invasive in children.

O.20. MANAGEMENT OF PAEDIATRIC BURNS IN SOUTH-EAST ENGLAND: AN EVIDENCE BASED APPROACH BASED ON HEALING TIME

Smith M., Kishikova L., Cubison T. (U.K.)

INTRODUCTION

Burn injuries are capable of inflicting serious harm upon the developing child, with long-term physical and psychological consequences. Evidence shows that healing times of less than 21 days is associated with a lower risk of hypertrophic scarring. Therefore, our current treatment approach is based upon maximising wound healing potential and involves a secondary assessment of burns at 48 hours and implements recent technologies such as LDI scanning and biological dressings. With healing time as a marker of outcome, we attempted to see whether paediatric burn injury outcomes have improved since adoption of this approach.

MATERIALS AND METHODS

We undertook a retrospective cross-sectional case note study examining recent paediatric burn injuries over a recent 6-month period. Information on demographics, treatment and outcome was collected, and compared to a cohort from 2006 published by the senior author.

RESULTS

181 paediatric burn injuries of all aetiologies were examined from the recent cohort (mean age 54 months), in comparison to a cohort of 337 scald injuries from 2006 (mean age 27 months). The proportion of patients developing hypertrophic scarring at set time points after date of injury was higher than previously, likely reflecting the inclusion of burn types other than scalds. However, healing time was reduced compared to the previous cohort, with 75.1% of burns healing in less than 21 days, (vs. 62.0% previously). This was particularly evident at the 10 day point, with 28.2% of patients healing by this time (vs. 16.3% previously). Far less patients had protracted healing times of more than 30 days (11.6% compared to 24.9% previously).

CONCLUSIONS

Implementing a structured approach to paediatric burn management utilising modalities such as LDI and secondary review of burn depth to ascertain most effective treatment can lead to improved healing times, giving a better outcome in terms of hypertrophic scarring.

O.21. EVALUATION OF FUNCTIONAL AND VISCOELASTIC PARAMETERS IN CHILDREN AFTER DIAPHYSEAL FOREARM FRACTURES

Upenieks J., Petersons A., Villerusa A., Kurmina E. (Latvia)

INTRODUCTION

Changes in range of motion (ROM) of elbow and wrist joints after diaphyseal forearm fractures in children reflect the efficiency of treatment. ROM depends on viscoelastic parameters of muscles – tone frequency, elasticity and stiffness.

OBJECTIVE

Evaluation of viscoelastic parameters of muscle, responsible for motion in elbow and wrist joints in children after diaphyseal forearm fractures.

MATERIALS AND METHODS

Two groups of 30 children were selected, aged 7 to 15 years, treated from 2009 to 2010 due to diaphyseal fractures of one or both forearm bones. The first group consisted of 18 boys and 12 girls treated conservatively with closed reduction and plaster immobilization. The second group consisted of 17 boys and 13 girls treated by elastic stable intramedullary nailing (ESIN). The patients were analyzed 6±1 month after the trauma. ROM in elbow and wrist joints was measured using goniometer. Myotonometer Myoton-3 was used for assessment of viscoelastic parameters of 6 muscles in both hands.

RESULTS

In the conservative group >100 reduction of flexion-extension in injured side wrist joint was documented in 15 children, in elbow joint – in 7 children, but 2 children complained of reduced pronation-supination. In the operated children group these numbers were 7; 3 and 1, respectively. No difference in muscle tone frequency was documented in the conservative and surgical patient groups (mean 12.8±3.2 and 13.2±2.7 Hz relaxed, and 14.6±2.1 and 15.1±1.9 Hz contracted, respectively). A similar pattern was displayed of elastic decrement – (mean 1.5±0.1 and 1.6±0.1 relaxed, and 1.7±0.1 and 1.8±0.1 contracted, respectively). Comparing muscle stiffness, mean rates were higher in the operated patients (256±14 and 325±16 N/m relaxed, and 322±24 and 412±21 N/m contracted, respectively).

CONCLUSIONS

Reduction of ROM >100 affects mainly flexion-extension and is significantly higher in non-operated children. Increased muscle stiffness in operated children correlates with less reduction in ROM.

O.22. THE ROLE OF THE *MRI* IN THE DIAGNOSIS AND TREATMENT OF THE PELVIC OSTEOMYELITIS

Martson M., Rebane I. (Estonia)

INTRODUCTION

MRI is stated as the best modality for detection of acute osteomyelitis, particularly of the pelvic bones. MRI is available in Tallinn, but not in our hospital. The difficulties of arrangement of the MRI investigations, particularly on emergency basis, sometimes cause hesitation concerning its necessity.

OBJECTIVE

The aim of the current study is to evaluate the role of MRI in diagnosis of the pelvic osteomyelitis in our hospital.

MATERIALS AND METHODS

Retrospective analysis of paediatric patients with pelvic osteomyelitis treated in our hospital 2004–2011.

RESULTS

10 patients (age 3–15 years) were found in medical records. In 9 of 10 cases MRI investigation was performed. In 5 cases the right diagnosis was confirmed. Two patients (3 and 6 year old) were investigated repeatedly in sedation due to movement artefacts and wrong negative diagnosis at first MRI. Two patients had intrapelvic fluid collections (abscesses?) without bone focuses. The bone involvement was detected at repeated MRI in one case and suspected by findings at surgery in the other case. 4 of 10 patients were treated surgically because of detection of the intrapelvic abscesses at MRI (3 pt) or clinically obvious soft tissue abscess outside the pelvic ring (1 pt). The hospital stay was shorter (14 ± 5 days) in the group of patients treated surgically compared to the group of patients treated conservatively (23 ± 7 days). 4 patients were followed up to 6 months with repeated MRI. Despite the pathological findings on the MRI scan, any changes in the treatment scheme or restriction of the physical activity were not commenced.

CONCLUSIONS

The MRI is valuable for diagnosing pelvic osteomyelitis and planning of surgical treatment, which can lead to rapid improvement and shorter hospital stay. For avoiding the wrong-negative results, the investigation in younger patients must be done in sedation. The role of the MRI in follow up of these patients is doubtful.

O.23. THYREOIDECTOMY IN CHILDREN: 18 YEARS SINGLE INSTITUTION EXPERIENCE

Baglaj M., Gerus S., Dorobisz U., Wlkiera B. (Poland)

OBJECTIVE

Until the mid-1990s Lower Silesia had been regarded as a region of endemic goiter, but since then a better system of iodine prophylaxis has been introduced. The objective was to assess the changing trends in epidemiology of surgical thyroid diseases in children and to examine whether they have influenced potential alterations of the operative strategies during the study period.

MATERIALS AND METHODS

The medical records of all children operated on for thyroid disease between 1993–2010 were retrospectively reviewed. The data regarding the indications for thyreoidectomy, details of surgical management and outcome were collected and analysed in three time periods 1993–1998, 1999–2004 and 2005–2010.

RESULTS

There were 46, 63 and 41 children operated on in the analysed time periods respectively. Preoperative thyroid US showed nodular lesions within the thyroid gland in 145 children (94.7%). The frequency of unilateral and bilateral nodular lesions was basically similar throughout the whole study. There has been a significant decrease of subtotal resections from around 45 % in the first period to less than 10 % in the other two research periods. The reverse trend can be clearly seen with regard to unilateral total lobectomy. Since 1999 total lobectomy or total thyreoidectomy was performed in more than 80% children. Nodular goiter was the most common indication for surgical operation followed by follicular adenoma. When analysed in the selected periods, incidence of nodular goiter and follicular adenoma were 39.1%, 39.1% and 51.1%, and 28.2%, 31.3% and 25.52%. Malignant disease was recorded in 7 children (4.6%).

CONCLUSIONS

A gradual decrease in the number of children with surgical pathology of the thyroid gland seems to result from effective iodine prophylaxis. Depending on the extent of thyroid disease, unilateral lobectomy, either alone or coupled with partial or total resection of the contralateral lobe, should be a standard surgical procedure in children.

O.24. PHEOCHROMACYTOMA IN CHILDREN: SINGLE CENTRE EXPERIENCE

Pereyaslov A., Dvorakevich A. (Ukraine)

ABSTRACT

Among various adrenal tumors, pheochromocytoma caused hazardous arterial hypertension. Attempts to treat arterial hypertension without clear establishing of its etiology lead to the development of serious changes in cardiovascular system with high lethality risk.

This study summarized the results of treatment of 11 children with pheochromocytoma. Unilateral localization of pheochromocytoma was in 10 patients and one patient had extraadrenal localization. All patients were operated: in 4 (36.4%) patients conventional adrenalectomy was performed and in 7 (63.6%) – laparoscopic adrenalectomy.

Except of arterial hypertension, headache (72.7%), palpitation (63.6%), and polyuria (45.5%) were the common symptoms of pheochromocytoma. The hypertensive retinopathy and cardiomyopathy was noted in 3 patients. Elevated level of urinary metanephrine was noted in 9 patients (28.37–59.24 mg/24h) and in the cases of normotensive pheochromocytoma this test had a normal value. Despite the medication, the intraoperative hypertension was noted in 3 patients that required the infusion of sodium nitroprusside. The conventional adrenalectomy was performed through lumbotomy in 3 patients and in one patient with the extraadrenal localization of pheochromocytoma – through transabdominal approach. The laparoscopic adrenalectomy in all patients was performed through retroperitoneal approach. Pathologic features suggestive of benign character of tumor were noted in all patients.

O.25. ADRENOCORTICAL CARCINOMA IN CHILDREN: THREE CASES

Simanauskiene E., Posiunas G., Verkauskas G. (Lithuania)

INTRODUCTION

Adrenocortical carcinoma in children is a rare tumor and comprises 0.2–0.5% of all pediatric malignant tumors.

OBJECTIVE

To analyze our experience of management of this rare and complicated malignancy in children.

MATERIALS AND METHODS

Retrospective analysis of 3 consecutive cases from 2007 to 2010.

RESULTS

All patients were girls: 6 months, 14 and 17 years of age at the time of diagnosis confirmation. Tumors were hormonally active and diagnosed because of symptoms of hormonal hypersecretion. They were stage 2, 3 and 4 at diagnosis. The 17 year old girl had tumor adrenalectomy only, the others underwent adjuvant therapy. The girl with metastatic disease underwent resection of pulmonary metastasis with CW Nd:YAG laser. All patients are alive with 1.5–5 years of follow-up.

CONCLUSIONS

Although the overall prognosis for patients with adrenal carcinoma is poor, with improvement of surgical procedures as well as medical therapy it may improve. Team approach of pediatric surgeon, oncologist and endocrinologist is very important.

O.26. OCCURRENCE OF MALIGNANT TUMOURS OF THE ABDOMINAL CAVITY IN TARTU UNIVERSITY HOSPITAL

Varik K., Dmitrieva N., Mikkel S. (Estonia)

OBJECTIVE

To find out the occurrence and type of malignant tumours of the abdominal cavity in children in TU Hospital during 2001–2011.

MATERIALS AND METHODS

108 primary cases of malignant tumours were diagnosed in the age group 0–19 years, among them the tumour was located in the abdominal cavity in 15 (3.9%) cases. Of the study subjects 8 were boys.

RESULTS

The malignant tumours with location in the abdominal cavity were non-Hodgkin lymphoma (NHL) in 5 cases (33%), nephroblastoma in 3 cases (20%), neuroblastoma in 3 cases (20%), malignant teratoma, alveolar rhabdomyosarcoma and T-cell lymphoma, 1 case (7%) each. According to the NHL histological type, 4 children had Burkitt lymphoma and 1 child had B-large-cell lymphoma. NHL was diagnosed in age 10–14 years, nephroblastoma in age 0–2 years and neuroblastoma in age 0–5 years. The most frequent tumour in boys was Burkitt type NHL (50%) and in girls nephroblastoma (43%). The length of the anamnesis before primary hospitalisation was up to 2 months. The main symptom was abdominal pain (53.3%). Among 8 children with abdominal pain 4 were hospitalised for emergency surgical treatment: 3 children were operated for bowel invagination as the primary diagnosis and 1 child for tumour mass in the ovary region. In the other cases tumour was detected on palpation of the abdomen or on ultrasonography. After confirmation of the histological diagnosis of malignant tumour all children received chemotherapy and surgical treatment according to the protocol. There were 2 (13%) death cases: in the case of neuroblastoma 1 year and in the case of alveolar rhabdomyosarcoma 3 years after the primary diagnosis and complex treatment.

CONCLUSIONS

In boys the most frequent malignant tumour in the abdominal cavity was Burkitt type NHL, which occurred in the age group 10–14 years, and in girls – nephroblastoma, which occurred in the age group 0–2 years. The symptom of tumour was abdominal pain in half the cases. Death occurred in two cases.

O.27. IS LITTORAL CELL ANGIOMA OF THE SPLEEN REALLY SO RARE IN PAEDIATRIC POPULATION?

Matuszczak E., Chyczewski L. (Poland)

INTRODUCTION

Littoral cell angioma (LCA) is a rare primary splenic vascular tumor originating from littoral cells lining the splenic red pulp sinuses. There are only few descriptions of cases of LCA in children in literature.

MATERIALS AND METHODS

The authors performed a retrospective analysis of medical charts of pediatric patients with splenic lesions treated between 2005 and 2010 in the Pediatric Surgery Department covering the population of 300 000 children.

RESULTS

Surprisingly LCA accounted for 37.5% splenic lesions in our series.

CONCLUSIONS

Majority of LCA tumors are benign, but given its malignant potential, splenectomy and long-term follow-up should be a gold standard for its management.

O.28. SURGICAL TREATMENT OF BONE CYSTS WITH OSTEOGENESIS STIMULATION IN CHILDHOOD

Sinyuk V., Dudarev A., Sinyuk I. (Russia)

INTRODUCTION

Bone cysts are one of the most common diseases of the skeleton during childhood and, according to different authors, constitute from 21 to 57% of the bone disease in children. The problem of diagnosis and surgical treatment of bone cysts in children is very topical and requires close attention.

OBJECTIVE

Estimation of the results of treatment of bone cysts in children with osteogenesis stimulation by osteoplasty with growth factors.

MATERIALS AND METHODS

The results of examination and treatment of 29 children aged from 1 to 15 years with degenerative bone cysts were analyzed. The highest frequency of disease – 17 (58.6%) cases – happens between the ages of 11–15 years. Within these cases degenerative solitary cysts were observed in 19 (65.5%) cases, aneurysmal – in 10 (24.5%) cases.

RESULTS

Treatment of patients with bone cysts starts with puncturing of a cyst cavity. We carry out intraosseous pressure measurement to clarify the activity of the process with taking of the cyst content for cytological tests. The cyst cavity is cleansed mechanically with the perifocal detachment of the periosteum. Later the gel-mixture of Chronos (Chronos) with the supernatant of autologic growth factors was injected into the cyst cavity.

CONCLUSIONS

A comparative study of the long-term results of the surgical treatment of bone cysts shows the high efficacy of the surgical treatment of bone cysts with the use of Chronos with the supernatant of autologic growth factors in comparison with the control group, that is evidenced by the increase of good results in 25.5% of cases and reducing of the complications and recurrences in more than 2.5 times.

O.29. TWO CENTER EXPERIENCE IN MULTIDISCIPLINARY TREATMENT OF DANDY-WALKER SYNDROME

Posiunas G., Lukosevicius E., Drukteinienė A., Daugelavicius V., Barauskas V. (Lithuania)

INTRODUCTION

Dandy-Walker syndrome is a rare congenital malformation that involves multiple systems and organs. This malformation is characterized by agenesis or hypoplasia of cerebellar vermis, cystic dilatation of the fourth ventricle, and enlargement of the posterior fossa could also have associated multiple abnormalities.

OBJECTIVE

To present the multidisciplinary treatment results of Dandy-Walker syndrome.

MATERIALS AND METHODS

Imaging, case histories, surgical protocols were analyzed of the patient with Dandy-Walker syndrome.

RESULTS

Diagnosis of Dandy-Walker malformation was made postnatally after a detailed examination in Kaunas. The patient had hydrocephalus, hypoplasia of cerebellar vermis, cystic dilatation of the fourth ventricle, enlargement of the posterior fossa, sternal cleft, tracheomalacia, large bilateral hemangiomas of face and neck, microstomia. At the age of 3 weeks the patient was operated on due to sternal cleft, thoracoplasty was performed. Later the patient was operated on by neurosurgeons, shunting of the fourth ventricle was done. After these corrections in Kaunas, the patient was transferred to the Children's Hospital in Vilnius for further treatment. Steroid therapy was administered for 6 months due to rapidly growing facial hemangiomas. Later multiple laser treatments of hemangiomas by Nd:YAG and pulsed dye laser were performed. Because of microstomia and feeding problems craniofacial surgeon performed oral plastic surgery. Now the patient is socially active, neurologically compensated and has satisfactory cosmetic appearance.

CONCLUSIONS

Despite clear prognosis of Dandy-Walker syndrome, multidisciplinary treatment and teamwork could achieve good results in the treatment of this rare disease.

O.30. RECONSTRUCTION OF THUMB HYPOPLASIA

Ozols Dz. (Latvia)

INTRODUCTION

Congenital hand anomalies are rare – in 0.16%–0.18% of newborns in Latvia. 70% of all anomalies are syndactyls. It can be isolated, when only the thumb is affected, and in 59% of the cases it is associated with radial dysplasia (or radial club, radius dysplasia, longitudinal radial deficiency). 19 200 newborns were registered in Latvia in 2010; it means that we have approximately 30 newborns with hand defects. Thumb hypoplasia is a spectrum of congenital abnormalities of the thumb varying from small defects to complete absence of the thumb. There are five types of thumb hypoplasia, originally described by Muller in 1937 and improved by Blauth, Buck-Gramcko and Manske.

MATERIALS AND METHODS

15 patients were treated in The Centre of Plastic and Reconstructive Microsurgery (CPRM) of Latvia from 2005–2010. All operations were performed in combined anaesthesia: general + peripheral block (wrist or foot block). Type V – 1 patient bilateral, pollicisation in 10 and 11 month of age. Type IV – 3 patients, 1 patient had toe transfer at the age of 10 years, 2 patients had pollicisation. Type IIIb – 3 patients, EIP transfer, nonvascular toe phalange transplant and opponensplastic were done in one operation. KW was inserted for 5 weeks. Type II – 8 patients, EIP transfer was done for all cases. EIP transfer was used to reconstruct EPL and get stability of MCP and IP joints, tendon were sutured around MCP joint and IP joint. First web space deepening was done, if necessary.

RESULTS

All patients got a stable functional thumb. One reoperation was done due to MCP instability. Parents of one patient were dissatisfied with the result.

CONCLUSIONS

Thumb reconstruction is very difficult as the patient needs to have a stable, functional and esthetic thumb. Pollicisation is a method of choice for grade IV and V, but for some patients toe transplantation is better. You have to discuss all possibilities with parents and get strong support before reconstruction.

O.31. FACTORS INFLUENCING PORTAL VEIN FLOW IN PRETERM INFANTS IN THE EARLY NEONATAL PERIOD

Lukosiute A., Palepaitis A., Uktveris R., Barauskas V., Visciulyte J. (Lithuania)

OBJECTIVE

The purpose of this study was to investigate intestinal blood flow and determine the influence of gestational age, birth weight and arterial blood flow on the venous blood flow in preterm infants in the early neonatal period.

MATERIALS AND METHODS

We measured Volume flow (Volfow), Time averaged mean velocity (TAMEAN) in the superior mesenteric artery and portal vein using Doppler ultrasound in uncomplicated preterm infants during the first week of life. Every infant's intestinal blood flow was measured several times (mean=3). We investigated the correlation between arterial and venous blood flow velocity, birth weight and gestational age using IBM SPSS Statistics 20 program. Linear regression model was used to analyze the dependence and prognostic values among the measurements and significance was accepted at $p < 0.05$.

RESULTS

Thirty-five preterm infants with a mean birth weight of 1.043 kg (SD = 0.278) and a mean gestational age of 27.6 weeks (SD = 2.4) were studied. Linear regression model revealed the significant dependence of venous Volfow with birth weight ($p < 0.01$), gestational age ($p < 0.01$) and arterial TAMEAN ($p < 0.01$). Birth weight is the most important prognostic value for the venous Volfow ($\beta; = 0.778$). The results of regression analysis show that with an increase in birth weight by 1 g, the venous Volfow will increase by 0.08 unit. Furthermore, the venous Volfow decreases by 5.9 unit with every week of gestational age. However, we couldn't set an analogical linear regression model for the arterial Volfow.

CONCLUSIONS

Age, birth weight and arterial TAMEAN are the prognostic values for the portal vein Volfow in preterm infants. With increasing age, the portal venous Volfow decreases in the early neonatal period.

PO.1. PREVALENCE OF SURGICAL CONGENITAL ANOMALIES OF NEWBORNS IN LATVIA (2000–2010)

Zile I., Kviluna D., Villerusa A. (Latvia)

INTRODUCTION

There are specific public health indicators recently developed by the European network for the surveillance of congenital anomalies in newborns and one among them is common surgical congenital anomalies.

