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ALGORITHM OF DIAGNOSIS AND TREATMENT OF VASCULAR ANOMALIES

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Vascular anomalies (VA) are characterized by a wide range of diseases, occurring at different frequencies and significantly different from each other, which presents great difficulties in their diagnosis and treatment. Since 2001, more than 5000 children and adults with VA have been treated. The work was based on the classification of VA adopted by the ISSVA. Methods that evaluated local hemodynamics (LHD), such as ultrasound with color Doppler mapping, thermal imaging, spectrophotometry, were of significant importance in the differential diagnosis of VA, in determining the stage of development of infant hemangioma (IH), in choosing a method of treatment and monitoring its effectiveness. Methods of managing patients with VA included in IH: observation, treatment with propranolol systemically and locally, laser thermotherapy, non-contact and interstitial; with vascular malformations: sclerotherapy with picibanyl and bleomycin, laser thermotherapy without contact and interstitial, IPL-therapy, excision. The main goal of treatment of VA was to obtain the best cosmetic result while maintaining the functions of the affected area. In children with IH, three variants of LHD - intensive, moderately elevated and normal, were observed. 45% of children with IH with normal or moderately elevated LHD were simply observed. Laser thermotherapy was performed in 10% of children with intensive LHD (in parallel with treatment with propranolol) and in the presence of ulceration of IH. The rest of the children were treated with propranolol systemically or according to the original technology locally. In the treatment of venous or arteriovenous malformations, thermal therapy with laser radiation with a wavelength of 1.56 μm was effective, especially in combination with a wavelength of 1.94 μm . With lymphatic malformation, large cysts were sclerized with picibanyl or bleomycin (efficacy greater than 75%). Small and microcamps were heated by laser radiation with a wavelength of 1.94 microns. In general, the algorithm developed allowed to significantly increase the efficiency of diagnosis and treatment of this difficult and very diverse pathology.

THE NEW DEVICE FOR EXTRACORPORAL HERNIOTOMY IN CHILDREN

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In recent years, approach to surgical treatment of congenital inguinal hernia at children cardinaly changed, and first of all, it is bound to daily introduction and use of a laparoscopy which allows "to approach" a problem with another side, and technology of operation practically excludes contact with ductus. In the last time a new method of an inguinal herniotomy in children - a video assisted percutaneous internal ring suturing (PIRS). From June, 2012 till January, 2016 by a technique of PIRS in our clinic was operated 369 children with congenital inguinal hernia. We developed: the device for suturing of an internal abdominal ring and a needle for a herniotomy (Patents for the useful RU 153074 U1 and RU 163478 U1 model "The Device for a suturing of an Internal Abdominal Ring" and "Needle for a Herniotomy").

The device represents needle 100mm with the conductor. External diameter of a needle is 3 mm, internal 2 mm. On the proximal end of a needle - a cannula suitable for connection of the reference syringe 5 of ml. The distal end has the ellipse form. In a gleam of a needle two threads are located: the first - the main, the distal end is bent in the opposite direction. The material which is not resolving. The second thread - auxiliary forms "lasso".

The average duration of an extracorporal herniotomy (taking into account an anesthesiology grants) - at unilateral hernia makes in our clinic 16,3 \pm 5 min., at bilateral 24 \pm 3 min. At use of the developed device duration of operation was reduced by 5 \pm 3 min.

The method of a video assisted percutaneous internal ring suturing at congenital inguinal hernia at children with use of the developed device for a suturing of an internal abdominal ring proved as the fast, reliable and giving excellent cosmetic effect.

CHOLECYSTECTOMY FROM SINGLE LAPAROSCOPIC ACCESS IN CHILDREN. TO BE OR NOT TO BE?

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Relevance. The progress of achievements in surgery is associated with the desire to perform an operation less traumatic and with the best cosmetic effect. These requirements are met by laparoscopic surgery of one access SPLS (Single Port Laparoscopic Surgery).

The aim of research. Improve the results of treatment of children with calculous cholecystitis

Materials and methods. For the period from February 2012 to March 2017, under our supervision, there were 36 patients with calculous cholecystitis. Operation to remove the gallbladder was performed using U-NOTES (umbilical natural orifice transumbilical endoscopic surgery). We used a special reusable X-CONE TM port from Karl Storz, a three-chip HD camera with elongated optics. Cholecystectomy was performed standardly with clamping of the vesicular duct and clamping or coagulation of the vesicle artery. The operation is mainly performed from the cervix. In the presence of infiltration or the appearance of complications with the allocation of cells in 3 patients cholecystectomy was carried out from the bottom. In 5 patients at the stage of "working out" of the cystic duct and artery, an additional 3 mm port was required. The duration of the operation was 43 ± 9.8 minutes. Antibiotic therapy was performed in one injection 30 minutes before the start. Anesthesia patients required only during the first day after the intervention. There were no complications in the postoperative period. Especially it is possible to note ease of extraction of a cholic bubble from an abdominal cavity through a monoport.

Conclusions. Can be noted that the duration of the operation and the course of the postoperative period, with the use of a single laparoscopic access through the navel, is comparable to classical laparoscopy. Cosmetic effect after operations from a single laparoscopic approach is assessed by patients above. This leads to an improvement in their quality of life.

FUNNEL DEFORMATION OF THE THORAX AT CHILDREN HOW TO OPERATE?

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Funnel chest is the malformation met at 0,6-2,3% of population, constitutes 91% of all congenital deformations of the thorax.

Purpose. Choose the most optimal way of a thoracoplasty at children.

Materials and methods. 156 children with funnel deformation of thorax $13,9 \pm 2,59$ (boys- 115, girls- 41) are operated in clinics of children's surgery of Tyumen medical university during since 1990 to 2017.. Patients are divided in two groups. First group constitutes 30 patients operated with method Bairova, second- 126 patients operated with method Nassa.