OBJECTIVE

To analyze surgical congenital anomalies (2000–2010) of newborns in Latvia.

MATERIALS AND METHODS

The data source was the Medical Birth Register. Prevalence of common anomalies usually requiring surgery (per 1000 live births) was calculated – overall prevalence of six anomalies and/or malformation groups that usually require surgery.

RESULTS

The average prevalence of live birth with anomalies typically requiring surgery was 9.77/1000 (95%CI 3.19–9.77). Average for severe congenital heart defects – 7.23/1000 (95%CI 3.19–7.35); orofacial clefts – 1.13 (95%CI 1.0–1.28); anomalies of the gastrointestinal tract – 0.98/1000 (95%CI 0.86–1.11); gastroschisis – 0.11/1000 (95%CI 0.07–0.16); omphalocele – 0.30/1000 (95%CI 0.23–0.38) and craniocynostosis – 0.02/1000 (95%CI 0.005–0.5). 9.4% (95%CI 8.2–10.6) of all newborns were preterm births, in gastroschisis group – 57.7% (95%CI 38.9–74.5) and gastrointestinal group – 25.4% (95%CI 20.2–31.5). In 10.6% (95%CI 9.4–12.0) of newborns antenatal care for the mothers was not started before the 12th gestational week. The highest percent in gastroschisis group – 19.2% (95%CI 8.5–37.9), followed by omphalocele – 17.1% (95%CI 10.1–27.6) and orofacial clefts – 16.3% (95%CI 12.3–21.2). In 3.6% (95%CI 3.0–4.5) newborns, when the mothers had not received any antenatal care, the highest percentage was in the gastroschisis group – 7.7% (95%CI 2.1–21.1), orofacial clefts group – 3.8% (95%CI 2.1–6.8).

CONCLUSIONS

Surgical congenital anomalies revealed a very high percentage in the group without antenatal care if compared to the control group, out of the average Latvian births – 3.6% against 2.7%. The health services need to reduce birth defects burden by primary prevention, successful early treatment and ongoing care for the affected children.

ACKNOWLEDGEMENT

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PO.2. RESULTS OF SURGICAL TREATMENT OF ESOPHAGEAL ATRESIA IN CHILDREN

Navasad V., Kovalchuk V., Navasad K. (Belarus)

INTRODUCTION

Esophageal atresia is the most complicated malformation of esophagus and it needs urgent surgical correction. The aim of this research was to show the main principle of diagnostics and treatment of esophageal atresia.

MATERIALS AND METHODS

36 children were operated in our surgical clinics during the last 15 years. Atresia of esophagus combined with lower tracheo-esophageal fistula was observed in 25 patients, without fistula – in 5 patients, with upper tracheo-esophageal fistula – in 2 patients, both with upper and lower tracheo-oesophageal fistula – in 4 patients. The first and the earliest constant symptom was foamy salivary discharge from nose and mouth. Diagnosis was made in the first hours after birth at esophageal intubation with Elefants test. The patient was moved to the resuscitation department of newborn children.

RESULTS

Diagnosis consisted of contrast X-ray investigation and esophagoscopy in some cases. Preoperative preparation included obligatory constant aspiration of contents from the upper part of esophagus, tracheal intubation and antibacterial therapy. It lasted for 8–9 hours.

Right side posterior-lateral thoracotomy in IV–V Th intercostal space with extra pleural approach was used. Direct single-layer esophago- esophagoanastomosis was made (using a director 16) after tracheo-oesophageal fistula excision in 24 cases. Oblique (indirect) anastomosis was made mainly. When the diastasis between proximal and distal ends of esophagus was more than 1 cm, the method of fixation of esophageal ends was used to reduce tension in anastomotic region. Cervical esophagostomy and gastrostomy was made after tracheo-oesophageal fistula excision in 2 cases. Re-thoracotomy was performed in 3 patients: in 2 cases because of dehiscence of anastomosis, in 1 case because of esophageal stricture.

Reconstruction of esophagus was performed in 2 children at the age of one-year. A large bowel graft with vascular pedicle was used for plastics. 3 children died from purulent mediastinitis, pneumonia, DIC-syndrome. 2 children died from combined congenital diseases of heart (vessels transposition, defect of interventricle or interatrial septum), lungs (aplasia), intestine (atresia of duodenum, anus and rectum) and kidneys (polycystic kidney).

Postoperative treatment was carried out at the resuscitation department of newborn children. It included: long-term ventilation of lungs (7 days and longer) in case of concomitant diseases, infusion and antibacterial therapy, stomach pump for 7–14 days, feeding from the 5th day with the help of the gastric tube and lineomate. Esophagoscopy was made before the discharge.

PO.3. TREATMENT OF THE TRACHEOESOPHAGEAL FISTULA IN CHILDREN

Troyan V., Grinevich Y. (Belarus)

INTRODUCTION

Tracheoesophageal fistula (TEF) is a relatively rare disease in childhood. It may be congenital, acquired or recurrent. Surgical management of TEF is still a source of controversy because of high rate suture incompetence resulting in fistula recurrence. Recurrent fistulas are the most difficult for surgical treatment. Due to this reason different methods and materials, such as muscles, pleura, pericardium, thymus, skin flap, Tachokomb, AlloDerm and others are used for leakage and fistula prevention.

OBJECTIVE

The aim of this work is to present our experience in surgical management of TEF and fistula recurrence prevention in children.

MATERIALS AND METHODS

37 patients with TEF, age 1 month to 15 years, were treated in our hospital in the period 2000–2011. Different methods were used in 19 patients (group 1), from simple trachea and esophagus walls suturing up to interposing between sutures muscle or pleura flaps, Tachokomb, or patient's own pericardium flap.

Starting with December 2006 we used fascia lata as plastic material for trachea repair. There were 15 children treated with this method (group 2). 13 patients had TEF, 3 of them congenital, 4 acquired as a result of esophageal trauma and 6 recurrent after esophageal atresia repair. Autofascia was used for laringotracheoesophageal cleft repair in two cases and for tracheostoma closure in another case.

In the year 2011 we started endoscopic laser techniques for TEF closure by Nd YAG "MULTILINE". The esophageal end of fistula was abbreviated with laser 1064 mkm wave length and 25 watt power in 3 patients (aged 8 months – 6 years) with recurrent TEF (group 3).

RESULTS

In group 1 fistula recurrences were noted in 5 cases (26 %), recurring in two patients three times and four times in another patient. In group 2 there were no signs of fistula recurrence in any of the cases, except one (6.7 %). In a newborn with laringotracheoesophageal cleft cervical part of trachea where fascia lata was used is completely competent, but there was partial incompetence at laryngs level where local tissue for cleft repair was used. Closure of TEF by laser abbreviation was successful in 2 patients after a single attempt and in 1 patient – after 2 procedures.

CONCLUSIONS

Our experience showed that patient's own fascia lata free flap is the best plastic material for operations upon trachea and esophagus in children. But endoscopic laser techniques can reduce morbidity and recurrence associated with open approaches and seems to be a more perspective method in TEF treatment.

PO.4. NEONATAL GASTRIC PERFORATION: REVIEW OF 10 YEARS EXPERIENCE

Bagdzevicius R, Vadluginė D. (Lithuania)

OBJECTIVE

Neonatal gastric perforation (GP) is a rare but life-threatening disease associated with poor survival prognosis. Many previous articles described GP as spontaneous. Still, several theories have been raised that mechanical ventilation, gastrointestinal damage, asphyxia, and corticosteroid use may be implicated as possible contributing factors in the development of GP. During this study we analyzed the etiology of spontaneous gastric perforation and treatment outcome of newborns who were treated by surgical intervention in our clinic over 10 years.

MATERIALS AND METHODS

Retrospective analysis has been performed on the medical records of four patients with neonatal gastric perforation over a 10-year period.

RESULTS

All four newborns were preterm male. The average gestational age was 31 weeks and birth weight was 1885 g. The pregnancies had maternal complications. Three were born in the Caesarean section and one was delivered vaginally. The newborns were diagnosed with metabolic acidosis. Two of them were treated with CPAP and the other two with mechanical ventilation. The patients were probed, one was prescribed corticosteroids, the others – indomethacin. One newborn was diagnosed with necrotizing enterocolitis. Clinical signs appeared in 1–15 days. Initial clinical symptoms were of sudden onset peritonitis. Performing the synoptic abdominal radiographs pneumoperitoneum was always observed. Perforation occurred at the greater curvature in 2 newborns, at the lesser curvature in 1, in posterior wall – in 1. All patients were operated: two patients were treated with gastrorrhaphy and drainage, and two were treated with gastrorrhaphy alone. Three patients survived and one had died.

Mortality rate – 25%.

CONCLUSIONS

The etiology of neonatal GP is multifactorial and the diagnosis must be based on X-ray and findings during surgery. Treatment success depends on early diagnosis and urgent surgical intervention.

PO.5. OUR EXPERIENCE IN TREATMENT OF NECROTIZING ENTEROCOLITIS IN INFANTS

Hmelenko A., Kovalchuk V., Hmelenko M., Kovalchuk T. (Belarus)

OBJECTIVE

To investigate the clinical picture and treatment particularities in the patients with necrotizing enterocolitis (NEC).

MATERIALS AND METHODS

In the period 2001–2011 in Grodno Pediatric Surgery Clinic there were treated 30 children with NEC – 18 (60%) boys and 12 (40%) girls.

At the moment of hospitalization the patients' age was from 1–17 days. 22 (73.3%) children were born prematurely in a period starting from 180 (228±14) days, with weight from 880g (1670±250 g). 8 (26.6%) children died, the reason of lethal outcome being heavy accompanying pathology.

RESULTS

Operative treatment due to the developed complications (the perforation of the small intestine) was performed in 11 (36.6%) patients and was conducted in 2 (6.6%) cases – in the suturing of the perforated small intestine, in 7 (23%) cases – in resection of necrotized area of the small intestine with ileostomy and in 2 (6.6%) cases – cecostomy during cecum perforation with the following (45–70 days) imposition of the intestine anastomosis and was conducted in the first 4–6 hours since the moment of the appearance of the clinical signs of perforations after intensive preoperative manipulations. Diagnostic laparoscopy was used in 4 patients.

Acute thrombocytopenia, neutropenia, coagulation violations, heavy hyponatremia and nonperishable acidosis confirm the diagnosis of intestinal necrosis.

Active conservative therapy, comprising decompression of the gastrointestinal tract, desintoxication therapy (rehydration, improvement of microcirculation, blood flow characteristics), antibiotics that can prevent the development of necrosis and perforation of the intestine was applied to all patients.

CONCLUSIONS

NEC needs an intensive therapy. In case of such complications as perforation of the small intestine and peritonitis an operation is necessary. Well-timed conservative treatment can prevent the development of heavy complications of NEC.

PO.6. CONGENITAL HIGH INTESTINAL OBSTRUCTION AND EXTRAORDINARY INTRAOPERATIVE FINDING. TWO CASES

Navasad V., Navasad K. (Belarus)

ABSTRACT

Intussusceptions in infants reveals more often at the age of 4–9 months. It can be explained by starting additional or artificial feeding. Another reason for intussusception is intestinal malformation, due to which intussusception can reveal even earlier. Intussusception in newborn infants is very rare.

Two newborn infants with intussusception had been treated in Grodno Pediatric Surgery Clinic for 6 months.

Both infants were moved from the maternity hospital to the department of intensive care of newborns. Congenital intestinal obstruction was suspected. Ultrasound investigation of abdominal cavity and contrast roentgenography of intestine were performed. In laparotomy small bowel intussusception was found. Desinvagination was not successful. Resection of intestine with intussuscepted region was performed and finished with end-to-end small bowel anastomosis.

Histological study of intussuscepted region showed that the first infant suffered from membranous intestinal atresia with hemorrhagic necrosis and serous peritonitis. Postoperative period was normal; the patient was discharged with recovery.

Necrosis of intestinal wall was revealed during histological examination of the intussuscepted region in the other infant. In the postoperative period progressive aggravation in the patients' condition was noticed. Re-laparotomy finished with enterostomy was performed. The patient suffered from pulmonary-intestinal form of mucoviscidosis. The infant died.

PO.7. INTESTINAL DYSBACTERIOSIS IN CHILDREN WITH CONGENITAL OBSTRUCTION OF ESOPHAGUS, STOMACH AND DUODENUM

Navasad V., Navasad K. (Belarus)

ABSTRACT

The problem of intestinal dysbacteriosis remains one of the most important, because of its primary role in pathology of gastro-intestinal tract, allergic diseases and long-term use of antibiotics. Disturbance of intestinal microbiocenosis leads to disorder of its motor, digestive and absorbing functions. In early childhood intestinal dysbacteriosis can also lead to the development of dystrophy, anemia, vitamin insufficiency, alimentary allergy, secondary immunodeficiency and generalization of infections up to septicopyemia.

In 2011 in Grodno Pediatric Surgery Clinic an investigation of feces was performed to reveal the intestinal dysbacteriosis in children with congenital obstruction of esophagus, stomach and duodenum in early postoperative period. 14 children were examined: 5 – with esophageal atresia, 8 – with congenital pyloric stenosis, 1 – with congenital duodenal obstruction. The picture of intestinal dysbacteriosis with decrease of bifidobacteria and lactobacteria and increase in the number of aerobe microorganisms was observed in the feces of all children. Decreased number of normal colibacillus (*Escherichia coli*) was observed in the feces of 7 children, increased number of *Proteus* – in 5 children. In 3 children dysbacteriosis was complicated by intestinal candidosis.

The achieved results could be explained by the disturbance of intestinal patency that prevented normal intestinal flora colonization, and antibiotic therapy in an early postoperative period.

Consequently, it is necessary to investigate intestinal microbiocenosis with its subsequent correction in children with congenital obstruction of esophagus, stomach and duodenum.

PO.8. PURULENT PERICARDITIS IN CHILDREN

Vakulchyk V., Chesnov Y. (Grodno, Belarus)

INTRODUCTION

Irrespective of the achievements in modern medicine sepsis still remains one of the most actual problems of clinical practice. Purulent exudative pericarditis is very rare but severe complication of sepsis, which leads to 100% lethality in case of absence of adequate treatment.

OBJECTIVES

The aim was to show the results of treatment of children with purulent pericarditis.

MATERIALS AND METHODS

In the period 2005–2011 on the territory of Belarus 5 cases of purulent pericarditis in children (4 male, 1 female), aged 3 months to 3.5 years, were observed. In 4 cases the disease started with bacterial pneumonia and sepsis. In one case: BCG vaccination – bacterial pneumonia – sepsis. Clinics: cardiac tamponade. Diagnostics: USI, ECG, CT. Treatment: in the 1st case a pericardiocentesis, drainage, pericardiolavage were performed. The treatment was unsuccessful. All other patients were treated with pericardiocentesis and drainage to eliminate cardiac tamponade and prepare the children for radical operation. All children were operated. Thoracotomy, subtotal pericardectomy, sanation and drainage of pericardial and pleural cavities were performed in 4 cases. In one case a sternotomy with total pericardectomy and complete resection of epicardium was performed. All the children recovered.

CONCLUSIONS

1. Pericardiocentesis with drainage should be used as forced measures to eliminate cardiac tamponade. This kind of treatment is ineffective in children.
2. The basic method of treatment for purulent pericarditis is subtotal pericardectomy.

PO.9. TREATMENT OF PLEURAL EMPYEMA IN CHILDREN

Govorukhina O., Makhlin A., Svirsky A. (Belarus)

INTRODUCTION

Treatment of pleural empyema in children represents an interesting issue because of different opinions and treatment tactics concerning this disease.

Methods of treatment include puncture and drainage of pleural cavity with or without injection of fibrinolytic, thoracoscopy with pleural cavity sanitation and dissection of the pleural adhesions, minithoracotomy or standard thoracotomy with decortications.

OBJECTIVE

To define the criteria for optimizing the treatment of pleural empyema in children.

Effective drainage of the pleural cavity, giving a possibility for the lung expansion and normalization of its functions, may be defined as the aim of treatment. Timing and methods for achieving this goal may be quite different.

MATERIALS AND METHODS

Traditionally, the pathological process of empyema formation is divided into 3 stages: 1. Exsudative phase, which is characterized by the presence of the liquid sterile pleural exsudate in pleural cavity. 2. Fibrinotic – purulent stage with accumulation of the turbid liquid, which is separated in small cavities, divided with fibrin adhesions. 3. Stage of organization with thick exsudate and organized pleural adhesions round the lung, which immobilize the last.

It is possible to make the diagnosis of pleural empyema if as a result of pleural puncture you obtain pus or turbid exsudate, with Gram-stained microorganisms or bacterial growth in it; pH of exsudate less than 7.0 and glucose level less than 4.0 g/l are supplemental diagnostic criteria. Haemophilus influenza, Staphylococcus aureus and Streptococcus pneumoniae are most often pathological cultures in pleural empyema. We use diagnostic and treatment algorithm, based on early sonography according to X-Ray findings.

RESULTS

During the period 2000–2011 we treated 40 patients with pleural empyema, aged 1 to 15 years. The patients were divided in groups according to the method of treatment.

Group A (10 children) – pleural cavity drainage without fibrinolytic injection or thoracoscopy.

Group B (18 children) – pleural cavity drainage + streptokinase injection.

Group C (12 children) – videothoracoscopy with adhesion dissections, pus and fibrin removal, pleural lavage and pleural cavity drainage were performed.

Videothoracoscopy was performed with three 5-mm ports, for the removal of the large fibrin fragments in two cases we used one 10 mm port.

Group A consisted of children with stage 1–2 empyema, group B – stage 2 empyema and group C – stage 2–3 empyema.

All children from all groups recovered. In 2 cases in group A pleural drainage was considered ineffective and the treatment regimen was supplemented with streptokinase injection.

It was difficult to compare the length of hospital stay in children of all three groups because of the differences in severity of the pathological process. But, nevertheless, we noticed the reduction in the hospital stay in the patients of groups B and C (16.7 days and

15.8 days) in comparison with group A patients (30.8 days). The pleural drainage was left in place for 14.4 days – in group A patients, for 9.6 days – in group B patients, and for 7.2 days in group C patients.

In the 1st stage of empiema formation simple pleural drainage may be sufficient taking into account the liquid nature of exsudate. But in the vast majority of cases we do not deal with the 1st stage patients as they are usually treated with antibiotics by pediatricians; and by the moment of hospitalization in the surgery department they usually have stage 2 or even stage 3 disease.

Irrespective of the evidence on efficacy of the pleural drainage in stage 2 and stage 3 disease the hospital stay is unacceptably long. Therefore we consider streptokinase injections and videothoracoscopy as methods of choice in the treatment of stage 2–3 disease.

Streptokinase injections is an option of effective, inexpensive and simple treatment, it is less invasive than thoracoscopy, the length of hospital stay in streptokinase-treated patients and in videothoracoscopy patients is similar, but streptokinase cannot substitute thoracoscopy in the cases where removal of fibrin fragments and adhesion dissection are critical for pleural cavity sanitation.

CONCLUSIONS

Treatment of choice in pleural empyema depends on the stage of the disease. It is critical to perform adequate sanitation, drainage of the pleural cavity and to create the conditions for lung expansion and restoration of its functions.

In case of ineffectiveness of one treatment tactic it may be supplemented with another one.

PO.10. MORPHOLOGICALLY BASED APPROACH TO THE SURGICAL TREATMENT IN CHILDREN WITH FUNNELED CHEST DEFORMATION

Yakimova Y., Kirgizov I., Talalaev A., Shahtarin A. (Russia)

OBJECTIVE

To determine the relationship of the morphological picture of the costal cartilage and ultrasound characteristics of cartilage in children with congenital funneled chest deformation (FCD).

MATERIALS AND METHODS

The research was done on 18 children with funneled chest deformation, aged 3 to 17 years. 23 children with no signs of connective tissue dysplasia (CTD) constituted the control group and US of the rib cartilage was performed to all of them.

RESULTS

We revealed that in the preschool and school-age children without phenotypic features of CTD the structure of the rib cartilage was defined as homogeneous and hypoechoic. In 15.4% of adolescents the costo-sternal joint defined as a hyperechoic zone to a small extent.

In 18 children with FCD an intraoperative US-examination of the rib cartilage revealed hyperechoic zone in the structure of the rib cartilage. Hyperechoic zone had a central location in 49.1%, up to 1/2 of the cartilage length in 38.2% and extended more than 1/2 of the rib cartilage length in 12.7%. The morphological study revealed that the size of chondrocytes increased by 41.5% (9.2 ± 0.5 mm), the amount of ground substance rib cartilage decreased by 59.4% ($42.8 \pm 1.8\%$), chondrocyte volume increased more than 2.1 times ($47.4 \pm 2.4\%$), and the amount of fibrous structures increased up to 75% ($9.8 \pm 0.8\%$). Consequently, in the central zone of hyperechoic rib cartilage structure dysplastic changes of hyaline cartilage were observed. In subperihondrale and middle zones, significant changes in the structure of rib cartilage were not identified.

CONCLUSIONS

The identified changes in the structure of rib cartilages in children with FCD of different ages allow us to recommend the most optimal timing of surgery and state that ultrasound used during thoracoplasty helps to determine the exact amount of cartilage resection, depending on the length of the hyperechoic area.

PO.11. TWO FATAL CASES OF SPONTANEOUS GASTRIC PERFORATION IN CHILDREN

Malcius D., Trumpulyte G., Barauskas V. (Lithuania)

INTRODUCTION

Gastric rupture is a potentially fatal condition occasionally encountered in adults or neonates. Reports concerning gastric ruptures in non-neonatal children are uncommon.

OBJECTIVE

The aim is to present cases of a very complicated and rare disease – non-neonatal spontaneous stomach perforation.

MATERIALS AND METHODS

The cases of two children who suffered spontaneous gastric rupture in the Department of Paediatric Surgery are reported here.

RESULTS

The first patient was a 4-year-old boy transferred to our hospital due to intracranial hypertension and respiratory insufficiency. Intracranial tumor – papilloma arachnoidea was diagnosed, urgent ventricular drainage, and then craniotomy, excision of the tumor was performed. Five days after the operation peritonitis and pneumoperitoneum developed. During laparotomy gastric perforation of macroscopically unchanged gastric wall was found. Then two relaparotomies were performed due to the intraabdominal abscesses. The gastric suture was tight. Despite intensive treatment, the postoperative period was complicated with pneumonia, herpes zoster, multiorgan insufficiency developed and the patient died.

The other patient was a 3 year old girl, who had a history of ventriculoperitoneal shunt due to hydrocephalus. She was urgently admitted to intensive care from home due to shock, severe abdominal distention and peritonitis, huge pneumoperitonem. During laparotomy a big defect of thickened anterior gastric wall was found. Despite intensive treatment the postoperative period was complicated with multiorgan insufficiency and the patient died.

CONCLUSIONS

In both cases the patients were after neurosurgical procedures and the pathogen from the abdominal cavity was *Candida albicans*.

PO.12. LAPAROSCOPIC NISSEN FUNDOPLICATION WITH GASTROSTOMY IN NEUROLOGICAL IMPAIRED CHILDREN WITH GERD

Kakar M., Engelis A., Laizans P., Zviedre A., Sveklis J., Petersons A. (Latvia)

INTRODUCTION

Mentally retarded children frequently experience feeding difficulties which can lead to malnutrition, growth failure and recurrent aspiration pneumonia. Feeding Gastrostomy is now the preferred method of providing nutritional support to children with neurological impairment (NI). Neurologically impaired children have gastro-esophageal reflux and gastrostomy is frequently complicated by worsening of these symptoms. This has led to the acceptance of surgical anti-reflux operation in the form of a fundoplication along with gastrostomy worldwide.

OBJECTIVE

The aim of the study is to compare the results of open and laparoscopic Nissen and Thal funduplications with feeding gastrostomy in NI children and to analyze the general health and quality of life of these children after the elective surgery in Latvia.

MATERIALS AND METHODS

A total number of 19 patients, 15 boys and 4 girls admitted to the Children's Clinical University Hospital in the years 1998–2011, were selected for this study. The patients were divided in 2 groups. Group I Thal (open or laparoscopic). Group II Nissen (open or laparoscopic). We analyzed the medical records and reviewed the demographic data, clinical symptoms, diagnostic tests, the operating technique, early and late morbidity and mortality rates, resolution of preoperative symptoms and quality of life. A questionnaire was prepared and the parents and care-givers contacted to ensure a follow up of all our patients. The collected data were analyzed for improving the general health and quality of life of NI children with GERD in Latvia.

RESULTS

The median duration of postoperative observation was 3 months to 3.5 years. There was no major complication recorded at the time of surgery in both the groups. 2 patients developed late complications. 4 patients had recurrent GER symptoms post-operatively. 6 patients died in both the groups. All deaths were not related to the surgery. The overall recurrence rate was 21.05% (4/19). The results reveal that there was a significant improvement in GER symptoms, feeding indexes, the care-giver perception, the child's comfort and quality of life. The patients gained weight postoperatively.

CONCLUSIONS

Our study suggests Laparoscopic Nissen fundoplication with feeding gastrostomy is a feasible method in NI children with GERD with better post operative results. pH-study in NI children may sometimes give false negative results due to preoperative medical treatment, consequently, more effort should be taken to develop new diagnostic methods, especially in case of NI children.

PO.13. RESULTS OF LAPAROSCOPIC REPAIR OF HERNIA IN CHILDREN

Dvorakevich A., Pereyaslov A. (Ukraine)

ABSTRACT

One of the mini-invasive methods of congenital inguinal hernia repair is PIRS (percutaneous internal ring suturing).

This method was applied in 146 children with congenital inguinal hernia. Mean age was 6.8 ± 1.8 (range from 0 to 14 years). Out of 146 patients in every 5th patient there were found signs of contralateral inguinal hernia that were not apparent earlier; in such cases surgery was done on both sides.

Intraoperative and in remote postoperative period in 21 (14.4%) children complications were noted. Intraoperative bleeding due to trauma of branches of hypogastric vessels were noted in 2 patients and hematoma of parietal peritoneum in 12 children. The cause of twist and necrosis of a loop of small intestine in one boy was strangulated intestinal obstruction, due to torsion of the loop of ileum around omentum which was captured inside not tightly closed internal inguinal ring. Most of intraoperative complications appeared at the beginning of applying the PIRS method. Hernia recurrence was noted in 4 (2.7%) patients, appearance of hydrocele in 2 (1.4%) children. The hernia recurrence, caused by the not tight suturing of internal ring, was corrected by classical Duhamel hernioplasty.

PO. 14. ONE-PORT LAPAROSCOPIC TREATMENT OF INGUINAL HERNIA IN CHILDREN

Troyan V., Nikulenkov A. (Belarus)

OBJECTIVE

The laparoscopic approach to inguinal hernia in children is more logical than the conventional open approach. Some ways of closing internal inguinal ring with laparoscopic technique are used at present. The aim of this work is presenting our experience in laparoscopic-assisted treatment of inguinal hernia.

MATERIALS AND METHODS

In our hospital 32 infants and children with inguinal hernias were treated laparoscopically in 2011. The ages ranged from 1 to 7 years, boys – 12, girls – 20. All operations were performed with “Storz” equipment. Instrumental equipment includes: 30° 3 or 5 mm laparoscope, Veress needle, Deschamps needle and 3-0 polydioxanone (PDS) monofilament suture. Using other laparoscopic instruments is not required. The surgeon is positioned on the contralateral side of the hernia, and the assistant on the ipsilateral side. The monitor is at the foot of the bed on the ipsilateral side of the hernia. The surgeon and assistant will switch positions during a bilateral hernia repair. The umbilical trocar is used for insufflation and for the 30° 3 or 5 mm laparoscope. By means of serial use of the Deschamps needle and the Veress needle through a puncture in a projection of an internal inguinal ring (on “a bikini line”), imposing purse-string suture around an internal inguinal ring without using laparoscopic instruments. Using the Veress needle to do possible safe dissection of the hernial sac and minimize the potential risk to the vas and vessels injury. The umbilical incisions (3–5mm) and puncture dots (1.5mm) are closed with Steri-Strips.

RESULTS

Positive outcome was noted in all patients. Treatment of an umbilical hernia in 7 cases was done. Operative time was 9 min (monolateral hernia) or 15 min (bilateral heria). All patients returned to normal activity from 2–3 hours after the repair. Complications in 6 months were not observed.

CONCLUSIONS

The technique is easy to learn and does not require expensive laparoscopic instruments. Transumbilical laparoscopy without doubt provides a better way to assess the status of the internal inguinal ring. Good cosmetic results were universally observed. This procedure can be used like “one-day surgery”.

PO.15. LAPAROSCOPIC UNROOFING PROCEDURE OF HEPATIC CYST (CASE REPORT)

Posiunas G., Strumila A. (Lithuania)

INTRODUCTION

Solitary hepatic cyst is nonparasitic cyst, which must be distinguished from hydatid (echinococcal) cyst, cystic tumor, abscess or polycystic liver disease. Asymptomatic patients do not require therapy because the risk of developing complications related to the lesion is lower than the risk associated with treatment. Surgery is indicated only in symptomatic patients.

OBJECTIVE

To present minimally invasive treatment of large solitary hepatic cyst.

MATERIAL AND METHODS

Case history, ultrasound imaging and operation video material was analyzed.

RESULTS

A 12 year old girl came for a consultation because of chronic abdominal pain and frequent vomiting. Soft palpable abdominal mass was detected in the epigastric region. Ultrasound examination revealed 10 x 15 cm cyst in left hepatic lobe. CT scan confirmed the diagnosis of solitary cyst pressure upon stomach and pancreas. The patient was operated on, laparoscopy and unroofing procedure was performed, also the remaining cystic wall was coagulated by Nd:YAG laser. No postoperative and follow up complications.

CONCLUSIONS

Minimally invasive methods and new technology could help surgeons avoid complications and achieve better cosmetic results.

PO.16. DIAGNOSTIC AND THERAPEUTIC ASPECTS OF PAEDIATRIC PATIENTS WITH ACUTE GASTRIC DILATATION

Aleksejevs G., Petersons A. (Latvia)

INTRODUCTION

Acute gastric dilatation (AGD) is rare, life threatening condition, which may evolve to gastric infarction and total necrosis of stomach. We present a case series of 4 children with acute gastric dilatation managed in the Children's Clinical University Hospital, Riga, Latvia, over a 5-year period. All the patients were timely diagnosed and treated conservatively. We recommend that patients with suspected AGD are examined urgently starting with the abdominal X-ray.

Acute gastric dilatation (AGD) is a rapid increase in gastric volume with ischemic changes in the gastric wall. The etiology of this disease is not entirely clear. Acute gastric dilatation is often described in children and adults with anorexia nervosa, healthy children who have been long starved in socially disadvantaged families, patients with genetic diseases like Rett syndrome, Prader-Willi syndrome, Down's syndrome.

OBJECTIVE

To evaluate the diagnosis and treatment results of AGD in Latvia, and provide practical recommendations based on literature data.

MATERIALS AND METHODS

Retrospective analysis of four AGD patient data. The patients were treated at the Children's Clinical University Hospital during the period 2005 - 2010. The patient age, gender, duration of treatment, risk factors and associated pathologies were analyzed.

RESULTS

The patient age was 7 to 17 years (mean age 12.5 years). Duration was 20 to 45 (average of 38.3) days. Major risk factors are eating disorders; the accompanying abnormalities are cerebral palsy, gastric, duodenal ulcer disease, and adjustment disorders.

All patients had nasogastral relieving stomach probe, three of them received nasojejunal probe feeding. Rehydration therapy, gastric protectors were administered in all cases, two patients received antibacterial therapy.

CONCLUSIONS

AGD is a rare disease. 4 patients were treated in the period 2005-2010. All treated patients had a timely diagnosis. The main diagnostic method is abdominal X-ray. Conservative treatment was effective in all cases.

PO.17. ACUTE APPENDICITIS IN EARLY AND PRESCHOOL AGE CHILDREN IN CLINICAL UNIVERSITY CHILDREN'S HOSPITAL OF LATVIA DURING 2000–2009

Shurna D., Engelis A., Petersons A. (Latvia)

INTRODUCTION

Acute appendicitis is a common condition and appendectomy – most frequent urgent operation in children. In 0 – 5 year old children perforation of appendix develops in up to 82% patients, but during the first year of life this number can reach even 100%. Therefore timely diagnosis and treatment are important to avoid severe complications and even death.

OBJECTIVE

The aim of the study was to analyze the data of early and preschool age (0–6 years old) children treated in the Children's Clinical University Hospital (VSIA BKUS) with the diagnosis primary acute appendicitis within a ten year period (2000–2009).

MATERIAL AND METHODS

In-depth retrospective analysis was performed of VSIA BKUS archive data by using the programs MS Excel 2007 and SPSS Statistics 19. The diagnoses were classified according to ICD-10.

RESULTS

A total of 363 patients of mean age 4.32 years (the youngest – 11 months old) were identified; among them 54.8% boys and 45.2% girls. The mean age was slightly declining. Half of the patients were admitted to hospital 12.8–24 hours after the onset of symptoms (37.2 hours average). 38.6% had acute ruptured appendicitis with generalized peritonitis (K35.0), 10.7% acute appendicitis with peritoneal abscess or infiltrate (K35.1) and 50.7% cases classified as K35.9 including: 10.5% of acute catarrhal, 27% of acute phlegmanous and 13.2% of acute gangrenous appendicitis. The average hospital stay was 9.5 days with a slightly increasing tendency. 95% were operated, 17 patients received only conservative therapy. The role of conservative therapy as the only way of early treatment in acute appendicitis has been decreasing since 2006.

CONCLUSIONS

During the years 2000–2009: 1) The proportion of acute non-complicated appendicitis was slightly declining, but the proportion of perforated appendicitis – slightly higher year by year. 2) Changes in the patient number, gender, age and length of anamnesis did not allow for obtaining statistically significant conclusions.

PO.18. CANDIDA – RARE AND DANGEROUS PATHOGEN IN CHILDREN’S PERITONITIS

Malcius D., Barauskas V. (Lithuania)

INTRODUCTION

Non-peritoneal dialysis Candida peritonitis is rare in children. Candida peritonitis is still associated with poor prognosis.

OBJECTIVE

Presentation of series of five non-peritoneal dialysis patients with different causes of peritonitis when *Candida albicans* were cultured from abdominal cavity.

RESULTS

Two patients – a 4 year old boy and a 3 year old girl were operated due to spontaneous rupture of the stomach. Repeated laparotomies were performed in one case due to intraabdominal abscess formation. Despite the intensive treatment both patients died. *Candida albicans* was cultivated from the abdominal fluid. Antifungal treatment was prescribed in both patients. A 16 year old boy was admitted due to sudden abdominal pain, peritonitis and pneumoperitoneum. Urgent laparoscopy and stitching of perforated duodenal ulcer was performed. Postoperative period was complicated by intraabdominal abscess formation. Relaparoscopy, drainage was performed. *Candida albicans* was cultivated from abdominal fluid after both operations. The antifungal treatment was prescribed just after relaparoscopy. The patient successfully recovered. A 12 year old boy was admitted about 24 hours after a blunt abdominal trauma – he had fallen from a sledge. Peritonitis was diagnosed. The rupture of ileum, total peritonitis was found on laparotomy, resection and anastomosis were performed. Usual antibiotics were prescribed. *Candida albicans* was cultivated from abdominal cavity, but antifungals were not prescribed. The patient recovered uneventfully. A 17 year old boy was admitted due to appendicular peritonitis. Appendectomy was performed. *Candida albicans* was cultivated from abdominal cavity. Usual antibiotics were prescribed without antifungals. The postoperative period was complicated with surgical wound suppuration; the patient recovered.

CONCLUSIONS

We had 5 cases of peritonitis when *Candida albicans* was cultivated from abdominal cavity and only one of them had no surgical complications.

PO.19. CHRONIC CALCULOUS CHOLECYSTITIS IN CHILDREN

Vakulchyk V., Hryn A. (Belarus)

INTRODUCTION

Ecological and environmental changes, as well as changes in the diet, lead to an increase of diseases in children that rarely have been observed in the previous decades. Increase related to violation of the rheological properties of bile, including stone formation in the biliary tract, is observed.

OBJECTIVE

The goal is to present the results of diagnosis and treatment of children with chronic calculous cholecystitis.

MATERIALS AND METHODS

In the period 2009 - 2011 in Grodno Regional Clinical Pediatric Hospital there were observed 11 patients (among them 8 girls) with cholelithiasis, chronic calculous cholecystitis. 10 children were over the age of 14 years. Disease duration ranged from 1 week to 5 years. The main symptoms were recurrent abdominal pain, predominantly in the right upper quadrant and epigastric area, nausea and occasionally vomiting, dry mouth. One child was hospitalized with symptoms of obstructive jaundice due to choledochal concretions; one girl had a surgery for acute destructive pancreatitis on the background of calculous cholecystitis. Survey: biochemical blood analyses, USG, fibrogastroduodenoscopy. MRI was used in two cases. The ultrasound estimated the size of the gall bladder, the condition of its walls, the number and size of the concretions, patency of intra- and extrahepatic bile ducts, the condition of the pancreas. Choledochal extensions have not been identified.

Concretions in the gall bladder were often multiple (8 children), ranging in size from 5 to 28mm. In most of children (7) pathology of stomach and duodenal ulcer (chronic gastro-duodenitis) was diagnosed. Related diseases: obesity, I - III degree was diagnosed in 3 children, chronic pancreatitis in one child. All the children underwent laparoscopic cholecystectomy. Complications and deaths were not observed.

CONCLUSIONS

Gallstone disease begins to manifest itself at an increasingly younger age. Most of the children revealed comorbidities. Laparoscopic cholecystectomy is a method of choice.

PO.20. MODERN APPROACH TO THE SURGICAL TREATMENT OF PORTAL HYPERTENSION (PH) IN CHILDREN

Prudnikova T., Kirgizov I., Senyakovich V. (Russia)

INTRODUCTION

Bleeding from esophageal varices is the most serious complications of extrahepatic portal hypertension (EPH) and congenital hepatic fibrosis (CHF).

MATERIALS AND METHODS

In the period 1973–2011, 827 children with EPH (811 pts) and CHF (118 pts), aged 8 months to 18 years, were investigated and operated in our clinic (total – 929 patients). Among them there were 344 girls and 583 boys. 224 patients were operated in other hospitals (disconnection procedures, splenectomy, shunting), and 56 were operated at our center. Splenomegaly without hepatomegaly, hematemesis from varices had been noted as symptoms in 54.7% children with EPH. Hepatosplenomegaly in all patients and hematemesis from varices had been noted as first symptoms in 32.3% children with CHF. On oesophagoscopy all patients with EPH and CHF had esophageal varices and danger of hematemesis. In all cases gastric or duodenal lesion was confirmed. On sonography cysts in kidneys were discovered in 13.9% of children with CHF. The indications for shunting procedure were portal hypertension, varices of esophagus, hematemesis from varices. All patients underwent the shunting procedure.

RESULTS

The results revealed high efficacy of shunting. A follow-up over the period from 1 to 25 years recorded 93.9% successful results at endoscopic and sonography examinations. No variceal hematemesis was observed. Operative mortality was not marked for the last 23 years.

CONCLUSIONS

Shunting as a radical method for decompression of portal hypertension is the best method for treatment of variceal hematemesis in children with extrahepatic portal hypertension and congenital hepatic fibrosis.

PO.21. DIFFERENT SURGICAL OVARIAN MASSES IN CHILDREN

Sonmez K., Turkyilmaz Z., Karabulut R., Can B., Kose F., Basaklar A.C. (Turkey)

OBJECTIVE

The purpose of this study is to describe the presenting signs and symptoms and the initial and exact diagnoses in children who were admitted to our children's hospital and operated for ovarian masses.

MATERIALS AND METHODS

A retrospective chart review was performed on all patients hospitalized between January 2002 and December 2010, with a discharge diagnosis of an ovarian mass. Age, presentation, symptom(s), physical exam findings, and radiologic imaging results were obtained.

RESULTS

32 patients were operated for ovarian masses. The patients' age ranged from 15 months to 17 years (mean 12.7 years). The most common presentation was abdominal/pelvic pain (25 cases), followed by abdominal and pelvic mass (15 cases), intrauterin ovarian mass (2 cases), puberte prekoks (1 case). 6 patients had menstrual irregularity. The masses were mostly unilateral, cystic, or solid/cystic and ranged in size from 3 to 25 cm (mean 9.7). Epitelial ovarian tumors were associated with 3 serous cystadenoma (one bilaterally), 1 mucinous cyst, 2 mucinous cyst adenoma and one bilateral clear cell sarcoma. This patient is the youngest bilateral clear cell carsinoma case in the literature. Another interesting case was for obesity and excesive weight gain. Abdominal MR showed a giant cystic mass extending to xyfoid and filling all abdominal area. Tumor markers were normal levels and 17 liters of fluid aspirated the left ovary and salpingooop horectomy was done. Histopathologic diagnosis was mucinous cyst of ovary. In 6 cases, the tumor was associated with a mature cystic teratoma. Remaining 21 ovarian cystys (in 19 cases) were functional ovarian cysts (simple, corpus luteum, hemorajik, follicules, paraovarian cyst) which were larger than 5 cm and not reducing in size. Ovarian torsion was identified in 7 of the 32 cases. Two cases of cyst releated torsions were diagnosed in intrauterin period and being followed. These torsion cases were the cases where the over was situated in the act of parasitic form inside the periton due to torsion without marker elevation and alterations of the size.

As most of the ovarian cycts are benign in character, initially fertility conserving operations must be considered.

PO.22. OVARIAN TORSION

Geimanaite L., Trainavicius K. (Lithuania)

INTRODUCTION

Ovarian torsion is a rare problem in pediatric age, but it is a condition requiring urgent surgery to prevent the loss of ovarian tissue and infertility. The aim of this research is to evaluate clinical signs, US findings, treatment and long-term results.