Results and discussion. In the first group duration of surgery is $134 \pm 10,51$ minutes, hemorrhage is 150-500ml. The pneumothorax is recorded at 28 (93,3%) children, hemothorax at 1 (3,3%). All patients needed to drain a pleural cavity, drainage duration is 3-5 days. During 10 days patients received the anesthetizing therapy and 14 days antibacterial. Hospitalization duration is $41 \pm 4,42$ days. Three patients have disease recurrence, what need to repeat thoracoplasty. In the second group duration of surgery is $39 \pm 4,33$ minutes, no hemorrhage. The pneumothorax is recorded at 8 (6,35%) children, 5 (3,96%) needed to drain a pleural cavity, 3 patients have hemothorax and hemopleuritis, them made a drainage of a pleural cavity and a puncture. One sanatsionny thoracoscopy. Patients weren't in chamber of an intensive care more one day. Anesthetics and antibacterial drugs were prescribed to 3-5 days. For the 3rd days were activated, in $9 \pm 1,82$ days discharged.

Conclusion. At the moment the plate dismantled at 37 (40,7%) patients operated by the Nassa method. All of them are satisfied with result of operation.

THORACOSCOPY AT THE ESOPHAGUS ATRESIA WITH INSUPERABLE TO DIASTASES

(Clinical observation)

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The main number of complications and unsatisfactory results in the surgical treatment of esophageal atresia associated with large diastases between segments, when after complete mobilization the acute and abdominal segment of the esophagus can not be linked. In our clinic, one patient as a primary operation and delayed anastomosis of the esophagus was made thoracoscopically.

Newborn V. came to the clinic at the age of 4 hours of life with a clinical and radiological picture of esophagus atresia with a lower tracheotophageal fistula, high atresia of the anus. He was born in 35-36 weeks of gestation. Weight at birth 2156 g. After cooking the baby works. In thoracoscopy, after elimination of the lower tracheotophageal fistula and maximum isolation of the segments of the esophagus, diastases are 5 cm. Segments of the esophagus do not approach. A superposition of the transverse elongation of the esophagus on Fokera is performed. To feed the patient, laparoscopic removal of the pendulous enterostomy is performed, as well as due to the abnormality of the anorectal region-the laparoscopic formation of a double separate colostomy.

Ten days later, the patient is taken for repeated thoracoscopy. Completed thoracoscopic anastomosis of the esophago-esophagus "ends at the end". After a radiological examination with a water-soluble contrast on the 10th day, the baby begins to feed. The child developed chylothorax and chyloperitoneum. In accordance with the protocol of conservative treatment of chylothorax and choleopetonemia, the child was abolished enteral load, octreotide infusion, a full parenteral nutrition source was prescribed. Against the background of the therapy, the status stabilized, the lymph flow ceased. Enteral loading resumes after 15 days. Now the child is at home. Nutrition through the mouth in full, there is no dysphagia.. He is preparing for operative treatment of atresia of the anus.

THE CASE OF ILEOCECAL INTUSSUSCEPTION DUE TO BURKITT'S LYMPHOMA IN A CHILD

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In the practice of a doctor, rare, casuistic diseases occur, accounting for less than 5% of all lesions of an organ. Single cases of intussusception in a child owing to Burkitt's lymphoma have been described.

The child Dmitry S., 12 years old, complained of abdominal pain, repeated vomiting, loose stools, and anorexia. He was sick for 3 days. The father accidentally discovered a tumor in in the right half of the child's abdomen. At admission, the condition is grave due to intoxication. Pronounced asymmetry of the abdomen due to the formation was revealed. Examinations: CT of the abdominal cavity - abdominal mass in the right half of 120'70'90 mm in size, enlarged mesenteric and retroperitoneal lymph nodes, ultrasound of the abdominal cavity - intussusception of 72'60'50 mm, consisting of intestinal loops and lymph nodes. Preliminary diagnosis - tumour of the abdominal cavity? Intussusception.

At laparotomy, tumor biopsy, omentum resection, terminal ileostomy and peritoneal drainage were made. The large omentum was totally affected having multiple nodular elements. The ileocecal zone was affected by the total tumorous process. Intussusception was found in the ascending colon. Disinvagination was determined to be not possible. The extensive tumor spread to the entire mesentery and walls of the small intestine. The parietal peritoneum was involved in the neoplastic process up to the diaphragm. Thrombohemorrhagic changes in the mesenteric vessels in the basin of a.ileocolica and the transitional phenomenon of the necrobiosis in the segments forming the invagination were revealed. Taking into consideration the foregoing, removal of the tumor and intussusception had been considered to be impossible. Biopsy was taken and the large omentum resected. The distal ileum was resected for examination and the terminal ileostomy applied in the proximal part. A «second look» re-exploration was planned in 48 hours. Aspiration biopsy of the bone marrow was performed.

At relaparotomy in 2 days necrosis of the intestinal loops composing the intussusception was revealed due to thrombosis of the mesentery vessels. Right-sided hemicolectomy was performed. The results of histological study: lymphoblastic lymphoma with total large omentum infiltration, lesion of the walls of the removed intestinal fragments. Atypical cells were not found in the bone marrow.

The child was consulted in the Institute of Oncology. There was established the clinical diagnosis - Burkitt's lymphoma, stage IV, therapeutic group 2, subgroup R3, total infiltration of the omentum, lesion of the wall and mesentery of the small intestine and ileocecal angle, retroperitoneal space, parietal peritoneum. Ileo-colonic intussusception with necrosis, terminal ileostoma. For further treatment, the child was sent to the hematology department.

APPLICATION OF THE HYDROSURGERY SYSTEM AND PLASMAJET FOR THORACOSCOPIC DEBRIDEMENT OF PLEURAL CAVITY IN CHILDREN WITH FIBRINOTHORAX

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Introduction. Thoracoscopy became a favored modality in pediatric pleural empyema treatment. However, the factors affecting on outcome of thoracoscopic management remain unclear. Purpose of the study Demonstration of hydrosurgery system "Versajet" and the plasma unit "Plasmajet" during thoracoscopic treatment of children with pleural complications destructive pneumonia.

Materials and methods. 377 patients with a pneumonia was treated at the Speransky Children's Hospital in Moscow for the last 1 year. 62 patients (16.45%) from 377 required drainage of the pleural cavity.