MATERIALS AND METHODS

52 ovarian torsion cases in 49 girls were operated between January 1989 and December 2011. The patients with preserved ovary were clinically and sonographically followed up.

RESULTS

The average age of the patients was 10.56 years. In 34 patients the ovarian torsion was on the right side and in 19 patients on the left side. All girls (100%) had abdominal pain. The other signs included: vomiting (45/52; 86.54%), febrile fever (11/52; 21.15%), and dysuria (2/52; 3.85%). The average time delay between the first symptoms and surgical treatment was 44.95 hours. US scan was performed in 43 (82.69%) patients, in 25 cases ovarian torsion signs were detected. Laparoscopy was performed in 9 cases, laparotomy in 42 cases, 1 laparoscopy converted to laparotomy. 22 ovaries were removed, 30 were detorsed. Since 2005 all ovarian torsions were detorsed, except 1 case in which mature teratoma was found. There were no postoperative complications, such as thromboembolism or peritonitis. 17 of the 30 patients were examined average 2.78 years after detorsion. In 16 cases multifollicular ovaries were found.

CONCLUSIONS

In all girls presenting with abdominal pain, vomiting, fever and leucocytosis the diagnosis of an ovarian torsion must be considered. Although US is very helpful, only the surgery assures the diagnosis. Detorsion of twisted ovary is safe and effective in children.

PO.23. OMENTAL INCARCERATION MAY CAUSE HYDROCELE AND THIS HYDROCELE CONFUSED SIMPLE OR SCROTAL HYDROCELE

Basaklar A.C., Alparslan K., Kaya C., Karabulut Z., Sonmez K., Turkyilmaz Z. (Turkey)

OBJECTIVE

The recommended approach to hydrocele repair in children is inguinal. Recently, trans-scrotal approach is recommended for children hydroceles. In this report we present our experience on hydrocele with omentum incarceration.

MATERIALS AND METHODS

This retrospective study reviewed the records of 10 children who underwent inguinal hydrocele repair with omentum incarceration in our clinic.

RESULTS

The mean age of the patients was 4.5 (1.5–16) years. Hydroceles were located on the right side all of patients. Scrotal erythema, inguinal pain, signs of intestinal obstruction and hernia sac have not been determined. Hydrocele repairs were made by inguinal approach in all patients. The processus vaginalis were rougher than normal and recognized as a hernia sac. So the hernia sacs were opened and omental incarceration was identified in all cases. Omentum was pushed into abdomen in all patients. High ligation was performed and the distal part of sacs was fenestrated.

CONCLUSIONS

In the light of our experience, scrotal approach for hydrocele repair in children would be difficult to deal with incarceration of hernia. Omental incarceration may cause hydrocele and this hydrocele may be confused with normal hydrocele. Therefore, we still recommend inguinal approach for childhood hydroceles.

PO.24. OPERATIVE TREATMENT OF RARE PENIL MALFORMATIONS IN CHILDREN

Iodkovskij K., Kovalchuk V., Hmelenko A. (Belarus)

INTRODUCTION

Those malformations (webbed penis-WB, buried penis-BP) are met much more often than it is considered.

MATERIALS AND METHODS

In the years 1999–2010 in our clinic 28 boys (aged 3–13 years, mean age – 6 years) with penis abnormalities were operated; Buried penis was revealed in 16 boys, webbed penis – in 7, a hypospadias with a chordee – in 5. Correction of WB was performed by a dissection of a dermal fold transversely and a sewing up in length, in 2 cases with the usage of a Z-shaped plastics for tension removal in penoscrotal angle. Complications after correction were not observed, in all cases cosmetic results were good.

RESULTS

Operative correction of BP was performed in several ways. The penis was set free from subcutaneous fat, under the base a circular incision was performed. The penis was released from adhesions and sutured up a dermal wound for the base with noose sutures. In 5 cases on a ventral surface of the penis base was dissected with a triangular skin flap to densely embrace the penis base. The wounds healed a primary tension, however, almost for all patients after the operation the penil edema developed that reduced spontaneously within 2–4 weeks. Therefore for 4 patients a diverse operative technique was applied. For the penis base an arc-shaped incision was performed without dissection of the skin of dorsal surface. Then the penis was wrapped with the mobilised skin, the flap base fixed a deep suture with acquisition of a deep velum over an urethra, excess of prepuce exsected. At the yielded mode the penil edema was insignificant.

5 boys were operated for hypospadias with chordee. For 1 patient there was performed a 2 stage operation: stage 1 – penis rectification and offset of external bore of an urethra proximally; stage 2 – an urethroplasty on Dupley in 12 month. In 4 patients mobilization with albuginea sutures was sufficient for correction of penis curvature.

CONCLUSIONS

A successful operation allows the child to integrate successfully in society by the rigorous person and to prevent the development psychosomatic complexes.

PO.25. CAUDAL REGRESSION SYNDROME IN PATIENTS WITH HIGH ANORECTAL MALFORMATIONS

Lobaceva J., Mezale O., Kakar M., Platkajis A., Engelis A., Petersons A. (Latvia)

INTRODUCTION

Caudal regression syndrome or sacral agenesis is a rare congenital disorder. It occurs at a rate of approximately 1 per 25,000 live births. Its association with anorectal malformations is documented in various publications. The patients suffer from significant pelvic innervation impairment. Spinal and pelvic pathology radiological screening had not been performed for patients with anorectal malformations earlier in Latvia.

OBJECTIVE, MATERIALS AND METHODS

6 patients with a high anorectal malformation underwent surgery at the Children's Clinical University Hospital from 1999 to 2009. In these patients we performed magnetic resonance imaging (MRI) of the pelvis and spine in order to visualize the structure of the spine and any presence of bone or soft tissue abnormalities. During the examination, an additional radiological screening of the urogenital system was scheduled. The sacral ratio index was counted in plain radiograph simultaneously. The aim was to improve diagnosing, treatment strategy and possibly early prediction of the future quality of life for anal atresia patients

RESULTS

Caudal regression syndrome with complete coccygeal and partial sacral agenesis was detected by MRI in all 6 patients. In 5 patients sacral agenesis was found in the S3 level, but 1 patient - S4 level. In 2 patients we found spina bifida occulta of the sacral spine. In 3 patients we found low localized spinal cord (in the L2, L3 and L5 levels). Mean sacral ratio index in patients was 0.435 (0.32-0.62). In 2 patients we found a formation into the spinal canal, which, however, is unlikely to post any significant effect on the pelvis or lower limb function.

CONCLUSIONS

1) Sacral index is a good predictor of sacral hypo-development. Lumbosacral MRI verifies caudal regression syndrome. 2) MRI should be performed in the neonatal period and then repeated after the surgical correction approximately at 1 year of age. 3) Treatment of such patients requires a team involving pediatric surgeon, radiologist, neurosurgeon, urologist and gynecologist.

ACKNOWLEDGEMENT

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PO.26. METHOD IN REHABILITATION OF CHILDREN WITH ANORECTAL PATHOLOGY

Novitskaya S., Dzehtsiarou Y. (Belarus)

MATERIALS AND METHODS

182 patients with postoperative anal sphincter insufficiency were treated in the Pediatric Surgery Center from 1997 to 2011. Operative anorectal pathology correction had been administered to all of the patients who had various anorectal pathologies. Only children aged 5 and older underwent the rehabilitation process because younger patients initially had a negative attitude to it and refused to take part in the experiment. The patients complained basically on fecal incontinence (60%) and kalomazanie (40%).

RESULTS

The System Feedback Stimulator is a new type of equipment which gives an opportunity to control in the real-time regime the physiological parameters of a patient and this idea was used in the treatment. The therapeutic effect of the method is based on the corticovisceral connection reconstruction that is in charge of the anal sphincter function. Biological feedback method gives the patient video or/and audio forms of information about his/ her current physiological parameters. In the course of the feedback procedure the patient can consciously change these physiological parameters if he/she is fully familiar with them. Thus, the activation level of the parameter regulatory system in the brain changes as well. This technology helps to halve rehabilitation terms. The patient has to tense the anal sphincter and to keep this tension at the necessary level. At this time the device (EMG-sensor) registers the electromyogram and shows this information on the screen in the form of graphics for adults or like a game for children. The efficiency of this method is controlled with the help of electromyography (EMG). Contractile anal sphincter function is registered by interfacial EMG. Average amplitude is 300 ± 59 microvolt. Bioelectrical activity of this muscle gradually increases, so the amplitude reaches its climax after 15 minutes of stimulation. Complete remission or reliable decrease of the amount of fecal incontinence (when patients are satisfied with the quality of their life) were considered to be the positive results.

CONCLUSIONS

Biological feedback method is noninvasive, cheap and practically does not have any contra-indications. It is an effective method of postoperative rehabilitation of children with anorectal pathology.

PO.27. DIAGNOSIS OF CONGENITAL MALFORMATIONS OF GENITOURINARY SYSTEM AND MEDICAL TACTICS IN THE POSTNATAL PERIOD

Kovalchuk V., Iodkovskij K., Rakevich M., Motjuk I., Hmelenko A. (Belarus)

ABSTRACT

Conventionally it is considered that congenital malformations of the urinary tract (GUT) are easily to reveal. Duly and exact antenatal diagnosis of congenital malformations (CM) of GUT has an impact on the pregnancy outcome and the future life of the newborn. Ultrasonic screening of pregnant women provides three multiple examination of a fetus in 10–14 weeks, 18–22 weeks, 30–32 weeks. The accuracy of prenatal pathology diagnosis is 78–91%. Out of 25000 inspected women in 489 pregnant women CM was revealed, among them in 126 cases in a fetus the pathology of GUT has been found. The USG executed in the prenatal season has revealed the following pathological fluctuations: hydronephroses – 41(32.5%), cystic dysplasias – (6.3%), kidney hypoplasia – 6 (4.8%), solitary cysts – 5 (4%), pyelectasises – 48 (38%), megaloureter – 12 (9.5%), an aplasia – 4 (3.2%), dystopic kidney – 2 (1.5%). USG done on the 3rd–4th day of life of the newborn did not confirm the diagnoses exhibited prenatally (from 21 to 32 weeks of pregnancy) in 16 cases (20%): in 9 cases the diagnoses were not confirmed (pyeloectasises – 5 cases, a hydronephrosis of 1 degree – 1 case, solitary cysts – 3 cases), in 4 cases increasing of a degree of hydronephrosis was found, in 3 cases the process had decreased. After detection of GUT CM in a decompensated stage or in the case of infectious contamination of the urinary tract the newborns were admitted to Grodno Regional Pediatric Hospital (GRPH), the department of newborns. The other children were discharged home under the supervision of the pediatricist and the pediatric urologist. USG control of kidneys was performed every month; if the degree of hydronephrosis increased, the patients were admitted to GRPH hospital for examination and treatment; at the decrease of obstruction of GUT dispensary observation proceeded.

CONCLUSIONS

Newborns with the revealed abnormalities of GUT should be observed by pediatric urologist with USG control for deciding on further tactics.

PO.28. COMPLEX UROGENITAL SINUS ANOMALIES: SURGICAL REPAIR

Varik K., Kubarsepp., Tica C., Ardelean M.A. (Estonia, Romania, Austria)

OBJECTIVE

The aim of the study is to present the challenging surgical treatment of complex forms of urogenital sinus (UGS) anomalies.

MATERIALS AND METHODS

Many studies published in the last 15 years contribute to the improvement of treatment of children with UGS associated with CAH, cloacal persistence, or with “simple forms” of UGS. Five patients with rare forms of UGS are reviewed.

RESULTS

A 10-year-old girl with urogenital sinus, agenesis of the bladder and vagina. An ileal bladder replacement, ureteral reimplantation, and continent urinary diversion were performed. She is socially continent.

A 2-year-old girl with urethral agenesis, megabladder, narrow vesicovaginal fistula and introitus stenosis. To date the patient has a continent urinary diversion (Mitrofanoff stoma), but she is still incontinent through vesicovaginal fistula. She is scheduled for the closure of the fistula.

A 9-year-old girl with cloacal persistence, covered exstrophy and abnormalities of labia minora & majora. In infancy urethra-vagino-anorectoplasty were performed. Later she presented with introitus stenosis. The introitoplasty and the correction of labia minora and labia majora were undertaken. The patient is continent.

An 8-month-old girl with posterior cloaca, accessory urethra and hydronephrosis. Surgical treatment consisted of an UM with a transanorectal approach. She is continent.

A 7-year-old girl with posterior cloaca, accessory urethra, hydrocolpos and urine incontinence. Correction was achieved by urogenital mobilization (UM). The child is continent and has a normal calibrated vagina.

CONCLUSIONS

Patients with UGS and normal anorectum should be continent after repair.

In most patients with complex abnormalities social continence can be achieved.

PO.29. CLOACAL MALFORMATIONS: EXPERIENCE OF SURGICAL TREATMENT

Shahtarin A., Kirgizov I., Shishkin I. (Russia)

OBJECTIVE

The persistent cloaca represents one of the rarest congenital malformations of the ano-rectal areas. Frequency of the disease is about 1:50000 to 1:250000 newborns. The aim of the study was to optimise the experience of surgical treatment of cloacal malformations.

MATERIALS AND METHODS

In 2005–2011, 12 patients from Russia, Kazakhstan and Azerbaijan, aged 1 till 16 years, were operated in our department. It is necessary to note that in the first stage all patients imposed colostoma at their residence. The basic stage consisted in carrying out combined laparotomy and postsagittal proctoplasty.

RESULTS

In 33.3 % of patients abdominoperineal proctoplasty by distal part of the colon, and urethra and vagina division, with a subsequent plasticity, by postsagittal access. In 50 % of patients abdominoperineal pullthrough, and vaginoplasty was performed by using of the distal segment of colon, in 8.3 % vaginoplasty was spent with the use of ascendant colon. In the most difficult case of one girl, owing to complexity of the vascular archytectonics, the vaginoplasty has been executed by a segment of ileum.

CONCLUSIONS

Our experience testifies that separation of cloaca is not obviously possible without carrying out laparotomy and postsagittal proctoplasty as a single-stage. Thus, during the laparotomic stage, due to the length of the deferent part of a colon and its features of blood supply, the issue of the proctoplasty way is solved, and postsagittal access promotes definition of an optimum way of the urethro - and vaginoplasty.

PO.30. REPEATED RECONSTRUCTIVE REPARATIVE OPERATIONS IN 16-YEAR OLD GIRL WITH PERSISTENT CLOACA

Shishkin I., Kirgizov I., Prudnikova T., Shahtarin A. (Russia)

OBJECTIVE

To estimate the results of surgical correction of persistent cloaca in a 16 year old girl after abdominoperineal proctoplasty, executed in early childhood.

MATERIALS AND METHODS

The malformation was diagnosed right after birth, sigmoidostoma was applied. At the age of 4 - abdominoperineal proctoplasty was executed. On admission the girl was 14 years old. Complaints on fecal and urine incontinence. In the first stage perineal anosphincter-levatoroplasty was carried out. In 2 years: separation of the urogenital fistula, formation of the vagina fornix, urinal reservoir, neoimplantation of the ureters by Politano. Formation of the bladder cervix, vesicostomy. After the operation urine evacuation was carried out by catheterization. In 2 months the girl started to urinate self-dependent, the urine volume was up to 300–350 ml, frequency rate about 5–6 times a day, thus during the day urine leakage was not marked. Against imperative feeling of urination, keeps clear and dry. Vesicostoma closed independently in 3 weeks.

RESULTS

At control examination we revealed that the closing function of anal sphincter is satisfactory. The vagina fornix is generated correctly, structured. The outlet of the vesicostoma is not visualized. As a result of the performed correction, the girl completely keeps control, the bowels movements are regular, fecal and urine incontinence is not present. Miction is independent, painless, catheterization is not required. The child attends school, can practice dosed physical activities.

CONCLUSIONS

Separation of the urogenital fistula and vagina formation at advanced age represents a challenge, demanding careful analysis and scheduling of surgical correction in several stages. Previously the cases of persistent cloaca abdominoperineal proctoplasty was performed without separation of the urogenital fistula, which led to complications in the urinogenital system.

PO.31. MINIMALLY INVASIVE TREATMENT OF URETERAL CALCULI IN CHILDREN

Karaoglan U., Tan M.O., Sozen S., Biri H., Bozkirli I. (Turkey)

INTRODUCTION

Although shock wave lithotripsy (SWL) is generally accepted as first line treatment in ureteral stones, the development of small sized ureteroscopes and laser technology enabled the use of ureteroscopy in the paediatric age group.

OBJECTIVES

Evaluate the efficacy of shock wave lithotripsy, ureteroscopy and open surgery in the treatment of pediatric ureteral calculi.

MATERIALS AND METHODS

We reviewed the records of 67 (35 boys, 32 girls) children (71 ureters) admitted to our clinic for treatment of ureteral calculi. The initial treatment method was SWL in 80.3% (57 ureters), ureteroscopy in 11.3% (eight ureters) and open surgery in 8.5% (six ureters) of the renal units. SWL was performed with a Siemens Lithostar plus device in the prone position under dissociative anaesthesia. The indications for open surgery were a coexistent anomaly (like ureterovesical junction obstruction), high stone burden, failure of SWL or ureteroscopy. The mean age of the patients was 10.67± 4.4 (1-16) years.

RESULTS

The stone-free rates after SWL for upper, middle and lower ureteral calculi were 74.1, 100 and 75.9%, respectively. Increased stone diameter ($p = 0.014$) and/or burden ($p = 0.002$) were found to be significant factors that had an adverse effect on the stone-free rate after SWL while the success rates of SWL were independent of location. Including six patients (seven ureters) with failed SWL, a total of 14 patients (15 renal units) subjected to ureteroscopy for lower ureteral calculi yielded a stone-free rate of 93.3%. Thus, the overall stone-free rates after SWL, ureteroscopy and open surgery were found to be 75.4, 93.3 and 100%, respectively.

CONCLUSIONS

Depending on the stone burden, SWL might be a good option for initial treatment of most ureteral calculi in children. Ureteroscopy offers a high success rate for lower ureteral calculi, including SWL failures.

PO.32. INFUNDIBULOPELVIC INDEX: A MORE POWERFUL PREDICTOR FOR THE LOWER POLE STONE CLEARANCE AFTER SHOCKWAVE LITOTRIPSY IN PAEDIATRIC STONE PATIENTS

Kupeli B., Gurocak S., Ure I., Karaoglan U., Bozkirli I. (Turkey)

INTRODUCTION

Extracorporeal shock wave lithotripsy (SWL) has become the standard initial treatment for most of the renal calculi in children and several intra-renal anatomic features have been studied and found to be important factors for the outcome of SWL treatment, especially for lower caliceal stones.

OBJECTIVE

Our aim in this study is to show that the combination of lower pole pelvicaliceal anatomic features in a single index can be more predictive than considering every single anatomic feature alone.

MATERIALS AND METHODS

The clinical records of children with lower caliceal stones who underwent SWL between 2002–2008 were reviewed. After excluding patients with ureteropelvic obstruction, major renal anatomic abnormalities, non-calcium stones, metabolic abnormalities, history of recurrent stone disease, multiple stones and previous renal surgery 25 patients were enrolled in the research study. Lower pole infundibulopelvic angle (IPA), infundibular length (IL) and width (IW) were measured from intravenous pyelography. Infundibulopelvic index (IPI) was calculated as $(IPA \times IW \times 100) / (IL \times \text{stone size} \times \text{pelvicaliceal volume})$.

RESULTS

The mean stone size was 72.4 ± 49.4 mm². Overall stone-free rate was 80%. There were no statistically significant difference in IPA, IL and IW values between patients with residual stones and stone-free patients, respectively ($p=0.06, p=0.81, p=0.21$). Also no statistically significant difference was found in stone size ($p=0.27$), total pelvicaliceal volume ($p=0.07$) and SWL parameters. However IPI was significantly different between two patient groups ($p=0.04$).

CONCLUSIONS

Results of this study let us think that although every single anatomic variation might have some effect on the SWL outcome of lower caliceal stones in pediatric patient basis, combination of all these anatomic parameters alongside with including the stone size in a single index could be a more accurate predictive tool because every single anatomic feature is a part of the whole.

PO.33. MODIFIED BRACKA'S TWO STAGE REPAIR OF PROXIMAL HYPOSPADIAS – OUR FIRST EXPERIENCE

Gilis A., Pugacevska D., Kurmina E., Dobelis J. (Latvia)

INTRODUCTION

Proximal hypospadias still remains a great challenge for any pediatric surgeon. Despite many methods in use there are still many controversies in choice of urethroplasty. In our clinic we are following the simple protocol suggested by Dr. A.Bracka and Dr. W.Snodgrass – TIP repair if there is no need for urethral plate division and two-stage graft procedure in the cases with plate transection.

OBJECTIVE

To evaluate our results in the treatment of proximal hypospadias and to demonstrate our first experience with a modified two-stage graft repair.