14 patients from 1.6 to 15 years of age (mean, 3.2 ± 3.8) with pleural empyema were operated -Thoracoscopic pleural cavity sanitation with hydrosurgery system (Versajet-2) Hydrosurgery system is a surgical instrument based on the impact of high-speed jet of water on necrotic and inflamed tissues, combining the advantages of acute cleansing tissue and processing them by pulsating water jet. The design of the evacuation tube and its close proximity to the liquid jet creates a local vacuum, which effectively removes fibrin and liquid contents by Bernulli effect. Informed consent was obtained from parents, and the procedure received approval from the local ethics committee.

Results. Recovery and rehabilitation was uneventful in 13 cases. 1 patient with empyema of the right pleural cavity and severe organic lesion of the central nervous system was treated in our hospital by thoracoscopic adhesiolysis. However, postoperative period was complicated by recurrence of pleural empyema and cortication of right lung. Rethoracoscopy was performed six days later after initial operation - thoracoscopic debridement of pleural cavity, decortications of the right lung by hydrosurgery system with good results after surgery.

Mean operative time was 90 minutes (± 15 minutes). Drainage of the pleural cavity was removed 3-4 days after surgery. The childrens were discharged from the hospital on day 10 (± 1.2 days). After application of argon plasma coagulation has been achieved complete aerostasis in 2 patients, hemostasis - in 1 patient.

Ultrasound and X-rays examination 4 months after surgery confirmed the absence of inflammation in the lung parenchyma and full lung reexpantion in all patients.

Conclusions. Application Hydrosurgycal system during thoracoscopy, provide effective debridement of pleural cavity, decortications of the lung without damaging the lung parenchyma and create conditions for early rehabilitation of the compromised lung.

THE EFFECTIVENESS OF SURGICAL TREATMENT OF CHILDREN WITH NON-PARASITIC CYSTS OF THE SPLEEN

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From 2000 to 2017 49 children 2 - 17 years-old with non-parasitic cysts of the spleen sizes from 4 to 16 cm were treated by surgery. Preoperative examination included ultrasonography, multispiral computer tomography, magnetic resonance imaging and angiography. The various types of surgical treatment were used. Thus, 27 children underwent percutaneous drainage of the cyst using ultrasound navigation, deepitelisation was carried out by introducing into the cavity of 95% ethanol with exposure 7 - 8 minutes. In 16 patients was additionally used superselective embolization of the arteries that supply the wall of the cyst. In 2 cases procedure was limited to puncture and alcoholisation of cysts without remain drainage due to small residual cavities. 3 children with subcapsular localization of cysts have been subjected the laparoscopic fenestration with deepitalisation by high-temperature plasma stream. After that procedures the residual cavities was filled with PerClot, which is in contact with the liquid turned into a gel. In the early postoperative period the PerClot was visualized in the form of multiple hyperechogenic inclusions up to 3mm. Within 30 days these acoustic changes have disappeared without the formation of cavities. Among all patients subcapsular hematoma of the spleen after percutaneous puncture was noted in 2 cases (4%), recurrence of the cyst was diagnosed in 1 child (2%).

Conclusion: minimally invasive technologies in surgical treatment of children with non-parasitic cysts of the spleen allow us to completely abandon laparotomy and splenectomy, even at larger sizes cysts.

SLOW TRANSIT CONSTIPATION WITH DOLICHOSIGMOID IN CHILDREN – POSSIBILITIES OF SURGICAL TREATMENT

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Introduction. Chronic constipations in children occupy one of the leading places in pediatric gastroenterological practice. Conservative treatment is effective in 90-92%. Although, children with refractory slow transit constipations caused by dolichosigmoid in case of ineffective medical treatment require other ways to solve the problem, surgery may be one of them.

Aim of the Study. To elaborate effective methods of surgical treatment of dolichosigmoid in children.

Methods. The results of surgical treatment of 61 children with dolichosigmoid aged from 6 to 18 have been analyzed. The children were divided into two groups: I group (n = 32 children) – surgical treatment by means of resection of the sigmoid colon was analyzed; II group (n = 29 children) – the efficacy of the suggested surgery was analyzed, long-term functional results were studied, clinical efficacy of the applied methods was evaluated. Rectal biopsy was performed, irrigoradiographic examinations were estimated, the indices of anosphincterometry were studied.

Results. According to the findings of radiologic examinations dolichosigmoid in children should be classified into isolated and combined with dilation of the rectum. In case of dolichosigmoid with dilated rectum hypogangliosis is found histologically.

Conclusions. During surgical treatment of dolichosigmoid in children with dilation of the rectum the operation of Soave-Boley endorectal pull-through is recommended to be performed. In case of isolated dolichosigmoid in children the operation of sigmoidectomy is indicated with descendorectal end-to-end anastomosis with formation of distal colon ligament.

MATHEMATICAL SUBSTANTIATION OF THE MAIN SYMPTOMSCHOICE IN DIAGNOSTICS OF NATAL INJURYCONSEQUENCES OF THE CERVICAL SPINE

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We have studied 217 charts of the children treated in the surgical department of the Republican Mother and Child Center that have a diagnosis of a chronic rotational subluxation of C1. All the sick children underwent x-ray examination of C1 through the open mouth, a rheoencephalographic procedure. As a result of systematization of complaints, disease anamnesis, objective examination and results of instrumental survey methods, 27 factors related to the disease were collected.

The task was to find out the most important factors determining the severity of the disease.

Algorithm for solving the task:

- study of tables of initial experimental data and measures of tightness of linear regression between factors;
- construction, analysis of correlation matrices, splitting of factors into pleiads;
- application of expert methods - direct ranking and weighting factors of importance;
- tabulation of weakly correlated factors.

The mathematical analysis led to reduction the dimension of the factor space from the initial 27 to 5 units without changing the information capacity.

Conclusions:

As a result of the calculations, we have identified 5 factors carrying the main information load in the case of a rotational subluxation of the C1 vertebra. These factors were: data from the rheoencephalographic study, perinatal encephalopathy in the anamnesis, the age of the child, visual impairment, the presence of complications such as vertebrobasilar insufficiency, syncope, tension headache.

Based on these five factors, it is planned to build a probabilistic model for the severity of the disease.