MATERIALS AND METHODS

In the five year period 2006–2011, 37 patients with primary proximal hypospadias underwent surgical repair by the same surgeon at the Children's Clinical University Hospital in Riga. One stage TIP urethroplasty was done in 13 cases, the two-stage Bracka urethroplasty was used in 20 cases, while 4 patients underwent a modified Bracka two-stage repair (the classical two-stage graft procedure with testicular tunica vaginalis flap coverage over the neourethra during the second stage).

RESULTS

In TIP group 4 patients (30.7%) had complications, glans dehiscence (2), fistula (1) and neourethral stricture (1). In the Bracka two-stage group complications occurred in 9 (45%), glans dehiscence (3), fistula (4) and neourethral stricture (2). Only one patient developed complications in the modified Bracka two-stage repair group. It was serious urethral stenosis which required later surgery and was successfully treated by using Snodgraft technique.

CONCLUSIONS

The Bracka two-stage repair remains a good and versatile technique for primary proximal hypospadias repair when urethral plate division is needed. Technical modification suggested by Dr.W.Snodgrass when tunica vaginalis flap is used to cover the neourethra gives promising results for improving the outcome of proximal hypospadias surgery.

PO.34. TREATMENT OF THE HYPOSPADIAS IN CHILDREN

Kovalchuk V., Iodkovskij K., Hmelenko A. (Belarus)

INTRODUCTION

Hypospadias is one of the most wide-spread malformations of the penis. Complication rate after hypospadias repair depending on the type of operation is about 11.5–35%.

OBJECTIVE

To present the results of treatment of hypospadias in children.

MATERIALS AND METHODS

In the Clinic of Pediatric Surgery at Grodno State Medical University (GSMU) 198 children with miscellaneous forms of hypospadias were operated in the period 2001–2010. The MAGPI operation was performed at glanular, coronal and distal forms without chordee (49). In 5 patients (10.2%) fistulas occurred, in 2 there was recurrence of hypospadias. Complications occurred mostly after the Mathieu operation (an inverted dermal flap from a ventral surface of the penis). 26 children were operated, fistulas occurred in 8 (30%), necrosis of skin flap – in 3 patients. The one-stage Duckett operation with our modification was used for proximal penile, penoscrotal and scrotal. 8 patients were operated, in 2 (25%) fistulas occurred, in 1–stricture of neourethra. Two-stage operations were performed in 21 patients, the first stage of operation–correction of curvature was performed by Ombredan-Majs manoeuvre. After 6–12 months the second stage of operation–an urethroplasty was executed by Duplay. Beneficial effects are seen in 17 patients (80%). During all types of operations we always formed an external urethral opening at the top of balanus. The Snodgrass operation is used in our clinic since 2004. In 2006 we began to apply a subcutaneous flap for closure and solidifying of the suture line of neourethra. The Snodgrass operation was performed in 58 patients, among them 49 in a modified procedure. Complications in this group: fistulas in 7 patients (14%), in 2 patients – a stricture of neourethra.

CONCLUSIONS

Selection of the operation method depends on the value of a chordee, an offset value of an external urethra opening, retention of metal stenosis, a dysplasia of a skin of a ventral penile surface, retention or lack of a spongy tissue round a distal part of urethra.

PO.35. CHANGING RATES OF COMPLICATIONS IN HYPOSPADIAS SURGERY DURING THE LAST TWO DECADES

Valentinaite V., Gricius K., Puzinas A., Bilius V., Verkauskas G. (Lithuania)

OBJECTIVE

To evaluate changes of hypospadias surgery at our institution during the last two decades with special attention to the complication rate.

MATERIALS AND METHODS

All patients with hypospadias who had had the first repair in our department and had no other genital malformations were subjected to the research. The patients were assigned to two groups depending on the time of the performed operation: 1991–2000 or 2001–2010. We analyzed the complication rate according to the grade of hypospadias, and the age at the first operation. Complications were considered if listed in a carefully recorded database. Repeated operations on the same patient were also regarded as complications of the primary repair if not initially planned as a two-stage procedure. The year 2011 was checked for the previously operated patients.

RESULTS

975 patients were included in this study. 515 patients underwent repair between 1991 and 2000 and 460 patients – between 2001 and 2010. In the first group 59.6% of the patients had no complications, in the second group – 73%. Mean age at the first operation during the first decade was 5.4 years (range 0.1–19 years) and 4.1 years (range 1–17 years) during the second period.

CONCLUSIONS

With improvement of surgical techniques and suturing materials, the complication rate has decreased. However, hypospadias surgery remains complicated and further improvement is warranted.

PO.36. BIOMECHANICAL PARAMETERS OF PYELOURETERAL SEGMENT IN NEWBORNS – FIRST RESULTS

Pugacevska D., Petersons A., Kasjanovs V., Dobelis J., Gilis A. (Latvia)

INTRODUCTION

Congenital hydronephrosis is the most common cause of antenatally diagnosed hydro-nephrotic transformation. More than 80 % of children undergo spontaneous regression during the first year of life, only those having progressive forms and causing renal dysfunction require surgical treatment. There are no studies about biomechanical parameters of pyeloureteral segment (PS) in newborns.

OBJECTIVE

Experimental session for evaluating biomechanical parameters of PS in newborns.

MATERIALS AND METHODS

Six samples of PS were collected during conventional pyeloplasty from September 2010 to November 2011. The inclusion criteria were as follows: 1) PS of newborn aged 23 days to 7 months, 2) increasing anterior-posterior diameter and/or decreasing renal parenchyma, 3) radiologically proved obstruction of PS, 4) macroscopically visualized zone of stenosis during operation. Five control samples were collected during autopsies of newborn without genitourinary tract pathology. All samples were standardized by dimensions – 3.5 mm width and 30 mm length. Biomechanical evaluation was performed by using the Zwick Roell loading device. The samples were deformed longitudinally at the speed 5 mm/min. PC software Testexpert 11.02 was used to calculate failure strength, failure strain and elastic modulus.

RESULTS

Correlation between strength and strain was non-linear. Failure strain of pathological samples were twice higher than in the control group ($74.92 \pm 8.84\%$ v. $37.32 \pm 2.48\%$; $p < 0.05$). Also disruptive strength ($1.3 \pm 0.2 \text{ MPa}$) and elastic modulus ($4.1 \pm 0.79 \text{ MPa}$) in the patient samples were significantly higher than in the control group ($0.99 \pm 0.17 \text{ MPa}$ and $4.43 \pm 0.5 \text{ MPa}$; $p < 0.05$).

CONCLUSIONS

Pathological segment tissue has higher rates of deformability and tolerance for longitudinal tension than normal tissue. Further research of biomechanical parameters, analyzing the internal pressure of segments and transverse deformation, is necessary for allowing the introduction of new treatment methods in the future.

ACKNOWLEDGEMENT

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PO.37. VIOLENCE-RELATED CHILDREN INJURIES IN LATVIA

Springe L., Villerusa A., Zile I. (Latvia)

INTRODUCTION

Violence-related injury remains one of the leading causes of child mortality worldwide. According to the European Union Injury Data Base estimates the current homicide rate is the highest in the Baltic region.

OBJECTIVE

To characterize violence-related children injuries in Latvia during the years 2009–2011.

MATERIALS AND METHODS

The data from the Register of Patients, aged up to 18 years, who had suffered injuries and were hospitalized for injury during 2009–2011 were used. Out of total 12 791 injuries, 667 (5.2%) were violence-related. The cases were categorized in age groups: up to 1 year, 1–5, 6–12 and 13–17 years. The type of injury was categorized in seven groups: contusion, open wound, fracture, dislocation/sprain, brain concussion, burns and other.

RESULTS

During the study period violence-related injuries made up 5.2% of all child injuries reported to the Register. Proportionally, from all men injuries 6.3% (95%CI [5.8; 6.8]) were due to violence, but in women - 3.4% (95%CI [2.96; 3.99]). Comparing violent-related injuries among the age groups, the highest proportion is seen between the years 13–17 - 10.9% (95%CI [10.0; 11.8]), followed by the age group 6–12 - 3.3% (95%CI [2.9; 3.9]). The most widespread injuries were contusions (37.3%), brain concussions (29.7%), fractures (17.8%) and open wounds (9.0%). Mostly violence-related injuries occurred at home (53.4%), in the streets (17.1%) and at school (15.3%).

CONCLUSIONS

Age and gender of the victim determines the risk of violence-related injury. Proportionally violence-related injuries occur more often in men and in the age group 13–17 years. Contusions, brain concussions and fractures were the most frequently registered injuries. Mostly violence-related injuries had occurred at home.

PO.38. RELATIONSHIP BETWEEN FOREIGN BODY INGESTIONS AND CULTURE

Karabulut R., Sonmez K., Turkyilmaz Z., Demirogullari B., Ozen I.O., Guclu M., Basaklar A.C., Kale N. (Turkey)

OBJECTIVE

Evaluation of the results of our experiences in foreign body (FB) ingestions in our country.

MATERIALS AND METHODS

Medical records of 73 patients who were treated for FB ingestion were evaluated retrospectively. Demographic data of the patients and complications of the surgery were noted. Chest and/or cervical X-rays were used for radiologic assessment of the patients. Removal of FB in the esophagus was performed by rigid esophagoscopy.

RESULTS

The children's age ranged from 1.5 months to 15 years (mean age 4 years), and 59% of them were boys. Of all children, 41% were between 1.5 months and 2 years of age, 21% between 2 and 5 years of age, and 38% were older than 5 years.

The majority of the FB swallowed were coins and safety pins, accounting for 75% and 13% of all FB, respectively. Rigid esophagoscopy was performed in all patients, and no complication was encountered, except for two patients who had ingested safety pins. In these two cases an operation was performed 3 months after the ingestion because the safety pins did not change their places in the stomach.

CONCLUSIONS

The ingested foreign body varies according to the culture. The urgency of the situation caused by ingestion of foreign body is therefore in some respect dependent on the cultural constituency of the society the patient lives in, a fact that a physician should consider when dealing with ingested foreign bodies.

PO.39. GASTROINTESTINAL INJURIES FROM MAGNET INGESTION IN CHILDREN – CASE REPORT

Taal M. (Estonia)

INTRODUCTION

Children usually swallow radiopaque objects, such as coins, pins, screws, button batteries, or toy parts. The majority of ingested foreign bodies pass spontaneously, but serious complications, such as bowel perforation and obstruction, can occur. An estimated 40% of foreign body ingestions in children are not witnessed, and in many cases, the child never develops symptoms. 50% of children with confirmed foreign body ingestions are asymptomatic unless complications occur.

ANALYSIS OF CASE REPORT

22 month-old boy, presented with vomiting and abdominal pain for the last 3 days. General physical and systemic examinations were unremarkable. No lesion was found on external examination beside abdominal distension. Hematological and biochemical investigations were within normal limits. The ultrasound of the abdomen was normal. In plain abdominal X-ray there was seen a metal foreign body in the bowel. His mother told that he was playing with magnetic balls together with his older brother 3 days ago. During the exploratory laparotomia conglomeration of bowels was found with 8 bowel perforations caused by 17 cylindrical magnetic balls (4mm in diameter) stuck together. The magnets had magnetically joined across three loops of intestine and one loop of colon, causing bowel necrosis and perforations. The magnetic balls were removed, perforations sutured and the patient was discharged home on the 8th postoperative day in good condition.

CONCLUSIONS

Foreign body ingestion is a common occurrence in the pediatric population. Diagnosis is often delayed because it is difficult to obtain a precise history of foreign body ingestion. In many cases ingested foreign bodies pass spontaneously without complications. Initial signs and symptoms of injury are nonspecific, leading to delayed diagnosis and greater injury. Even when parents know a child has swallowed magnets, they might assume that such small pieces will pass normally. Radiologic examination cannot confirm whether the objects swallowed are magnetic and whether they are in separate sections of the gastrointestinal tract with tissue between them. Multiple magnets may align together in a rod or cylinder shape and may appear as a single object.

Surgical intervention is required for about one percent of foreign body ingestions. Multiple magnet ingestion produces bowel injuries, including bowel obstruction, ischemia, necrosis, perforation and surgical intervention. This case report highlights the complications that might occur with multiple magnet ingestion.

PO.40. INGESTION OF MULTIPLE MAGNETS – A RARE BUT SERIOUS CONDITION IN PAEDIATRIC TRAUMA

Kakar M., Svekļis J., Zviedre A., Barauskas V., Engelis A., Petersons A. (Latvia, Lithuania)

OBJECTIVE

The purpose of this paper is to demonstrate the risks and raise awareness to dangers associated with magnet ingestion in children. Accidental ingestion of multiple magnets can cause serious morbidity and mortality in children.

MATERIALS AND METHODS

We report a short series on three patients from two institutions in the years 2008–2010,. Data concerning the age, sex, anamnesis, diagnosis and treatment were analyzed to raise social awareness among parents and caregivers.

RESULTS

All three patients were hospitalized in the emergency department with distended abdomen, sharp abdominal pain and repeated vomiting. Abdominal X-ray revealed multiple metallic objects. Immediate surgery was scheduled. The operation revealed multiple magnetic objects with decubitus of the intestine wall and magnets stuck together, making penetration and forming fistula by pressure necrosis. Foreign bodies were evacuated along with excision of decubitus at multiple places. The anamnesis of all the patients did not reveal the place, time and type of foreign body ingestion. Psychosocial, psychiatric, and developmental risk factors were noted in one patient. All patients underwent surgical treatment without any complications. Recovery after the surgical intervention was slow, but steady.

CONCLUSIONS

Early surgical intervention should be considered in case of multiple magnet ingestion to prevent complications. The focus should be on awareness raising among parents and caregivers about hazardous complications of magnet ingestion. Toys with magnets should come with warning signs for buyers and should be considered as a serious risk factor in pediatric trauma.

PO.41. SPLENIC INJURY IN CHILDREN

Chooklin S., Pereyaslov A. (Ukraine)

INTRODUCTION

Splenectomy in children often leads to multiple complications in the nearest and remote postoperative period and can have unfavourable consequences.

MATERIALS AND METHODS

There were examined 73 children (aged 4 to 14 years), undergoing surgical and drugs intervention on lien due to its injury. Immunological and hormonal investigations after splenectomy were performed. Out of 68 operations performed 39 were splenectomy, 6 cases of splenectomy with the tissue autotransplantation of the spleen in the greater omentum and 23 cases of the organ-preservation operations. 5 patients received conservative therapy treatment. The 1st degree of the spleen damage was diagnosed in 8, the 2nd degree - in 21, the 3rd degree - in 21, the 4th degree - in 18, the 5th degree - in 5 patients. Two-moment rupture of the spleen was verified in 4 cases.

RESULTS

Purulent-septic postoperative complications were marked in 9 patients caused by inadequate immune response. Obvious T-cellular immunodeficiency, low concentration of IgM, decrease of phagocytosis were observed in this category of patients. The autotransplantation of the spleen tissue normalised immunohormonal parameters and activated the compensatory functions to some extent. However, the hemocoagulative disorders intensified. For the complications prophylaxis in the postoperative period the usage of thymic hormones, interferon *, aspirin and dipyridamol were suggested. Later the postsplenectomy syndrome manifested itself in patients who had undergone the splenectomy in their childhood. Given this predisposition to infections thrombohemorrhagic processes prevailed.

CONCLUSIONS

The autotransplantation of the spleen tissue could not provide defence of the organism in full. Thus, at traumatic injury of the spleen the organ preservative operations should prevail.

PO.42. ANORECTAL INJURIES IN CHILDREN: TREATMENT GUIDELINES

Kakar M., Lobaceva J., Mezale O., Canarelli J.P., Engelis A., Petersons A. (Latvia, France)

INTRODUCTION

Perineal traumatic injuries are not very common in children. The management of perineal trauma in children is very challenging in the absence of standardized well-defined guidelines. The purpose is to demonstrate the performance in two centres, compare the results of 4 patients case reports and evaluate the treatment guidelines.

MATERIALS AND METHODS

I Case: UPJV University Hospital, Amiens (France). A 15-year old boy was brought to the emergency ward after he had fallen on his bicycle handlebar after a jump. Immediate CT showed the handlebar entering the left scarpa crossing the pelvis to the skin of the right buttock with no perforation of intraperitoneal organs. The boy was rushed to the operating room. A Foley catheter was placed preoperatively due to the suspicion of bladder rupture. An exploratory enlarged laparotomy up to the inguinal wound was performed to clear any intraperitoneal injury. The exploration of the pelvis revealed a crossing wound of the anterior and the posterior faces of the bladder as well as extraperitoneal. The bladder was closed in 2 layers around the Foley catheter. The rectum was diverted with lateral sigmoid colostomy without repairing the rectal injuries. The patient was discharged successfully without any serious complications.

II Case: UPJV University Hospital, Amiens (France). A 10-year old girl was transported from a peripheral hospital to the emergency with a picture of peritonitis with fever and vaginal bleeding, the anamnesis revealed that while jumping into a brook in a sitting position she impaled herself on a wooden branch in the stream. CT scan defined the position length and thickness of the wooden branch and perforation in the peritoneal cavity. It had entered the anus and passed through the anterior wall of the rectum, vagina and uterus. She was immediately rushed to operation - median laparotomy. The foreign body was evacuated and the fragmented uterus sutured and drained, the rectal wound was not closed and a sigmoid loop colostomy was performed. A recto-vaginal fistula was detected after 6 weeks during the closure of the colostomy. A vaginoscopy revealed a fragment of the branch persisting which was removed successfully but 5 weeks later, the second opacification showed a persistent fistula. An MRI revealed a 5X3 mm fistula. The scheduled closure of the fistula was planned in 4 months after the accident. In 6 months after the accident total colostomy closure was performed successfully without any consequences.

III Case: The Children's Clinical University Hospital, Riga (Latvia). A 10-year old boy was brought to the emergency with a diagnosis of *Vulnus lacerate perinei sin*, the anamnesis revealed that while jumping from a tree he fell on a sharp wooden stick. Visually, a lot of bruises on both the legs, perineal wound approx. 4-5 cm, checking with the finger revealed that one canal is along the pelvis 8-10 cm and the second enters the rectum. Immediately laparotomy with colostomy and closure of the rectal wound, as the wound was more than 7 cm large, and drainage were performed. After 2 weeks rectoscopy was performed to examine the rectal wound and 3 weeks after the first surgery colostomy closure was performed. The hospital stay was uneventful and discharged without complications.

IV Case: The Children's Clinical University Hospital, Riga (Latvia). A 9-year old boy was rushed to the emergency with the diagnosis of *Vulnus lacerate perinei dx*, the anamnesis

showed while sitting on a chair with a broken leg unknowingly he had got 3X1 cm deep wound ventral to the anal canal. The surgeon on duty in the emergency performed the primary closure of the wound and drainage. On the 4th day due to the unsuccessful closure and discharge from the wound a rectoscopy was performed and 10 cm deep in the pararectal canal a 15 mm damage to the rectum wall was discovered. Immediately laparotomy with colostomy with drainage was performed. 3 months after the first operation a re-diagnostic rectoscopy was performed and the planned colostomy closure was done. The patient was discharged with no further uneventful events.

CONCLUSIONS

The current standard guidelines in the treatment of severe anorectal injuries in children remain fecal diversion colostomy, wound drainage, and broad spectrum antibiotics. The authors emphasize extensive diagnostic investigation, especially rectoscopy on admission. The prognosis of penetrating perineal and transanal injuries in childhood is good, even in the cases with severe anorectal damage when the standard of the above mentioned guidelines is followed.

PO.43. MANAGEMENT OF CHILDREN WITH BURNS IN THE DEPARTMENT OF PAEDIATRIC SURGERY OF TARTU UNIVERSITY HOSPITAL (2002–2008)

Varimae E.A., Eller M. (Estonia)

OBJECTIVE

To study the epidemiology and surgical treatment of burns in children in the Department of Pediatric Surgery of TU Hospital.

MATERIALS AND METHODS

Retrospective analysis on the basis of the case records of the Department of Pediatric Surgery of TU Hospital.

RESULTS

During the 7 year period 253 children with a burn trauma were treated, among them 171 (67.6%) boys. 124 (49%) children were urban residents, 184 (72.7%) were under 3 years of age and 15 (5.9%) were above 10 years. The most frequent causes of burns were the following: burns with hot liquids in 204 cases (80.6%), contact in 21 cases (8.3%) and flame in 21 cases (8.3%). Average burn surface was 7.9% TBA. Average length of anamnesis was 36.9 hours. 165 children (65%) were hospitalised within 3 hours and 39 (15%) children, within more than 3 days. Average hospital stay for burn patients was 9.4 days. Average hospital stay for medically treated children was 6.5 days. 141 (55.7%) children were treated surgically, among whom 94 (66.7%) were boys. Among the operated children 105 (74.5%) were <3 years old and 10 (7.1%) were >10 years old. The cause of burns in the operated children was hot liquid in 107 (75.8%) cases and flame in 13 (9.2%) cases. Average burn area was 8.5% TBA. In most cases burns involved several regions, more often the neck, the chest, the upper and the lower extremities. The patients were operated average 4.4 days after the trauma. Average skin grafty was 4.0% (0.1–17%) of TBA. Repeat operations were required in 5 cases (3.5%) The cause of repeat operations was infection, transplant necrosis or insufficiency of donor surface. Average hospital stay for the operated patients was 10.9 days.