BEA SCORE STUDY AND CORRELATIONS WITH THE SURVIVAL OF SURGICAL POSITION CONCLUSIONS

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Purpose: To evaluate the applicability of Baseline Event Anticipation score (BEA), as a prognostic factor for complications in cases of cirrhotic patients.

Material and Methods: Population chosen for the study was represented by patients suffering from cirrhosis, being evaluated through BEA prognostic score sensibility, using the online formula. (<http://hepatitis-delta.org/physicians-and-scientists/calculator>).

Results: The lot of operated patients where 54, with an average age of 43.4 ± 4.3 years; 53% of them were male and 47% female. All patients had Azygo-Portal Devascularization Hassab-Kaliba, histologically distributed as: micronodular hepatic cirrhosis - 24 (44.4%) macronodular- 16 (29.6%) and micro-macronodular - 14 (25.9%). In the analysis was a prevalence of the BEA-B score - 21 cases (38.9%), followed by 17 cases (31.5%) with BEA-A score and 16 cases (29.6%) with BEA-C score. After surgery 7 patients had 15 complications: early (6) and late (9), surgical (3) and therapeutic (12). Comparing the results, there is a direct correlation, $r = 0.233$ of the BEA-C score with the incidence of complications, and a decrease in BEA-A and BEA-B patients.

Conclusions: This retrospective study was conducted in a specialized center with a reduced sample size, it demonstrates the prognostic utility of the BEA score and apparently requires care that will improve perioperative recovery, and will reduce morbidity.

MINIMALLY INVASIVE SURGICAL TREATMENT IN ADVANCED PANCREATIC CANCER AND CHRONIC RELAPSING PANCREATITIS

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Introduction. The pain is one of the common and important aspects of care for patients with pancreatic nonresectable cancer (CPN) and severe chronic relapsing pancreatitis (CPR).

Material and metode. The study includes 56 (69,1%) patients with CPR and 22 (27,2%) patients with CPN - 3(3,7%) patients with extrapancreatic unresectable cancer, held during the years 2008 - 2016 in the Department of surgery Nr.2. The patients with CPR included 49 (87,5%) men and 7 (12,5%) women, CPN -20 (90,9%) men and 2 (9,09%) women.

Results. They practiced 68 (83,95%) SPLT on the left 13 (16,05%) toracoscopic splanhnictomy (SPLT) on the right, 4 (4.94%) patients also required SPLT on the right on 8 weeks after SPLT on the left due to the minimal therapeutic response). SPLT and endoscopic stenting of CBP were done in 15 (68,18%) cases with complicated with jaundice. The analgesic effect on short-term (<3 months) had an efficacy in 56 (100%) relapsing CPR cases and 20 (90.9%) cases of CPN. Between 3-6 months, the analgesia efficacy was maintained at 38 (67,86%) cases of relapsing CP (continuing after 6 months) and 14 (63,63%) cases, 11 (50%) cases of CPN (after 6 months). The perioperative mortality was 0.

Conclusion. The main advantage of SPLT is complete exclusion or semnificative reduing of doses of opioid analgetics in treatment of CPN and CPR resistant to conservative antalgic therapy. SPLT and endoscopic stenting of main biliary tract represent minimally-invasive procedures a safe surgery in CPN of complicated with jaundice.

THE DOUBLE KIDNEY IN CHILDREN. THE CLINICAL AND MORPHOPATHOLOGICAL ASPECTS

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The study included a batch of 86 children from 3 months to 3 years age with double kidney diagnostics treated in pediatric urology departments during the years 2006-2016. From the 86 patients - 42 were diagnosed with double kidney and obstructive megaureterohydronephrosis of superior pelvic; 34 - with double kidneys with refluxing megaureterohydronephrosis of superior pelvis and 12 - with nonfunctional kidneys.

The surgeries were performed:

1. The Lumbotomia. The heminefrectomy of upper renal pelvis. The capsulotomy of the resting kidney segment (17 cases);
2. The Lumbotomia. The heminefrectomy of upper renal pelvis. The capsulotomy of the rest of the kidney segment. The second approach - survezical ureterectomy of the residual stump (11 cases);
3. The Gregoire's plastic joint antireflux surgery in a common block (34 cases);
4. The resection of the lower ureter segment of the renal pyelone with ureterocystoneanastomosis, the procedure by Mö-bly (4 cases)
5. The lumbotomia. The nephroureterectomy of both kidneys. The supravezical ureterectomy of both ureteral stumps (12 cases);
6. The Ureteral resection with ureter neimplantation, the procedure by Mö-bly.(10 cases).

The morphological explorations were performed intraoperatively and postoperatively with retrospective examinations based on the material (renal and ureteral complexes, kidneys, kidney and ureter segments), removed in surgical interventions and biopsy of the renal pelvis at distance by applying macroscopy (organometry, macrometry) and microscopy of tissue specimens. The histological processing methods included the method by cryotomy and the usual histochemical method. The methods of coloring with hematoxylin-eosin, picrofuxin by Van Gieson, Arnold's silvering method after Bilshovski-Grosse were used.

The results of morphopathological investigations have allowed us to establish the mechanisms of lesions at the cell, tissue, organ level, which require new solutions in the choice of effective diagnostic methods and the level of surgical interventions, which is of decisive importance in the choice of surgical management.

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The micro-anatomical structural and morpho-functional capacity of the ureter from the lumen to the exterior, depending on the predominant tissue component, is determined and guided by three tunics: the internal tunic - the epithelial conjunctive, the medial tunic - the muscular conjunctive and the external conjunctive-vascular-nervous. The latter has a significant importance in the medical-surgical management of surgical pathology and functional management of the intraoperative and postoperative ureter. This is frequently found in both normal ureters and ureteral malformations due to the well-differentiated vasculo-arterial afferent network associated with efferent vascular-venous networks.

The conjunctive-vascular-nervous tunic, so nominated by us, is constituted by making continuously the connective tissue from the muscular-conjunctive tunic to the periphery and transition by discontinuity of the connective tissue of the retroperitoneal cell-adipose tissue into a lax connective plate consisting of fine collagen and elastic fibers with a varied condensation, thus anchoring the ureter in the retroperitoneal space. We consider it the "meso" of the ureter

Normally, this tunic has a more intimate appearance with the ureter, whereas a considerable distance from the muscular tunic can be observed in malformations.