CONCLUSIONS

Burns are more frequent in boys and at the age <3 years. The most frequent cause of burns was hot liquids. 55.7% of the patients were operated, and average skin grafty was 4% of TBA. Repeat operations were required in 3.5% of the operated patients. Hospital stay was average 4.4 days longer in surgically treated patients compared to medically treated patients.

PO.44. LASER ASSESSMENT OF PAEDIATRIC BURNS (MOOR LD12-BI)

Geleauskas D., Misevicius V., Vencius J. (Lithuania)

MATERIALS AND METHODS

Laser doppler burns imager (LDI2-BI) scans a low power laser beam in a raster pattern over skin or other tissue surfaces. Moving blood in the microvasculature causes a doppler shift of the scattered laser light, which is photodetected and then processed to build a colour coded map of the blood flow. The moorLDI2-BI™ uses the laser Doppler technique to predict the healing potential (HP) of a burn wound. Clinical trials have shown that burn wounds heal within 14 days where there is high LD blood flow, within 14 to 21 days with 'medium' blood flow, and take longer than 21 days where there is low LD blood flow (the latter usually indicating that surgery is required). With the introduction of moorLDI2-BI™ laser Doppler imager different regions of a mixed depth burn can be mapped in a single image.

247 (219 patients) assessments were performed in our Burn and Plastic Surgery Unit during the last 3 years. LDI scanning was performed on day 2 and day 5 post-burn.

RESULTS

The study revealed that Laser doppler burns imager (LDI2-BI) can predict the need to graft (or not to graft) a burn wound on 2-3 day post-burn with 97% accuracy.

CONCLUSIONS

Laser burns assessment allows us to predict early burn degree from 48 hours. Starting with Accuracy of assessment is about 97%. The LDI2-BI™ can help the burn surgeon by indicating the healing potential (HP) of a burn wound.

PO.45. EXPRESSION OF CYTOKINES IN VENOUS BLOOD IN CHILDREN YOUNGER THAN 7 YEARS WITH HEAD TRAUMA OF DIFFERENT SEVERITY

Barzdina A., Pilmane M., Tretjakovs P., Petersons A. (Latvia)

INTRODUCTION

Mild and moderately severe head injuries (HI) constitute around 90% of all head trauma in children, and correct diagnosis is very important for the detection of the amount of injury and prognosing the outcome. Lately, serum biomarker studies after head injuries have become more popular in the childrens' population. One of the main pathological processes in secondary brain damage, having an impact upon the outcome of HI, is ischemia of the brain tissue. Inflammatory reactions play an important role in this process. There are only a few studies on inflammatory reactions in brain tissue after HI in children below 7 years of age.

OBJECTIVE

The aim of the study was to determine the expression of biomarkers in serum after HI of different severity at different time points (the 1st to 4th day) after HI in children from 1 month to 7 years of age.

MATERIALS AND METHODS

7 patients with a head injury, treated in the ICU and the Clinics of Neurosurgery and Neurology of the Children's Clinical University Hospital, and 11 control group patients were enrolled. Blood samples were frozen at 70° C, with a following analysis with Luminex xMAP, using Milliplex kit, made in the laboratory of the Department of Human Physiology and Biochemistry at Riga Stradiņš University.

RESULTS

From 10 detected biomarkers in the 4-day period statistically significant differences were found in the epidermal growth factor (EGF) ($p=0.045$). Statistically significant differences from the controls at different time points after HI were found in EGF; IL-6; monocyte chemotactic protein-1 (MCP-1) and interferon alfa (INF α).

CONCLUSIONS

EGF is a potentially informative biomarker in diagnostics of head injury and possibly predicts the outcome, especially in children of younger age. IL-6, MCP-1 and INF α are potentially informative biomarkers starting with the 12th hour after HI.

PO.46. PULMONARY INVOLVEMENT IN PAEDIATRIC MULTISYSTEM LANGERHANS CELL HISTIOCYTOSIS: A CASE REPORT

Lacis A., Kovalova Z., Medne G., Abola Z. (Latvia)

INTRODUCTION

Langerhans cell histiocytosis (LCH) is a rare disease with diverse forms of clinical presentation. Descriptions of LCH generally have been limited to single case reports and small case series. Pulmonary LCH (PLCH) is more common during the third and fourth decades of life.

OBJECTIVE

To demonstrate our experience with the management of pediatric PLCH with multiple lesions of different organs, complicated by recurrent pneumothorax.

MATERIALS AND METHODS

A girl at the age of 10 months was admitted to our hospital with multiple maculo-papular skin lesions. LCH was verified based on the biopsy data. The tactics “watch-and-wait” was selected, applying local symptomatic treatment. At the age of 16 months the child was admitted to our hospital again with progressing breathing difficulties during the last 2 weeks. Skin lesions had slightly progressed, US examination revealed a cystic lesion of the liver 7 x 6 mm. The initial chest X-ray showed granular infiltration over both lung fields. No osteolytic lesions in bones were detected. Laboratory examination revealed no pathologic fields. During the following days the patient developed severe pulmonary insufficiency and massive subcutaneous emphysema. CT scans showed multiple cystic lesions in both lungs, progressing in number and size, followed by recurrent pneumothoraces. Chemotherapy was given in accordance with the induction program DAL-HX, followed by a salvage therapy with Cladribine. A method of bilateral pleurodesis was implemented, instilling chemical irritants (Bethadine and talc powder) into the pleural space, resulting in stabilization of the clinical course.

RESULTS AND CONCLUSIONS

In this report we present a case of a pediatric PLCH leading to recurrent pneumothoraces. Furthermore, we discuss the practical approach to PLCH. After seven months of specific treatment the chest X-ray exams revealed some positive dynamics. At the time of preparing the given presentation though the clinical course has been stabilized, the prognosis remains poor.

PO.47. THE FIRST CASE OF EXTRASKELETAL EWING'S SARCOMA OF THE MESOCOLON IN A CHILD

Turkyilmaz Z., Sen M.C., Sonmez K., Karabulut R., Poyraz A., Oguz A., Basaklar A.C. (Turkey)

INTRODUCTION

Ewing's sarcoma (ES) is a malignant neoplasm usually affecting the skeletal system. Extraskeletal Ewing's sarcoma (EES) is a rare tumor. Only one case of primary mesocolon Ewing's sarcoma has been previously reported in an adult. But, as far as we know, up to now there has been no reporting on this rare tumor in the mesocolon in childhood.

CASE REPORT

A 15-year-old girl was referred to our clinic for a mass located in the right upper and lower abdominal region. It turned out that she had been aware of the presence of this mass for approximately one year, however, she had thought that this condition was related to the abdominal muscle strengthening exercises rather than an abdominal mass. Physical examination revealed a relatively mobile smooth mass extending beneath the liver to the pelvis. Abdominal CT scan showed a large mass located below the hilum of the liver and the right hepatic lobe, with the dimensions of 98x90x120 mm. All laboratory tests and tumor markers were within normal limits. Imaging studies and physical findings suggested that the mass was a benign cystic lesion within the abdomen. At laparotomy, a large peritoneal tumor, 10 × 10 × 12 cm in size, was located within the right mesocolon as far as the hepatic flexure. The tumor had not invaded the surrounding organs. Deep to the tumor, there was an extensive vascular network originating from the mesocolon supplying the mass. After ligation of these vessels, the tumor was completely resected without rupturing the capsule. The tumor consisted of small round cells with rosette formation which demonstrated extensive necrosis. The tumor showed extensive mitosis. Immunohistochemical (IHC) staining revealed a strong positivity for Vimentin and anti-CD99. It was positive for INI-1 and s-100 and slightly local positive for synaptophysin. Fluorescent in situ hybridization (FISH) probe revealed at (11-22) translocation in the tumor cells, suggesting a translocation involving the EWS gene. Thus, it is a histological, immunohistochemical and molecular Ewing's sarcoma of the mesocolon. The patient was referred to pediatric oncology for subsequent treatment.

CONCLUSIONS

In patients, who cannot be diagnosed in the preoperative period, as in this case, primary total excision of the tumor and rapid histopathologic examination is the gold standard. In the present case, the absence of metastatic disease is the critical fact for the patient's prognosis.

PO.48. RARE MIXED TYPE GERM-CELL TUMOUR IN A 5-MONTH OLD GIRL

Auzina I., Medne G., Kovalova Z. (Latvia)

INTRODUCTION

The number of gonadoblastoma cases reported is approximately 1% of all tumors in children at pre-pubertal age. In 8% the character of these tumors is malignant germ-cell tumors. If comparing the occurrence of this type of tumor in infancy and in pre-pubertal girls with adolescent girls, the incidence is 56% and 29%. It makes it difficult to set a differential diagnosis in these patients due to the tumor's atypical and mixed morphological structure.

OBJECTIVE

The aim of the study was to analyze a case report of a germ-cell neoplasm in a 5-month old girl.

CASE REPORT

Girl G. (born September, 2010) was hospitalized in the Children's Clinical University Hospital in Riga due to bloody discharge from the genital tract and secondary anemia. A malignant mixed type germ-cell tumor (25x25x40mm) in the pelvis minor was found on performing histological and immunohistochemical analyses. Chemotherapy and symptomatic therapy was prescribed. Due to the therapy the dimensions of the tumor decreased twice, and the bloody discharge stopped after the first course of chemotherapy. After finishing the chemotherapy no visible tissue was found in ultrasound examination.

CONCLUSIONS

1. Mixed type germ-cell tumor in a 5-month old girl is extremely rare
2. In case of bloody discharge in girls of pre-pubertal age a differential diagnosis is a must
3. There is a good prognosis for reconvalescence by using complex chemotherapy in the case of germ-cell tumors
4. A discussion about future fertility preservation must be done prior applying chemotherapy.

PO.49. PROPHYLACTIC HEALTH INSPECTIONS IN SCHOOLS IN DETECTABILITY OF THE SURGICAL PATHOLOGY IN CHILDREN

Iodkovsky K., Bondareva O., Pysh V., Hmelenko A. (Belarus)

INTRODUCTION

Early detection of patients with initial forms of pathology with pronounced clinical developments of the disease still missing, timely applied treatment, and dispensary observation are factors that contribute to improving the health of the nation.

OBJECTIVE

To investigate the frequency of surgical pathology in schoolboys of Grodno at preventive examinations in the years 2006–2009.

MATERIALS AND METHODS

Every year for carrying out mass health examinations of organised groups of children there was set up a team of doctors-experts, including the pediatric surgeon, the otolaryngologist, the oculist, the neurologist. Pupils of forms 6,9,11 of Grodno and the Grodno region were examined. Examinations were performed in all secondary schools (41) and primary schools (24) of the Grodno region and 2 secondary schools for handicapped children. In the period 2006–2009 there were examined 65848 pupils of forms 6,9,11. Out of the 65848 examined pupils, the greatest number of children had a surgical pathology – 25581(38.8%), visual impairment – 20888(31.7%), hearing impairment – 3658(5.5 %), neurologic disorders – 1741(2.6 %). When analysing the surgical pathologies (including patients both with orthopedic and urological pathology), it was revealed that most of the deviations were in the musculoskeletal system: flat-footedness in 7861(30.7%), violation of posture in 8590 (33.6%), scoliosis in 5093 (19.9%) and in 704(2.7%) cases other orthopedic pathology. In the other children with a surgical pathology there were revealed hernias of different localisation in 1041(4%) cases, varicocele – in 651(2.5 %) cases and other diseases, such as hydrocele, cryptorchism, phimosis, hemangiomas, nevi, keloid scars after burns or postoperative scars and others.

CONCLUSIONS

The main purpose of preventive examination is to identify pupils with functional and anatomic deviations of different character and to assign treatment for the revealed deviations and proceed with observation of the children.

PO.50. CAUSES OF ABORTION DURING CONGENITAL FETAL MALFORMATIONS

Iodkovsky K., Matsyuk I., Ysubova E., Kovalchuk K., Hmelenko A. (Belarus)

INTRODUCTION

Prenatal diagnosis of congenital malformations and hereditary diseases with the aim of identifying intrauterine damages of the fetus due to severe diseases and prevention of their birth is the priority and effective method for reducing child morbidity, disability and mortality. Children with congenital and hereditary diseases constitute mostly the cases of children with limited ability, whose treatment, upbringing and social adaptation require considerable motivation from their family and the government.

OBJECTIVE

Identifying the causes of abortion during fetal congenital malformations based on the data in Grodno Regional Perinatal Centre.

MATERIALS AND METHODS

We performed analysis of USG of pregnant women during different stages of pregnancy in the years 2007–2010.

RESULTS

Among the 20,000 women in 555 (2.7%) there were identified congenital malformations (CMF) of the fetus. There were 278 cases of termination of pregnancy based on medical indications (50.1%). Most of the abortion was carried out when multiple congenital malformations were identified: among the 105 identified cases 83 abortions were performed (29.9%). When detecting anomalies of the nervous system (91 cases) 66 abortions were performed (23.7%); with chromosomal abnormalities (34 cases) 30 abortions (10.8%); with abnormalities of the circulatory system (64 cases) 35 abortions (12.6%); with abnormalities of the musculoskeletal system (57 cases) 30 during abortions (10.8%); abnormalities of the urinary system (130 cases were found) – 10 abortions (3.6%). Abnormalities that caused the interruption of pregnancy were identified during the following terms of pregnancy: 16–20 weeks (41.6%); 21–25 weeks (34.42%); 11–15 weeks 17.36%); 26–30 weeks (5.56%).

CONCLUSIONS

Abortion was mostly carried out because of congenital abnormalities of the nervous system (23.7%), and in the cases of multiple congenital defects. The highest percentage of malformation, causing the termination of pregnancy, is observed between the 16th and 20th weeks of pregnancy (41.66%).

PO.51. ANATOMIC BASED APPROACH TO THE SURGICAL TREATMENT IN CHILDREN WITH THE CONGENITAL CLEFT OF PALATE

Nelyubina O., Mamedov A, Kirgizov I., Prudnikova T. (Russia)

OBJECTIVE

The congenital cleft of a lip and palate (CCLP) belongs to the most common congenital malformations. The aim of the study was to increase the efficiency of treatment in children with the congenital cleft of palate and upper lip based on the anatomic-based approach to surgical treatment with normalization of the velopharyngeal ring (VPR) structures and functions, as well as speech production.

MATERIALS AND METHODS

In 2008–2011 the main group of 83 children, aged 0–16 years were operated according to Mamedov's method and 25 children in the control group – by using Frolova's method. In patients over 18 months of age the functions of VPR and speech production were assessed.

RESULTS

Expressed nasality in the presurgical period revealed in 83% of the main group and in 96% of the control group. Light nasality revealed in 18% and in 4% respectively. In the postoperative period an expressed nasality was not observed, light nasality – in 43% and in 68% of the patients. Speech in the presurgical period was not estimated as good, in the postoperative period it was estimated as good in 66% and 20% respectively. Speech was estimated as satisfactory in 16% and 8% of the patients in the presurgical period, and in 24% and 56% of the patients in the postoperative period; it was poor in 85% and 92% in the presurgical period, while in the postoperative period it was in 10% and 24% of the patients of the basic and the control groups, respectively.

CONCLUSIONS

The choice of the operative treatment tactics is determined by anatomic-based methods of defects elimination in CCLP, with subsequent anatomic-functional normalization of the structures of VPR. The offered ways with restoration of VPR are the most optimal for improving the speech production function.

PO.52. PERIOPERATIVE DYNAMICS OF CREATININE CLEARANCE IN CHILDREN WITH CONGENITAL HEART DISEASE

Krastins J., Straume Z., Auzins J. (Latvia)

INTRODUCTION

Cardiac surgery with cardiopulmonary bypass (CPB) is commonly perceived as a risk factor for decline in renal function. Hypothermia, hypoxia, hypotension, non-pulsatile blood flow during extracorporeal circulation, use of contrast media, ACE inhibitors, inotropic and (or) vasoactive substances affect the kidney and contribute to the development acute kidney injury (AKI).

OBJECTIVE

To evaluate dynamics of creatinine clearance (CICr) in children undergoing surgical correction of congenital heart disease (CHD), using CPB.

MATERIALS AND METHODS

We conducted prospective, non-randomized observational study at the tertiary care Children's Clinical University Hospital, Pediatric ICU. The study protocol was approved by the Hospital Ethics Commission. The study included 30 patients, 12 boys and 18 girls with CHD with the median body weight 6.8 kg, (IQR 5.2<8.2 kg) and median age 7 months (IQR 5<10 months). During the surgery and 24 hours after it the urine was collected to measure CICr, using the difference in UCr and SCr concentration.

RESULTS

Median duration of aortic cross-clamping was 95 min., (IQR 70.5<133 min.), median CPB time was 147 min. (IQR 116.75<205 min.), median urine output during and after the surgical repair was 2.4 ml/kg/h (IQR 1.29<3.15 ml/kg/h). Median CICr was 39.8 ml/min/1.73 m², (IQR 24.9<65.5 ml/min/1.73 m²). However, during the surgical repair of CHD with CPB we found severe decline in CICr. None of our patients required renal replacement therapy postoperatively. There was no statistically significant difference between CICr values pre- and postoperatively.

CONCLUSIONS

Surgical repair of CHD in children by using CPB has severe, but transient effect on renal functions. Seven patients (23.3%) were at the risk of AKI according to RIFLE criteria after the surgical correction of CHD, four patients (13.3%) complied with the injury category. Before discharge from hospital CICr returned to normal values.

PO.53. CORRECTION OF THE HEMOSTASIS SYSTEM CHANGES IN CHILDREN BEFORE CARRYING OUT ENDOVASCULAR RESEARCHES

Petrov E., Poljaev J., Kirgizov I., Garbuzov R., Filinov I. (Russia)

OBJECTIVE

To study changes in the hemostasis system in children with a surgical pathology before carrying out endovascular research.

MATERIALS AND METHODS

Lately we have carried out about 72 endovascular research. 49 children with pathology of gastrointestinal tract (GIT) were examined and 23 children – with portal hypertension after stopped bleeding from GIT. The basic method was digital subtraction angiography with carrying out transarterial returnable researches. Before the research the hemostasis system was assessed.

RESULTS

We revealed that in 27 children with Hirschprung's disease, in 7 children with a short-bowel syndrome and in 15 children with ileostomas the infringements of hemostasis were similar in the form of the chronometric latent hypocoagulation, with APPT lengthening by 24% and PT by 22%, at TT lengthening by 8%. Decrease of the vitamin K-dependent blood-coagulation factors was noted. In children with portal hypertension the infringements in the hemostasis system were in the form of hypocoagulation with APPT lengthening by 16% and PT by 18%, at TT lengthening by 14% and fibrinogen decrease by 37%. Decrease in major blood-coagulation factors, increase of the SFMC that demanded carrying out the specific correction of the hemostasis system was noticed.

CONCLUSIONS

Changes of the hemostasis system in children with various surgical pathologies often take place and it is to be taken into account when carrying out endovascular research.

Examination and correction of the hemostasis system before carrying out endovascular research, is an integral part of the preparatory stage.

PO.54. COMPARATIVE ANALYSIS OF SURGICAL TREATMENT FOR LOWER LIMB LENGTH CORRECTION IN CHILDREN

Bergmanis U., Upenieks J., Faustovs I., Stekels E., Salmins G. (Latvia)

INTRODUCTION

Lower limb length discrepancy is a problem in pediatric orthopedics. Numerous methods have been used for operative correction. Comparative analysis of methods may indicate to the recommended treatment.

MATERIALS AND METHODS

Medical records of 81 patients aged from 5 to 18 years (mean 15.4 years) were analysed retrospectively. Inclusion criterion was operative lower limb length correction performed from 2001 to 2011. Correction methods were epiphysiodesis and shortening of the long leg and lengthening of the short leg. We used Blount staples for epiphysiodesis, ESIN, locking nail for shortening and Wagner, Ilizarov and Kalnberzs devices for lengthening.

RESULTS

47 patients (58%) were operated due to congenital shortening of lower limb, 34 patients (42%) suffered from acquired limb length discrepancy. 45 patients (55%) had limb shortening due to femoral shortening, while 29 patients (36%) complained of tibial shortening and 7 patients (8%) complained of both segment shortening. Timing of the operations was from 5 to 18 years (mean 15.4 years). 15 epiphysiodeses, 7 shortenings and 59 lengthenings were performed. We used a circular fixator in 5 cases and a monolateral fixator in 24 cases in order to perform lengthening of the short femur. 27 lengthenings of the tibia were performed by circular fixator and 3 lengthenings were performed by monolateral fixator. Correction length was from 2 to 10 cm (mean 4.78 cm). 87 complications, including 50 pin tract infections, 2 problems with bone formation, 15 axial deviations, 20 joint problems, 5 fractures of the regenerate bone were documented. Average hospital stay was from 8 to 20 days (mean 11 days).

CONCLUSIONS

The complication rate correlates with the amount of lengthening. Frequent complications of lengthening procedures have made epiphysiodesis and shortening procedures more attractive options for small discrepancies. The locking nail is preferred for femoral shortening and for lengthening the femur with the monolateral fixator.