It has been established that vasculo-nervous devices in the sheath area form a vascular plexus giving various circular and longitudinal oblique branches anastomosed and organized in a layered way, segmented or in various arborescent aspects.

This plexus, a vascular carcass, directly communicates with the vasculo-nervous network of muscle and epithelial-connective tunics. Between the sheath and ureter muscles, the connective tissue is devoid of vascular anastomosis, in this area there are only afferent and efferent arterio-venous vessels that penetrate the respective area, which allows it to be detached on insignificant surfaces.

The detachment of the ureteral sheath induces amputation of the afferent and efferent arterial and venous branches with the disordered local circulation at the meso-ureter level, including the ureter within the limits of the detachment. The attempts of detachment of the ureteral sheath contribute to severe circulatory disturbances in the ureteral segments meant for anastomosis, which leads to fibrosis of the ureter.

The lower third of the ureter does not mobilize, but detaches from the peri

RADIOLOGICAL PARTICULARITIES OF THE OBSTRUCTIVE VAGINAL ANOMALIES

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Introduction: Obstructive vaginal anomalies (OVA) are a very rare pathology, occurring at a frequency of 0.1% of newborn girls. OVA is a broad spectrum of various Müllerian anomalies: imperforate hymen (IH), complete transverse vaginal septum (CTVS), Herlyn-Werner-Wunderlich syndrome (HWW).

Objective of the study: Evaluation of radiological features of obstructive vaginal anomalies by ultrasound examination (USG), computed tomography (CT) and magnetic resonance imaging (MRI).

Material and methods: The retrospective and prospective study included 52 patients operated in the Department of Surgical Gynecology of the Institute of Mother and Child. The mean age was 15.7 ± 0.3 years (95% CI: 14.97–16.34). Diagnosis confirmed by the USG exam (n=52, 100%), CT (n=4, 7.7%) and MRI (n=7, 13.4%).

Results: In all cases (100%) USG (transabdominal or transrectal) were performed. IH was detected in 29 (55.8%) cases, USG demonstrates hypoecogenic hematometocolpos, MRI in T1W images - important uterine dilatation, intrauterine and intravaginal hemorrhagic fluid with hyperextension up to hymen; in T2W images - hyposeminal of intrauterine hemorrhagic content. CTVS was present in 8 (15.4%) cases, CT - intrauterine hyperdensus content with density up to 55UH; MRI demonstrates a vaginal transverse membrane appreciates its thickness and location. HWW syndrome was diagnosed in 15 (28.8%) patients and included uterus didelphys, obstructive hemivagina and ipsilateral renal agenesis. USG reveals renal agenesis and compensatory renal hypertrophy, the uterus didelphys with hypoecogenic fluid in the hemiuterus suggestive for haematometra, hematosalpinx. Based on the imaging data, the mean volume of the hematocolpos was 923.6 ± 79.1 ml (95% CI: 764.8–1082). Hematometra was detected in 23 (44%) patients, hematosalpinx and pelvic endometriosis - 3 (5.7%). Based on radiological findings (USG, TC and MRI), the maximal size of hematocolpos was 112.4 ± 5.8 mm (95% CI: 100.6–124.2), the minimal size was 76.7 ± 3.5 mm (95% CI: 69.64–83.81). In 16 (30.7%) cases vaginal malformations were combined with renal anomalies.

Conclusions: Modern imaging techniques elucidate the particularities of the radiological anatomy of OVA, allow early diagnosis of this pathology, treatment management to restore menstrual and fertile function.

CLINICAL AND THERAPEUTIC EVALUATION OF SURGICAL HERBAL HEPATIC CYCLE PATIENTS

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Introduction: The post-treatment analysis of clinical and socio-occupational status is a deceptive way in portal hypertension surgery in cirrhosis.

Purpose: To monitor the evolution of cirrhotic patients and the response to applied surgical treatment.

Materials and methods: A follow-up of 34 patients, followed at a distance of 1 month to 16 months post intervention for severe hypersplenism, examined clinically, biologically, edoscopically and imagistically.

Results: The information obtained revealed: the presence of esophageal varices with haemorrhagic imminence, reported in 36% cases, parenchymal decompensation, - in 2/34 patients, vascular decompensation - in 1/34 patients, alteration of liver biopsy samples - in 8/34 patients, portal vein thrombosis - 2/34 patients. In 82.3% (28 cases) there was a positive dynamics of evolution and quality of life when 17.6% (6 cases) of patients were enrolled in a higher class Child. At the end of the assessment 19 patients (55.9%) responded well, 11 (32.4%) - satisfactory response and 4 (11.8%) - unsatisfactory therapeutic response. The SF - LDQOL questionnaire, specific for chronic liver diseases, revealed significant physical impairment in 8 cases (23.5%) and the reduction of real bio - psycho - social capacity in 5 cases (14.7%) to operated patients.

Conclusion: Cirrhotic posttreatment patients should be considered at high risk of developing complications, requiring a therapeutic program at all stages of control.

FORMATION OF BIOFILMS BY CLINICAL STRAINS OF MICROORGANISMS RESPONSIBLE FOR SURGICAL PYOINFLAMMATORY DISEASES IN CHILDREN

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The ability of microorganisms to exist in the form of biofilms creates considerable difficulties for medical practice, since in this case the resistance of bacteria to antimicrobial agents is greatly increased. Therefore, the purpose of this study was to scrutinize the ability to form biofilms by microorganisms isolated from children with pyoinflammatory processes.

The identification of microorganisms was carried out according to the generally accepted microbiological protocols of their isolation and cultivation. Testing of isolates for the ability to form biofilms was realized by measurement of optical density in standard units (absorbance units - AU) on the spectrophotometer «Multiskan EX 355». The statistical processing of the results was performed using the programs «Statistica 6» and «Biostat».

In the course of the study, *S. aureus*, *S. epidermidis*, *P. aeruginosa*, *E. coli*, *Klebsiella*, *Proteus* spp., and *C. albicans* were isolated. In most cases, microbial associations comprising from two to three types of microorganisms were detected, namely *E. coli*, *K. pneumoniae*, *S. aureus* in 26,8 %; *P. vulgaris*, *Enterobacter*, *S. epidermidis* - 7,9 %; *P. mirabilis*, *K. pneumoniae*, *C. albicans* - 13,4 %; *S. aureus*, *K. pneumoniae*, *C. albicans* - 23,7 %; *E. coli*, *K. pneumoniae*, *C. albicans* - 16,5 %; *S. aureus*, *P. aeruginosa*, *C. albicans* - 3,4 %; *E. coli*, *S. epidermidis*, *C. albicans* - 2,9 %; *P. vulgaris*, *P. aeruginosa*, *S. epidermidis* - 2,8 %; *S. aureus*, *P. mirabilis* - 2,6 % of cases. The obtained results indicated the prevalence of microorganisms of the Enterobacteriaceae in children with pyoinflammatory processes in the material examined.

The studies of the ability of clinical strains of microorganisms to form daily compound biofilms, as well as plankton cells and new biofilms, made it possible to establish that the maximum daily biofilms density and the highest plankton cell formation were registered in microbial associations of *S. aureus*, *K. pneumoniae*, *C. albicans* ($4,56 \pm 0,19$ AU) and *S. aureus*, *P. aeruginosa*, *C. albicans* ($4,87 \pm 0,14$ AU). Plankton cells of all investigated microorganisms formed secondary biofilms actively with the highest density in *C. albicans* ($3,62 \pm 0,16$ AU), *K. pneumoniae* ($2,96 \pm 0,14$ units), *S. aureus* ($3,09 \pm 0,18$ AU) and *P. aeruginosa* ($3,11 \pm 0,12$ AU).

Thus, as a result of the division of bacterial cells, biofilm-forming microorganisms produce plankton cells capable of attaching themselves to the mucous membranes, wounds, catheters, and IV-lines with following formation of the new colonies, subsequently transforming into dense secondary biofilms, which makes for the spread and formation of multi-resistant clinical strains of microorganisms.

These properties of virulent microorganisms prompt to the development of methods for destruction of biofilms and intensification of microflora inactivation in the focus of inflammation. Our studies showed that the above mentioned requirements relating to the effective influence on biofilms corresponded to the joint effect of ultrasound and ozone, which significantly increased the efficiency of the treatment complex.

MULTIFACTORIAL AND COMPLEX APPROACH TO SURGICAL TREATMENT OF BENIGN BILIARY STRICTURES

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Objective of study was to systematize the experience of treating benign biliary strictures, analyzing the complex results.

Materials and methods. The integral prospective and retrospective cohort study analyzed the long-term results of 203 patients who underwent biliodigestive reconstructions during 1989-2015 years. Patients included in the research were supervised during 2-5 years: depending on the local anatomic particularities at the moment of reconstructive surgery, as well the remote clinical-evolutive particularities, using the clinical Terblanche score.

Results. The reconstructive surgical treatment was individual and directly proportional with the level of biliary strictures with a preference of selection of biliodigestive derivations on jejunal loop a la Roux. The reconstructive treatment of benign biliary strictures, classified according to Bismuth's classification, included the following surgical techniques: choledocojejunostomy in 86(42,4%) cases of type I and II strictures; hepaticojejunostomy to 102 (50,2%) patients with type III strictures, and in 15(7,4%) cases of type IV strictures bihepaticojejunostomy was performed. There were determined the following remote results based on the clinical-evolutive classification: very good / gr. I – in 123 (60,6±4,41%) cases, good / gr. II in 39 (19,2±6,31%) cases, relative satisfactory / gr. III – 18 (8,9±6,91%) cases and unsatisfactory / gr. IV in 23 (11,3±6,75%) cases.

Conclusions. The surgery of election in biliary strictures is hepaticojejunostomy on Roux loop. Analysis of remote results proved clinical efficiency of reconstructive interventions performed in 88,67% observations.

THREE COLUMNS VERTEBROTOMIES IN EXTRA-APICAL AREA AS A METHOD OF SURGICAL DEFORMITY CORRECTION OF CERVICOTHORACIC TRANSITION: ANALYSIS OF THE CLINICAL SERIES AND LITERATURE DATA

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Design: retrospective analysis of the clinical observations. Level of evidence – III.

Aim: retrospective analysis of the treatment results of the patients with malformation and segmentation of the cervical and upper thoracic vertebrae.

Materials and methods. Retrospective multi-center cohort of 8 cases aged from 8 to 15 years. Inclusive criteria are as follows: children aged less than 15 years by the time of operation, deformity in the frontal plane, application of three columns vertebrotomy and complete radiological archive availability.

Results. Patients with multiple abnormalities with a leading component maldevelopment of vertebral segmentation and formation are predominated. There were no violations of sagittal balance in patients. The amount of scoliotic deformity according to Cobb ranged from 30 ° to 66 ° (mean value - 46.1 °), with a frontal imbalance in 6 (55,5%) patients. After operations scoliosis values were from 3 ° to 34 ° (mean value - 15.3 °). However in all cases after operation the frontal balance was restored. The amount of correction ranged from 49% to 90% (mean 69,4%). No permanent neurological complications were observed in peri- and post-operative periods.

Conclusion. The key criterion for surgical correction of the defects of the cervicothoracic transition is the reconstruction of the local balance in the frontal and sagittal planes, and not the absolute correction of local deformation. Spine osteotomy in extra-apical area in children with multiple mal-developments of the cervical and upper thoracic spine allows us to produce adequate deformity correction (for mean 69,4%) and to reduce the risk of neurological disorders through main compression manipulation. That reduces the zone of instrumental fixation which is important for preservation of the axial growth.

PROLONGED DRAINAGE OF THE LOWER URINARY TRACT IN THE TREATMENT OF REFLUXING MEGAURETER IN CHILDREN

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The main purpose. To substantiate the need for conservative therapy as the first stage of treatment refluxing megoureter in newborns and infants.

Materials and methods. Analyzed results of treatment 19 children (25 ureters) with different levels of the disease. The evaluation criteria were the ultrasonographic researchers, determining the degree of dilatation of the ureters, the cup-and-pelvis system and the thickness of the kidney parenchyma, as well as the presence of an urinary tract infection.