PO.55. CLINICAL COMPARISON OF PELVIC OSTEOTOMIES IN TREATMENT OF DEVELOPMENTAL DYSPLASIA OF THE HIP

Salmins G., Bergmanis U., Stekels E., Upenieks E., Kurmina E. (Latvia)

INTRODUCTION

Developmental dysplasia of hip (DDH) is a serious condition that can be treated without surgical intervention if diagnosed early, however, it requires different operative approach in older children. The choice of the modification used depends on several factors.

OBJECTIVE

To analyze different modifications of pelvic osteotomies used for operative treatment of DDH, depending on the patient's age and severity of DDH.

MATERIALS AND METHODS

Retrospective analysis of medical records and X-rays was performed; there were included patients who were treated in the Children's Clinical University Hospital from 2000 to 2010 because of DDH.

RESULTS

103 patients were treated (15 boys and 88 girls). 23 patients underwent pelvic osteotomy (totally 24 osteotomies - 14 Salter, 4 Dega, 6 acetabuloplasties - Nilson, Staheli modifications).

Pelvic osteotomy as a separate operation in order to prevent the residual effects of DDH was performed in 15 patients. 2 patients with Salter osteotomy and 4 patients with acetabuloplasty had not been operated before. 7 patients with Salter osteotomy and 2 patients with acetabuloplasty had undergone other operative treatment before.

Pelvic osteotomy was carried out together with open reduction of the hip during the same operation in 8 patients, in two cases among those the redislocation of hip because of deformation of femoral head was observed. Both patients had had late diagnosis and consequently the initial treatment started at the age of 5 and 7 years.

Salter osteotomy improved the acetabular index by 10–15°. Dega osteotomy improved the acetabular index by 15–20°. Improvement was observed in all cases.

CONCLUSIONS

Early diagnosis and treatment of DDH leads to better results. Initiation of treatment after the age of 18 months is associated with the increased number of secondary operations. Therefore pelvic osteotomy should be considered as the first and definitive operative treatment. In some cases triple pelvic osteotomy could be an alternative operation instead of acetabuloplasty.

PO.56. ACUTE HEMATOGENOUS OSTEOMYELITIS IN CHILDREN (1972–2011)

Eller M., Varimae E. A. (Estonia)

OBJECTIVE

To analyse retrospectively changes in the incidence, epidemiology and length of hospital stay in acute hematogenous osteomyelitis in three different periods.

MATERIALS AND METHODS

Analysis of retrospectively collected cases for the years 1972–1975 (period I) and for 1983–2001 (period II) and comparison of these data with the data for the last 10 years, 2001–2011 (period III). The data were drawn from the case records of the Department of Pediatric Surgery of Tartu University Hospital.

	Period I 1972–1975	Period II 1983–2001	Period III 2002–2011
Patients	77	226	41
Average No. of patients per year	19	11.9	4.1
Gender: boys	54	135	25
Age:	under 1 year	10	41
	1–7 yrs	23	59
	above 7 yrs	44	126
Average length of anamnesis (days)	11.7	6	2.8
Localisation in long tubular bones	59.7%	85%	66%
In septic state	Data are absent	12	3
Death cases	2	–	–

The main pathogen in the last two periods was *Staphylococcus Aureus*: in 51% of the cases in period II and in 56% of the cases in period III. Data for period I as well as for anti-bacterial treatment are absent. In periods II and III the antibiotics used against the pathogen were Oxacillin and Gentamycin. In the last period Oxacillin was used for monotherapy in 50% of the cases and in combination with Gentamycin in 50% of the cases. For other pathogens, different antibiotics were used depending on the sensitivity of the microbe. Changes in bone structure were revealed on average by day 14.

CONCLUSIONS

The incidence of acute hematogenous osteomyelitis has decreased 4.8 times in comparison with the period 1972–1975 and 3 times in comparison with the period 1983–2001. In the last decade 70% of these children were admitted to hospital during the first 3 days. Death cases were not recorded in the last two periods.

PO.57. PROPER DELIVERY PRESSURE FOR CARDIOPLEGIC SOLUTION IN NEONATAL CARDIAC SURGERY – AN INVESTIGATION OF BIOMECHANICAL AND STRUCTURAL PROPERTIES OF NEONATAL CORONARY ARTERIES

Sikora N., Lacis A., Ozolins V., Kasjanovs V., Groma G. (Latvia)

INTRODUCTION

One of the most important issues in pediatric cardiac surgery is myocardial protection, when the cardioplegic solution mixed with oxygenated blood is injected into the coronary arteries with a pump. Neonates have many structural, functional, biomechanical and metabolic differences from adults, therefore it is crucial to give cardioplegic solution with an adequate delivery pressure. If it is too low or too high, it can lead to severe damage of myocardium.

MATERIALS AND METHODS

To assess the right delivery pressure of cardioplegic solution, biomechanical properties of eleven specimens of coronary arteries from neonates 12.3 ± 13.7 days old and weight 4.1 ± 0.9 kg, retrieved at the autopsies, were examined and compared with adult arteries. The specimens were pressurized from 0 to 200 mmHg with the step of 20 mmHg, while maintaining the length of the sample in situ. Structural damages were investigated afterwards.

RESULTS

There was a rapid increase of strain until the inner pressure reaches 80–100 mmHg and not as rapid regarding the stress in the arterial wall. When the internal pressure exceeds 100 mmHg, the strain of the arterial wall increases much slower, but at the same time the wall stress and modulus of elasticity begin to increase rapidly. It means that the structural elements of the arterial wall have been straightened and a possible damage in the wall of coronary arteries of neonates may appear. These results were compared with biomechanical properties of the arterial wall of adults and differences had been found. In structural investigations there appear to be damage in the wall of neonatal coronary artery after being pressurized with the inner pressure of over 100 mmHg.

CONCLUSIONS

Our experimental results show that the delivery pressure of the cardioplegic solution in neonatal coronary arteries should not exceed 100 mmHg, if higher, it increases the risk of structural damage of the vascular wall, leading to the injury of myocardium.

PO.58. PERIPHERAL LYMPHADENOPATHY IN CHILDREN: DIFFERENTIAL DIAGNOSIS

Lacis A., Meiksans R. (Latvia)

INTRODUCTION

Lymphadenopathy is a common issue that brings children to see a physician. An understanding of the wide variety of diseases and conditions that may present as lymphadenopathy is essential for choosing the most appropriate approach to an individual patient. Although most often lymphadenopathy is a sign of a benign underlying disorder, it is important that the pediatrician also have an appreciation for the malignant diseases that may present with lymphadenopathy.

OBJECTIVE

Identification of comprehensive criteria for differentiation of peripheral lymphadenopathy in children.

MATERIALS AND METHODS

The causes of peripheral lymphadenopathy in children are discussed, based on the literature review. Lymph nodes in most regions less than 1 cm in diameter are usually considered to be normal and tend to be larger in the early years of childhood than in later life.

During the period of 12 months 162 children (age 3 wks–18 yrs) with lymphadenopathy were referred to our hospital for consultation. In 14 cases (6%) malignancies were discovered as the underlying reasons. The most common malignancy was non-Hodgkin lymphoma (7), followed by Hodgkin lymphoma (4), neuroblastoma (2) and teratoblastoma (1).

RESULTS AND CONCLUSIONS

In most patients the infectious cause can be easily detected. A diagnosis of less obvious causes can often be made after considering the patient's age, the duration of the lymphadenopathy and whether localizing symptoms, constitutional signs or epidemiologic clues are present. The key factors for differential diagnostics: the onset, size and characteristics of the lymphadenopathy, recent infections and immunization history, skin lesions, constitutional symptoms, allergies, received medication and general status. The location of enlarged lymph nodes can be helpful in the differential diagnosis. When a node or group of nodes is rapidly enlarging and/or when they are located in the supraclavicular region, a high possibility of malignancy should be considered.

PO.59. ADEVERSE EFFECTS OF BCG (SSI) VACCINATION IN LATVIA

Kakar M., Zviedre A., Liepina M., Petersons A., Engelis A. (Latvia)

OBJECTIVE

The aim of the study was to evaluate the frequency and treatment methods of complications after BCG SSI vaccination.

MATERIALS AND METHODS

Patients of the age of 1 month to 3 years were selected in a single institution. The data were analyzed using the confidence interval (CI) analysis with standard deviation methods.

RESULTS

Between January 2005 till September 2009, 95 patients were diagnosed with adverse affects after the vaccination of BCG SSI. 69 (72.6%) were boys and 26 (27.4%) were girls. In 91 patients the diagnosis was confirmed by ultrasonography. From 95 patients, 32 (37%) had infiltrative regional lymphadenitis, 58 (61%) had purulent regional lymphadenitis, 4 (4%) patients had abscess. One patient had purulent regional lymphadenitis in combination with abscess. Mean age at the time of diagnosis was 5–6 months in the cases of infiltrative regional lymphadenitis, while it was 8–9 months in the cases of purulent regional lymphadenitis. Lymphadenitis or abscess was localized on the side of the vaccination, in 82 (86%) patients in the left axillary region, in 4 patients in the left supraclavicular region and in 4 patients in the axillary and supraclavicular region. In 87 (92%) patients histological examination confirmed *M. Bovis* with granulamatosi process. 91 (95.8%) patients underwent surgical treatment. One patient had lymph node biopsy. 4 (4.2%) patients were treated conservatively. 85 (94%) had lymph node extirpation.

CONCLUSIONS

Treatment demands multidisciplinary involvement of a pulmonologist specialized in tuberculosis, a sonographer and a pediatric surgeon. Careful excision combined with short postoperative drainage gives excellent results in the case of purulent regional lymphadenitis. The incidence of purulent regional lymphadenitis in our institution is $5.3 \pm 3.3/10000$ vaccinated with BCG SSI per year.

PO.60. SPLENIC ROLE IN THE HOST DEFENSE PROCESS AFTER THE CHALLENGE WITH *STREPTOCOCCUS PNEUMONIAE* IN RATS

Volrats O., Pilmane M., Petersons A. (Latvia)

INTRODUCTION

We investigated the role of the spleen in the host defense after the challenge with *Streptococcus pneumoniae* in Wistar rats.

MATERIALS AND METHODS

Animals that were divided into 4 groups underwent splenectomy (SPR), partial splenectomy (PSR) and sham operation (SOR). Healthy rats constituted the control group (CGR). 10 weeks later the rats were challenged with 10^6 /ml *Streptococcus pneumoniae* intravenously. In all rat parenchymatous organs there were detected interleukin-10 (IL-10), tumor necrosis factor α ; (TNF α); human β ; defensin-2 (H β ; D-2) containing cells and apoptosis. Kaplan–Meier and Mann Whitney statistical analysis methods were used.

RESULTS

Survival after *Streptococcus pneumoniae* challenge was longer in SOR (1.3 days), but mortality was higher in the SPR group (100%).

In splenic tissue the amount of H β ; D-2, IL-10 and TNF α ; containing cells was statistically equal ($p < 0.01$) and higher than in the other groups. The amount of IL-10 containing cells was higher in the SPR parenchymatous organs ($p < 0.001$), in the PSR and SOR groups it was similar ($p = 0.308$) and in CGR it was lower ($p < 0.01$). The amount of TNF α ; containing cells was rather similar in PSR and SOR ($p > 0.05$). The highest amounts of H β ; D-2 containing cells were observed in CGR ($p < 0.001$). The highest amount of apoptotic cell was observed in the kidney of SPL, SOR and CGR.

CONCLUSIONS

Survival was higher in animals with the whole spleen. 1/3 of splenic tissues cannot fully protect animals from *Streptococcus pneumoniae* sepsis. Partial splenectomy and *Streptococcus pneumoniae* sepsis do not influence the relative amounts of H β ; D-2, IL-10 and TNF α ; in splenic tissue.

PO.61. A METHOD FOR EXPERIMENTAL MODELLING OF PANCREAS TRAUMAS FOR WISTAR RATS

Zaremba E., Mikitins A., Antonovica L., Petla J., Petersons A. (Latvia)

INTRODUCTION

The incidence of pancreas traumas (PT) is low (0.4/ 100 000), they comprise only 1–3% of the abdominal traumas; however, lethality in case of PT remains unchangingly high (12–73%). In case of PT among children the opportunities to accumulate clinical experience are very limited. These conditions determine the necessity of new research and do not let avoid the use of laboratory animal models. The existing experimental models of PT are technically complex, not always easily repeatable; the opportunities to model the degree of pancreas damage are very limited.

OBJECTIVE

To develop a technically simple, easily repeatable method for experimental modelling of PT of various degrees of severity for Wistar rats.

MATERIALS AND METHODS

Under general anaesthesia 50 experimental animals – Wistar male rats (220–250 g) – underwent upper middle laparotomy (2 cm) and by applying transillumination of pancreas tissues and 10 x optical magnification there were made damages of pancreas tissues of various severity using standardized Crile clamps (Aesculap BH 167 R). Group 1–10 rats had their pancreas tissues squeezed for 10 sec. without tissue rupture, Group 2 – 10 rats had their tissues squeezed for 10 sec. between 2 Crile clamps damaging tissues without damaging the pancreas duct, in Group 3–13 rats had their tissues squeezed for 10 sec. damaging tissues with damaging the pancreas duct, in Group 4–17 rats had their tissues squeezed for 10–20 sec. between 2 Crile clamps making full cross-damage of pancreas. 24 h and 72 h after creating PT samples of blood serum were taken from the surviving animals to examine cytokines. The animals were killed after 72 h. Autopsy was performed on all animals taking tissues for immune-histological examination.

RESULTS

Up to 72 h in Group 1 no animals died, in Group 2 one animal died, in Group 3 four animals died, in Group 4 eight animals died. The features of pancreatitis – edema, haemorrhages, hemorrhagic exudation – were identified in the autopsy of all animals. The animals having a damage of the pancreas duct or cross-damage of pancreas often have extensive steatonecroses, pancreonecroses. Approximately 30% of the models with damaged pancreas tissues (more in Group 3 and Group 4) needed bipolar coagulation for haemostasis. Coagulation was needed rarer in the group with cross-damage of pancreas under longer exposition of the clamp.

CONCLUSIONS

The method with putting Crile clamps under general anaesthesia is to be applied for creation of PT in Wistar rats and it lets modelling of various degrees of PT severity.

PO.62. UNILATERAL IN-PLEURAL ANALGESIA AFTER HYDRONEPHROSIS SURGERY IN CHILDREN

Albokrinov A., Pereyaslov A. (Ukraine)

ABSTRACT

Adequate postoperative (PO) analgesia is the cornerstone for an uncomplicated PO period. Use of epidural block (EB) in this patient category is not absolutely safe and may lead to complications related to anesthesia itself. Thus, optimization of PO analgesia in children remains the matter of discussion. Mechanism of action of interpleural block (IPB) consists of diffusion of local anesthetic (LA) solution through parietal pleura to intercostal and splanchnic nerves.

Overall 33 pediatric patients were randomized into EB group (n=11), IPB group (n=12) and Conventional group (n=10). The groups did not differ by age, sex and weight. In the EB, IPB and Conventional groups children were anesthetized with sevoflurane (low flow or minimal flow mode), fentanyl and atracurium. In the EB group epidural catheter was inserted between Th12 and L1 spinous processes after induction of anesthesia. Bupivacaine 0.25% 0.5 ml/kg was administered after the test dose and infusion of bupivacaine 0.25% 0.4 mg/kg*hour was started. Epidural infusion lasted for 2 PO days. In the IPB group epidural catheter was inserted into the pleural space after induction of anesthesia. Our experience tells that interpleural LA must be more concentrated to show its analgesic action. So Bupivacaine 0.375% 0.5 ml/kg was administered after the test dose and infusion of bupivacaine 0.375% 0.4 mg/kg*hour was started. Rescue morphine injections (0.1 mg/kg s.c.) were administered for severe pain (VAS > 4) in the EB and IPB groups. Children of the Conventional group received morphine 20 mcg/kg*hour and ketoprofen 3 mg/kg*day. Intraoperative (IO) doses of fentanyl were significantly lower in the EB and IPB groups than in the Conventional group.

Regional techniques show significantly better quality of PO analgesia in comparison with intravenous morphine and ketoprofen. Efficacy of IPB in PO analgesia is comparable with efficacy of EB. IPB is an effective method of PO analgesia after urologic surgery in children.

NO. 1. IMPLEMENTATION OF CLINICAL INFORMATION SYSTEM IN THE PEDIATRIC INTENSIVE CARE

Alita Kuzuma, Inita Sture-Sturina (Latvia)

INTRODUCTION

Clinical Information Systems (CIS) are mandatory in intensive Care Unit in response to the growing amount of data to be processed, the turnover of the patients and the necessity for reliability and review processes. Dedicated ICU bedside data collection systems have proven to be valuable and accurate tools for nursing documentation, data collection, and onscreen display of patient information.

MATERIALS AND METHODS

Implementation process of CIS started in spring 2011 when the local network consisting of 11 Care Vue (Philips Healthcare) monitors, patient workstations with flat screen monitors, servers, infusion management devices and printers were installed at our PICU. A group of advanced end-users was formed and started their training sessions, led by Philips Healthcare Intelli Vue Clinical Information Portfolio (ICIP) implementation team. Later the advanced users were appointed trainers for the rest of the ICU personnel and system configuration according to the local requirements. The configuration, initial testing and custom development activities were carried out parallelly during 2011.

RESULTS

CIS Intelli Vue Clinical Information Portfolio (Philips Healthcare) was introduced in our unit in August 2011. Till the end of the year 2011 ICIP was used for care of 264 patients. Each nurse can handle the information using ICIP, even those, who had basic knowledge of PC. The system is accessible at every bed through panel PCs and at desks or office through desktop PCs. To support quality management and control, ICIP provides scores such as SAPS II, TISS 28, and the Glasgow Coma Scale. These scores are calculated automatically from parameters in the routine documentation.

CONCLUSIONS

CIS facilitate the handling of large amounts of data and allow for efficient data retrieval; care of the critically ill patient. Benefits of CIS with automated data capture from ICU devices demonstrate a reduction in the nursing workload, too.

NO.2. PREPARATION OF THE PATIENT AND FAMILY FOR OPERATION

Triin Kaldoja, Lagle Ostrovski (Estonia)

INTRODUCTION

Undergoing an operation causes anxiety, if not fear, in every child and his/her family members. It has been proved that children who have had good preoperative preparation, including both psychological and physical preparation, appropriate for their age, experience less fear and are more cooperative. Preparation starts at home by using the Information Sheet, which introduces the hospital setting and procedures, lists the items to be taken along, and provides the contact data of the department.

In hospital, staff members prepare the child for operation, cooperating with him/her and the parents. Good teamwork ensures conveying of the necessary information to the child and the family, as well as a prompt performance of procedures.

OBJECTIVE

To describe preparation of the child and his/her family for operation in the Department of Paediatric Surgery of Tartu University Hospital.

CONCLUSIONS

Based on the literature data and experience, the presence of a parent is particularly important throughout the whole process, i.e. before the operation, taking the child to the operation room and at recovery. Accompanied by the parent, children who are well prepared for the operation are calmer and more cooperative with the staff. All this ensures better recovery of the patient in the postoperative period.

NO.3. SPECIFIC ASPECTS OF PERIOPERATIVE CARE FOR DELAYED ANASTOMOSIS IN ESOPHAGEAL ATRESIA

Kristina Zarina (Latvia)

INTRODUCTION

Specific aspects of the perioperative care for delayed anastomosis in esophageal atresia are important and significant, because esophageal atresia is the most common congenital malformation of the esophagus. The perioperative care for delayed anastomosis in esophageal atresia is the totality of medical maneuvers prior to, during and after the surgery. The first delayed anastomosis of esophageal atresia in Latvia was successfully performed in November 2011.

OBJECTIVE

To review publications related to specific aspects of perioperative care for delayed anastomosis in esophageal atresia, complications, treatment results and to present the first case of delayed anastomosis in esophageal atresia.

CASE REPORT

Patient – a girl, born at 38 weeks gestation with the body weight 2.210 kg. The diagnosis identified at the time of birth – esophageal atresia of the type isolated esophageal atresia. Kader's gastrostomy was made under general endotracheal anesthesia. At the age of 5 months the patient underwent left-sided thoracotomy by separating the upper and the lower end of the esophagus forming end-to-end anastomosis with moderate retraction of esophageal segments. The postoperative course, however, was associated with severe complications.

CONCLUSIONS

To perform a delayed esophageal anastomosis in an esophagus without fistula the nurses, neonatologists, pediatric surgeons, including parents of the patient, must continuously work as a team. As a result the quality of life of the patient and his/her family improves significantly. The integrity of the esophagus was achieved by using the girl's own esophagus that ensured it – the preserved upper oral end of the esophagus. Success of surgical correction was determined by preventing the development of aspiration pneumonia, airway care, rational antibacterial therapy, parenteral and enteral nutrition and cooperation of the pediatric surgeons, nurses and parents.