Treatment based on prolonged drainage and lower urinary tract catheter Folleya (up to 1 month), with the interleave instrument natural urination (also up to 1 month, or until the secondary acute pyelonephritis). Medication support was in an antibiotic therapy, taking into account with the sensitivity of microflora and preventive treatment uroseptics.

There were regularly monitoring the degree of activity of the secondary flow of pyelonephritis and excretory function of the kidney. Excretory urography and cystography used in suspected degradation of structural parameters and renal function.

Indications for surgical treatment were indestructible inflammatory process within one month, the progression of dilatation of the ureters and renal pelvis system, thinning and disruption of parenchymal renal excretory function.

Results. In 6 (31,6%) of children to the age of 2 years were revealed a complete disappearance of dilatation of the ureter. In 3 cases of them survived vesicoureteral reflux 1- 2 degrees without renal impairment and without bladder syndrome, which can be considered as a positive treatment outcome.

Conclusion. Treatment the newborns and infants with refluxing megaureter should begin with conservative therapy, including prolonged drainage of the lower urinary tract.

MATHEMATICAL SUBSTANTIATION OF THE MAIN SYMPTOMS ROLE IN DIAGNOSTICS OF NATAL INJURY CONSEQUENCES OF THE CERVICAL SPINE

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Recently, according to the literature, the trauma of the cervical spine in newborns takes the leading place among the newborn natal injuries. According to available information, out of every 3 births, two newborns are injured in the cervical spine segment during labor. We have studied 136 cases of children who were in the intensive care unit of newborns in Republican Mother and Child Center. As a result of systematization of complaints, disease anamnesis, objective examination, 52 factors related to this disease were collected.

The task was to find out the most important factors determining the prognosis of the consequences of the natal trauma of the spine.

Algorithm to solve this problem:

- study of tables of initial experimental data and measures of tightness of linear regression between factors;

- construction, analysis of correlation matrices, splitting of factors into pleiads;

- application of expert methods - direct ranking and weighting factors of importance;

- tabulation of weakly correlated factors.

The mathematical analysis led to reduction of the factor space dimension from the original 49 to 4 units without changing the information capacity.

Conclusions:

1. As a result of the calculations, we have established 4 factors containing the greatest information load in the natal trauma of the cervical spine. These factors are the symmetry of the shoulders, the sucking reflex, the weighed gynecological anamnesis, the caesarean section.

2. Based on these four factors, it is planned to construct a probabilistic model for the consequences prognosis of the natal injury of the spine.

EXPERIENCE OF USING THE METAL PLATE IN THE TREATMENT OF PECTUS EXCAVATUM IN CHILDREN

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Congenital deformities of the ribs and sternum are often encountered. Surgical treatment of hollowed chest in children is generally accepted.

The purpose is to evaluate the efficacy of the metal plate in plastic surgery on the ribs and the sternum at the hollowed chest deformation.

Over the past 10 years there were 23 patients with a hollowed chest under the supervision. Of all the patients (23), the parents noted the deformation of the anterior thoracic wall in the first year of life in 5 children. The remaining 18 children had deformity at an older age - these children often had colds. Indications for plastic surgery were cosmetic, orthopedic, and functional. Only 10 patients demonstrated a violation of posture, 8 had a round back, and 3 had kyphoscoliosis.

Conducted electrocardiographic and spirometric studies found a violation of the cardiac activity function and external respiration in the majority of sick children (18, 67%).

Operation in the deformation of the ribs and sternum consisted of subchondral resection of the ribs of the deformed zone and T-shaped osteotomy of the sternum with subsequent correction of its shape and retention in this position by means of a metal plate that was inserted behind the sternum, and its jaws rested against the ribs themselves. The metal plate was removed one year after the operative treatment.

22 of the 23 children with chest deformity treatment had a recover restore the chest form and improvement of the chest function, 3 patients had a flat shape. Significant improvement in the function of respiratory and cardiovascular systems was revealed. All children became more active, cheerful, and sociable. Inferiority syndrome disappeared.

MAIN FACTORS AFFECTING NATAL INJURY OF THE CERVICAL REGION OF THE NEWBORN SPINE

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Parturition is a complex biomechanical process that affects the entire body of a newborn baby. The traumatic process consists of the flexion-compression and distraction moments, as well as the rotation of the head.

The purpose is to identify the main factors on the part of mothers and medical staff facilitating the trauma of the cervical spine segment.

Over the past 3 years we have seen 87 newborns who were in the intensive care unit over natal trauma of the cervical spine. Boys counted 38, girls - 39. Average weight is 2800-3200 grams. Newborns were born during the period from 38 to 40 weeks. All the newborns had KISS-syndrome. Predisposing factors of the parturient woman are as follows: narrow pelvis - 5; rapid parturition - 9; anomaly of the fetus and placenta position - 6; others - 7. Predisposing medical factors are stimulation or suppression of labor - 13; cesarean section - 20; not shown or incorrect medical benefit - 16. Combined factors of mothers and medical personnel - 11. We considered only those factors that played a major role in the trauma of the cervical region.

Of all 87 newborns, the cervical injury due to "maternal causes" occurred in 27 cases (31%); due to "medical staff" - 49 (56%), combined factors 11 (13%). Conclusions: considering predisposing factors, one can prevent or avoid natal trauma of newborn by changing tactics of childbirth. The main role in the formation of the natal injury of the cervical spine region in the newborn is devoted to unspecified or "active" medical benefits. Malformations in parturient women contribute least to the formation of the natal injury of the cervical spine region in newborns.

PERCUTANEOUS INTRAMEDULLARY FIXATION WITH THE WIRES FOR FRACTURES OF THE DISTAL RADIUS METAEPIPHYSIS IN CHILDREN

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Fractures of the forearm bones in children are among the most common injuries and they occupy a leading place among limb fractures. The method of treatment of the fracture of the distal metaepiphysis of the radial bone in children determines the type and place of the fracture, the degree of displacement of the bone fragments and the method of repositioning the bone fragments.

The purpose is to verify the effectiveness of percutaneous intramedullary Kirschner wires fixation in the treatment of fractures of the distal radius metaepiphysis in children.