NO.4. AWARENESS ABOUT ACID AND FOLIC ACID PROPHYLAXIS IN ESTONIA

Sire-Liis Haljaste, Kristi Soovik, Natalia Pavlova, Anna Paal (Estonia)

ABSTRACT

Folic acid has an important role in the development of the fetal nervous system, because the deficiency of folic acid during pregnancy may cause neural tube defects for the baby. The most common of these is known as spina bifida.

Still every year there are born children with folic acid deficiency-related congenital abnormalities in Estonia. Hereby the awareness about the importance of folic acid during pregnancy is still low.

The goal of the Estonian Spina Bifida and Hydrocephalus Society is awareness raising about folic acid in Estonia and the target audience is young women as future mothers.

For now, the first educational materials about folic acid prophylaxis have been worked out. In addition, AS BALSACK has started to manufacture four kinds of flakes for breakfast, enriched with folic acid. It is the first time in the Eastern European countries when food enrichment with folic acid has taken place.

RESULTS

February 29 is the World Rare Disease Day, and 2012 is declared the Spina Bifida and Hydrocephalus Awareness Year. Therefore the MANGO GIRL campaign will take place, starting to label folic acid enriched products.

NO.5. TRAUMA PATIENTS ATTENDANCE IN THE EMERGENCY DEPARTMENT AND THE NATURE OF THEIR CARE

Laila Kudrjavceva (Latvia)

INTRODUCTION

According to the data of the United Nations Children's Fund (UNICEF) and the World Health Organisation (WHO) Latvia still ranks first in the European Union regarding the number of trauma patients. Each year, an average of 18 000–20 000 children need emergency medical assistance and approximately 10% is hospitalized for further examination and treatment. The main reasons of children traumatism: curiosity, ignorance, unsafe environment, insufficient adult control of the child and seeing to his/her needs at a particular time period.

OBJECTIVE

To explore common injuries in children during the last four years, as well as deal with the nature of nursing in the medical emergency, while attending injured patients.

MATERIALS AND METHODS

Documentation analysis

RESULTS

Studying the injury registers of emergency medical assistance units, it was found out that in the year 2008 there were 19 846 children seeking treatment due to injury, while in 2009 – 18 859 children, in 2010 – 18 794 children and in 2011 – 19 144 children, including patients with acute injury, as well as patients revisiting the emergency medical department. Nurses who work with injured children are well-versed in their work, they are able to quickly deal with any emergency situation, when each second is valuable.

CONCLUSIONS

1. Over the last four years the number of children who had visited the emergency department for medical help due to injury has not changed.
2. Common injuries in children, who have sought assistance of medical emergency during the last four years, are the result of falls from a height, bruises, burns, fractures, bites of various animals, as well as the car injuries and abuse.
3. Nurse's work in an emergency department requires adequate, rational and rapid action in emergency situations, based on knowledge and team work.

NO.6. THE ROLE OF PARENTS' KNOWLEDGE OF ESOPHAGEAL BURNS CAUSING HAZARDS FOR CHILDREN

Indra Subaca (Latvia)

INTRODUCTION

Chemical burns are caused by chemicals when in contact with the organism. The main risk group is children under 5 years of age, who are left without adult control. Mostly, the traumatized locations are the throat, esophagus and stomach mucosa, severe cases of damage may be irreversible, causing the child's disability. The most common chemical agents are the following: 70% acetic acid, 9% table vinegar, grains of potassium permanganate, chlorine-containing solutions (laundry bleach), sodium or potassium lye.

OBJECTIVE

The objective is to identify parents' knowledge about risk factors that cause esophageal burns.

MATERIALS AND METHODS

The quantitative research method – survey – was applied in the study. The data were analyzed using descriptive and conclusive statistical methods. The survey covered 100 respondents.

RESULTS

In assessing the age of respondents, it was found out that 53% of the parents were younger than 30 years, in 65% of the cases the families had more than one child. Most parents use a variety of daily chemical products (85% - dishwashers, 74% - disinfectants, etc.). Only 35% of the parents store household chemicals safely away from children. Only 30% of the parents focus on the safety of packaging when buying household chemicals. 82.5% of the parents do not pay attention to hazardous markings on the package when buying household chemicals, 47.5% of the parents approve of vinegar essence sales ban, but 75% still use the essence at home, 27.5% of who keep it within the reach of children. In 62.5% of the cases the parents store combustibles away from children. 75% of the parents believe that the situation when a child swallows a chemical is very dangerous, 90% of them call an ambulance in that case. 95% of the parents admit that their children had never swallowed dangerous substances. 42.5% of the parents evaluate their knowledge about exposure to hazardous substances as poor. 82.5% would like to obtain such information from additional leaflets (47.5%), television (45%) and the internet (40%), etc.

CONCLUSIONS

1. Parents underestimate the dangers that threaten their child at home environment, because only 35% of them store household chemical substances in a dedicated, safe place.
2. 47.5% of the parents consider appropriate the ban to sell vinegar essence at food stores, but 75% of the respondents still do not understand the dangers of vinegar essence and still use it at home.
3. When using combustibles, parents are able to provide a safe environment for their children, as 62.5% after their use place them in a safe place.
4. 30% of the parents are guided by the security warnings on the package when buying household chemical products.

5. 82.5% of the parents do not pay attention to the dangerous goods labels when buying household chemical products.
6. 90% of the parents will turn for help to medical professionals in case of emergency.
7. Most of the parents (82.5%) would like to obtain information on hazardous substances, despite the fact that 57.7% had sufficient information about it.

NO.7. ELECTRONIC CASE RECORD IN NURSING

Larissa Jaguson, Jelena Gerasjova (Estonia)

INTRODUCTION

In 2002 the list and forms of documents certifying provision of health services and the order of documenting health care services were adopted by a regulation of the Ministry of Social Affairs of Estonia, specifying the requirements for the set of nursing documents. The set of nursing documents certifies provision of nursing care, which consists of the following parts: anamnesis, nursing plan, follow-up of the patient's state, treatment plan and epicrisis. Until 2009 all forms of the nursing documentation were on a paper carrier. However, the delivery of documents about the patient's health to the next care provider was often unsatisfactorily delayed or did not reach the addressee.

OBJECTIVE

To describe the possibilities of application of the electronic case record in nursing care.

CONCLUSIONS

It is an innovative and comprehensive system which is convenient to use. The flexible system of rights allows setting up an individual desktop for each user together with the functionality and with a set of menus, corresponding to the work task. This will significantly improve the availability of information, which will in its turn create good prerequisites for the treatment of patients.

NO.8. IMPORTANCE OF NURSES AND PARENTS COOPERATION IN THE CARE OF PATIENTS BEFORE AND AFTER HYPOSPADIA SURGERY

Agnese Starka (Latvia)

INTRODUCTION

Hypospadias is the most common genital malformation in children. The majority of hypospadias are found in boys at birth, but only in rare cases also in girls. Incidence of hypospadias is 1/300 infants. Each year up to 50 children undergo surgery for hypospadias correction.

OBJECTIVE

To evaluate the parents' knowledge and skills in caring for children before and after hypospadias surgery. To clarify the nurse's role in communication and cooperation with parents in the preoperative care for hypospadias correction.

MATERIALS AND METHODS

12 nurses and 12 parents, involved in the preoperative care for hypospadias correction, were interviewed. A questionnaire was developed and distributed between the respondents.

RESULTS

The nurses consider that the most important feature is cooperation with the patient's parents. The parents' role is high as they have constant care of their child. Some believe other factors to be of importance: the patient's treatment – epidural analgesia and urinary bladder catheter, reducing the pain – and the outcome of the operation. According to the results of the study, the average age of the children was 17 months. In most cases – eight out of twelve respondents – knew about the limitations associated with the operation outcome. Nine respondents were aware of a urine-collection bag located below the bed and secured with special clips.

CONCLUSIONS

General information suggests that the parental knowledge of child care after hypospadias operation is sufficient, but it is not applied in practice. Similarly, the study allows us to conclude that the leading role in caring belongs to the nurse, her communication abilities while cooperating with the patient and his/her parents, as well as educating them.

NO.9. CARE OF BURN TRAUMA INJURIES IN CHILDREN

Aija Lielnora (Latvia)

ABSTRACT

Every year a large number of children suffer from burn injuries. In the University Children`s Hospital of Latvia each year more than 300 children with burn injuries are treated. The way of obtaining the injury differs a lot with the age of the child. School-age children mostly acquire burns because of reckless handling of flammable substances or reckless handling of fireworks or electrical equipment due to the easy availability of both petrol and fireworks. At this age they are more interested in learning something new than in the consequences. However, children under school age, especially young children, get trauma mostly due to parental negligence. The main reason for injuries is unsafe environment in the first years of life at home where the child spends most of his/her time, so making it safe contributes to child`s safety. However, the environment that is safe for adults is not always a safe environment for a small child. Assessing the patient`s condition at the time of burn injury does not include only the primary or the secondary inspection of the wound and the assessment of vital signs but as well as of the airways, circulatory and respiratory and other systems. Burn injury treatment includes not only the wound dressing, but also maintenance and stabilization of metabolic and hemodynamic systems. It is important to maintain a metabolic balance with sufficient diet rich in protein. Treatment of patients with burn injuries is long, expensive and very specific, involving many medical fields. Cooperation of parents with the health care personnel is of importance for ensuring health care of the child.

NO. 10. NEONATAL NECROTIZING ENTEROCOLITIS

Olita Lase (Latvia)

INTRODUCTION

Necrotising enterocolitis (NEC) is one of the most serious conditions occurring in the neonatal period, most commonly affecting premature infants. This condition is characterised by essential early diagnosis and urgent surgical intervention, followed by a complicated post-operative period.

OBJECTIVE

To analyse the incidence, management and outcomes of necrotising enterocolitis in the Neonatology Unit of the Children's Clinical University Hospital, Riga. Compare the initial presentation with the management undertaken. To outline the management of necrotising enterocolitis in the post-operative period.

MATERIALS AND METHODS

Analysis was undertaken of 157 case histories, occurring between the years 2000–2009, and diagnosing necrotising enterocolitis. The stoma management protocol was refined.

RESULTS

In the past 10 years, there have been 157 cases of necrotising enterocolitis in the neonatology unit at the Children's Clinical University Hospital, 38% of which resulted in death. 49 of the cases have been infants with the birth weight less than 1000 grams. 51 cases received surgical intervention, of which 34 required a stoma.

CONCLUSIONS

The nurse, recognizing the first signs of necrotising enterocolitis, promotes earlier diagnosing. Careful nursing observations, correct assessment and management of post laparoscopy and stoma creation have a positive impact upon the outcome.

NO. 11. PECULIARITIES OF PATIENT CARE IN CHILDREN'S NURSING PRACTICE AFTER EXTREMITY BONE FRACTURES

Inese Gredzena (Latvia)

ABSTRACT

Bone fracture is a disruption of bone continuity. They break if the applied external force exceeds the strength of the bone. According to the WHO statistics, Latvia ranks one of the first in the traumatic injuries.

There are certain considerations that nurses have to follow while providing care for patients with extremity fractures. Disregarding the fracture classification it is very important to assess the patient's current condition and provide adequate first aid. The nurse has to remember that the patient suffers from pain that is dangerously unpleasant, distressing subjective feeling.

The most important signs of the bone fractures are pain, deformation, edema and hematoma, shortening of the extremity, functional disturbances. The primary goal of the nurse in such situations is to calm down the patient, manage traumatic shock, evaluate the pain intensity, administer the prescribed medicine and to follow up the condition of the broken extremity (temperature, colour, sensitivity).

The main problems that arise while providing care for patients with extremity fractures are related with pain management, deficiency of patients' self-care and disturbances of their movements. Patients seeking medical help are expecting from nurses individual approach and qualitative care. Nurse can promote health improvement by giving advice and educating patients. Knowledge about the care peculiarities will help nurses to provide qualitative patient care as well as facilitate faster recovering of the patients' physical independence and their return to active life.

NO.12. NURSING CARE ON A PATIENT WITH GASTROSTOMA

Julia Potkina, Lydia Epelbaum (Estonia)

ABSTRACT

This report attempts to give answers to the following questions: how can enteral nutrition be carried out through the use of gastroenteric tubes? what varieties of the tubes are in existence? what do they look like? how are they established? what are they used for? As a rule, the tubes are established surgically, a nursing process is realized by the medical staff or members of family domiciliary. It is important to correctly estimate to what extent the child and the family members are ready to accept information and learn how to take care of a gastrostoma. Items of care of the tube and the skin around a stoma are described in layman's terms. Caring for the gastrostoma prevents entering of microorganisms which induce an infection; signs of the infection and means of avoidance of the infection are described in the report. Upon a use of the gastroenteric tubes, it is important to give a correct estimation whether the tube functions normally, what peculiarities should be paid attention to in order to understand that the tube is faulty. Intercourse of the medical staff with the child and the family members is very important. In the report there is complete information on how malfunctions can be removed in case of the problems related to the use of gastroenteric tubes.

NO. 13. SPECIFIC CARE OF CHILDREN AFTER TRAUMATIC PANCREATIC INJURY

Sandra Narnicka, Inga Markova (Latvia)

ABSTRACT

Up to 10% of children with a blunt abdominal trauma have pancreatic injuries and the frequency of these injuries tends to rise. Handlebar injury is the most frequent mechanism causing severe pancreatic injury.

The children with pancreatic injuries need individual care depending on the status of hemodynamic, extent of the injury, existence of associated injuries and experience of the institution.

Children having such injuries should be concentrated in a specialized department that can provide high quality care and permanent monitoring.

NO. 14. NURSING OF THE HYDROCEPHALUS PATIENT WITH EXTERNAL LIQUOR DRAINAGE

Lydia Epelbaum, Kristi Soovik, Erge Ois, Ann Paal (Estonia)

INTRODUCTION

One of the treatment methods of hypertensive hydrocephalus is external drainage of cerebrospinal fluid. Cerebrospinal fluid is an excellent medium for microbes. Therefore external drainage of cerebrospinal fluid is used only as a temporary treatment method in emergency cases, and for as short time as possible.

OBJECTIVE

To introduce the main principles of nursing in patients with external drainage of cerebrospinal fluid.

CONCLUSIONS

Strict adherence to the aseptic and antiseptic techniques in nursing a patient with external drainage of the cerebrospinal fluid helps to reduce the risk of shunt infection considerably.

NO.15. TRANSCULTURAL CONCEPT IN NURSING CARE

Sanita Krankale (Latvia)

INTRODUCTION

Over the last 20–30 years the world has seen new trends in society now talking about globalization and migration processes. racial confusion and cultural diversity. Society begins to recognize and respect each person's unique value, rooted in his/her cultural traditions. The health care subject is a patient, an entity with its own values and needs, based in the appropriate culture and its traditions. The term culture has many explanations, and its use is extensive and versatile as well, e.g.

- culture as heritage, as a set of symbols and the relationship of culture and civilization;
- culture of dialogue;
- culture and the value system;
- culture and art.

It proceeds that culture is a versatile concept that everyone understands and interprets differently and there is no one particular definition of this term. In 1950, the anthropologist Madeleine Leininger, nursing professor in the USA, came up with the transcultural care theory. Dr. Leininger drew attention to the fact that human health or sickness is highly influenced by culture and cultural experience.

OBJECTIVE

To find out potential problems in transcultural nursing practice.

MATERIALS AND METHODS

The theory focuses on:

- comparative trials of different cultures and subcultures;
- emphasis of cultural expression, caring and traditions, the concept of care, health and illness values, beliefs and behavior patterns. Summarizing what has been stated above, the knowledge of and interest in patient's cultural values, beliefs and life style is required from the care provider to ensure professional and integrated care process. The main goal of transcultural care is to respect the patient in being able to learn about other cultures and religions, and to provide appropriate care.

Transcultural care theory is based on the following fundamental assumptions: care is a universal phenomenon, it does not alter its form of expression - care exists in all cultures, but the treatment methods and forms may vary, e.g. some cultures may provide care only to immediate family members, only women - relatives, only the patient's sex or represented only by specially trained people, etc. Understanding of "good care" is based on cultural values and cultural backgrounds, so that the care in the given situation, an assessment resulting from the cultural groups in the environment may not match with the assessment of the situation arising from the observer on the sidelines. Nursing is a care process, where difficulties and misunderstandings between the patient and the care provider sometimes can come up because of their different cultural peculiarities and behavior. However, today, when one of the major tasks of transcultural nursing is to provide culturally competent health care to the people with many different cultural backgrounds, the care provider must be a skilled and knowing professional operation instead of acetabuloplasty.

NO. 16. WOUND CARE DOCUMENTATION

Marina Fenin (Estonia)

INTRODUCTION

Wound care is continuously improving in connection with the introduction of new and more effective means. However, at the same time, it is difficult to describe the issues related to wound care as the working experience of nurses and their ability to assess wounds are different. Considering this, there arose a need for the development of a uniform system for documenting wound care, which would give a clear overview of the provided wound care and of the factors influencing it. In 2008, the Wound/Wound Care Sheet was introduced in TU Hospital, the completion of which is based on the guidelines on prevention and management of bedsores.

OBJECTIVE

To describe wound care documentation in the Department of Paediatric Surgery of Tartu University Hospital

CONCLUSIONS

The Department of Paediatric Surgery has adopted the Wound Care Sheet for describing burn wounds. In the course of work there arose a need to introduce the drawing of the human body in the front view and in the back view to better identify the site and extent of wounds. Proceeding from this, it was decided to use the Wound Care Sheet for documenting all burn wounds. Improvements in wound care documentation allow us to economise both on human and material resources. Owing to progress in the means of care, it is not needed any more to dress wounds every day. Documentation of wound care on a standard basis has made information about patient care uniform and continuous. The present documentation is less time consuming for the nurse than the earlier one. In addition, more focus is placed on analgesia and patient education. The described upgrading is rewarding both for the patient and the staff.

NO. 17. TWO METHODS OF TREATMENT OF SEVERE HEAD TRAUMA

Arta Barzdina, Arnita Tomina, Inita Sture-Sturina (Latvia)

INTRODUCTION

Retrospective research consists of two different approaches to the treatment of children with serious traumatic brain injury (TBI). The research includes comparison between the periods (01.01.2001–01.01.2004) of treatment with the traditional method (guidelines issued by the USA Brain Trauma Foundation (BTF)) and the treatment used in the Children's Clinical University Hospital PICU, where patients with serious TBI had been treated by using the adopted Lund Concept (LC) starting with January 2004.

OBJECTIVE

To compare the two methods of treatment.

MATERIALS AND METHODS

The 1st group consisted of 60 patients (2001–2004), who were treated according to the USA BTF guidelines, the 2nd group consisted of 50 patients (2004–2008), treated by LC, with serious TBI and politrauma (prevailing TBI) ranging from 3 months to 18 years of age and having the Glasgow coma scale (GCS) within the range of 3–8 points. All 110 patients had pathologic findings on initial computed tomography; they were in PICU for no less than 72 hours and all were on mechanical ventilation (MV).

RESULTS

After discharge the average Glasgow outcome scale (GOS) for the 1st group was 3–4 (points), MV 5.8 days, PICU stay 8.3 (3–27) days, average hospitalization time 39.6 (16–111). The results of the 2nd group after discharge: average GOS was 4–5, MV 4.7 days (2–14 days), PICU stay 7.7 days (3–12), hospitalization days- 36.4 (15–55) on average.

CONCLUSIONS

The 2nd group, including children with serious TBI and treated by using the adopted Lund concept, showed better results: shorter MV 5.8 vs 4.7 days (average); shorter PICU stay 8.3 vs 7.7 days (average); shorter hospitalization time 39.6 vs 36.4 days (average); better the GOS scale result (3–4 vs 4–5 points) after discharge.

NO. 18. THE ROLE OF THE NURSING MANAGER IN ENSURING QUALITY NURSING CARE

Tatjana Oolo (Estonia)

INTRODUCTION

Quality has gained increasingly more importance in nursing. The vision of the nursing manager, resources for achieving the aim and the outcome are reflected in the work plan, in the annual report and in the satisfaction of patients and staff. The prerequisite of quality nursing care is the knowledge that nurses acquire during RN, nurse specialists' and master's studies. When planning RN and training courses, the nursing manager does it on the basis on the requirement sheet of the staff member, on critical competences or competence requirements developed at TU Hospital and on the results of the appraisal interview. For improving organisational activity, there has been implemented a procedure of registering problem cases that is of great help for the nursing manager in raising problems and in decision making. This task is facilitated by a planned purposeful supervision of trainees in the department and by motivating the nurses and the care staff to participate in various work groups and peer training activities, as well by the systematic training of a nursing manager replacement.

OBJECTIVE

To describe the nurse management in the Department of Paediatric Surgery proceeding from the indicators of the quality nursing care.

CONCLUSIONS

The quality of nursing care is evaluated on the basis of four indicators: patient satisfaction, staff-centred, professional and work organisation activity. Patient and staff satisfaction studies are conducted every two years. Of the nurses employed 93% have higher education. In changing and improving our work organisation during five years we have often proceeded from the registered problem cases. All this has ensured continuity and quality in the provision of nursing care and recovery of patients.