Over the past 10 years the surgery department provided treatment for 107 children of different age and sex with fractures of the distal radius metaepiphysis. There were 67 boys and 40 girls. Damages were as follows: epiphyseolysis distal epiphysis in 39 (36%); osteoepiphyseolysis of distal metaepiphysis in 43 (40%); fracture of the distal radius with displacement of bone fragments in 25 (23%) children. The tactics of treatment depended on the fracture line, the shape of the fracture, and the age of the patient. All children reposition and percutaneous fixation was performed under general anesthesia with X-Ray control.

Wires as a retainer of bone fragments were applied for 30-35 days averagely. These patients were constantly observed by a traumatologist.

From all observations (107), the complications were in 7 (5%) patients, out of which 5 had an inflammation of the soft tissues, one patient had a soft tissue abscess rear of the wrist and one had a wire on the 30th day after the repositioning was broken at the level of the wrist joint.

All of these patients underwent treatment tactics correction that did not affect the final outcome.

COCCYGDYNIA IN CHILDHOOD AND ITS TREATMENT

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Coccygodynia is the pain in the zone of the coccygeal bone. The cause is injury.

The purpose is to determine the main clinical and X-ray signs of coccygodynia in childhood and to justify the effectiveness of her surgical treatment.

Since 2005, 33 children have been observed with a clinical symptoms of coccygodynia - age from 8 to 17 years old. There were 5 boys and 28 girls. On examination, all patients were determined constant pain in the coccyx. Clinically - the coccygeal zone without pathological changes. Palpation in this area defined pain at all 33 patients, 24 patients have pain while sitting on a solid surface, pain during the act of defecation at 16 patients. Vicious position of coccygeal bone and pain determined in all patients with rectal examination and X-Ray. Anamnesis contains a fall on the buttocks. All patients underwent surgery - removal of coccyx bone. The pain syndrome disappeared on the second day after surgery at 27 patients, all children without pain syndrome were prescribed for outpatient observation. All patients treated with a surgical method had a persistent cure - the pain syndrome in the coccyx region disappeared. Long-term results were followed to a depth of 5 years, recurrence of pain wasn't observed.

Coccygodynia is a consequence of traumatic damage of the coccygeal bone followed by non-union of the fracture, and the rapid development of scar tissue with involvement in the process of sensory nerve endings to the clinic constant pain in the coccyx.

Diagnosis is simple - a constant pain in the area of the coccyx. Radiographically is a vicious position of the coccygeal bone. The removal of the coccygeal bone is an effective way to treat coccygodynia.

TREATMENT OF NOTTA DESEASE ACCORDING TO SHASTIN METHOD IN OUR MODIFICATION

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Tenosynovitis stenansans is a dysplastic pathology of the anular ligament of the fingers that occurs in children most often between the ages of 1 to 3 years. The anular ligaments of the first finger are most often affected, although this is possible with the other fingers. Parents notice the difficult extension of the first finger or the inability to unbend the first finger completely. Also one can notice directly at the base of the first finger on the palmar side a thickening.

The purpose is to prove the effectiveness of the mini-invasive method of treatment according to Shastin method in our modification.

In recent years, we observed 67 children under the age of 3 years, in 51 cases the constrictive ligament was observed in the first finger, 16 were from other fingers. In 49 cases it was on both first fingers of brushes. Before surgery, ultrasound was also performed, which specified the area of the pathologically altered anular ligament and its extent. Operative access is performed on the palmar surface in the middle of the finger through a point incision (according to Shastin method) with a special pointed scalpel in the projection of the pathologically altered anular ligament, which was later dissected longitudinally. After all procedures a tendon of the long flexor gets the possibility of free sliding in its channel and the finger takes the usual position. The edges of the surgical wound approached by a thin strip of adhesive. After getting out of anesthetic sleep the child could move his finger freely. Traced long-term results up to 7 years in 45 patients. The functions of the fingers were restored completely in all 45 patients, there were no relapses.

Operative treatment in our modification is low-traumatic, highly effective and extremely rarely leads to relapses.

TREATMENT OF TRACHEBRONSHIC FOREIGN BODY IN CHILDREN THE ORLINOLOGY CLINIC EXPERIENCE

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After the introduction of bronchoscopy into the medical practice, the incidence of complications following the extraction of the foreign body from the lower respiratory tract, was considerably reduced. The aim of this study is to analyze the cases of tracheobronchial foreign bodies, brought via AVIASAN line in recent years, and solved by the otorhinolaryngology clinic “Em. Cotaga”.

Materials and methods. We performed a retrospective study involving 188 patients with tracheobronchial foreign bodies.

Results. The study found that the predominant age of tracheobronchial foreign body aspiration in children was from 1 to 2 years (59,6%).

Foreign bodies sucked into the lower respiratory tract was met more frequent in male (63,3%) than female (36.7%).

The localization of the suctioned bodies predominated in the right bronchus (60.1%) compared to the left bronchus (31,9%), and a small number of foreign bodies being in the larynx (3,2%).

Considering the nature of the foreign body, the sunflower seeds (30,9%) and walnut kernel (23,9%) predominance was observed.

Conclusions

- according to the children's age structure in the case of foreign bodies suction in the lower respiratory tract there is a predominance of the age of 1-3 years.
- by gender, the male sex predominates in the case of sucking foreign bodies.
- the location of the suctioned bodies are more often determined in the right bronchus than in the left bronchus.
- the organic of the foreign body depends very much on the peculiarities of the diet and lifestyle of the population, the age of the child, the games and the interests of the child.
- complications or deaths during and after tracheobronchoscopy in children.

INTESTINAL OBSTRUCTION AS A COMPLICATION OF NECROTIZING ENTEROCOLITIS IN CHILDREN

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Introduction. The problem of treatment children with intestinal obstruction on background a necrotizing enterocolitis (NEC) and after this pathology remains an actual subject for a discussion of many specialists today.

Aim of this study is the optimization of preventive measures in patients with NEC in order to reduce a quantity cases of NEC complications such as an intestinal obstruction.

Materials. 18 children with intestinal obstruction on background and after NEC have been under our observation. 11 patients were newborns and 7 patients were infants from 3 to 11 months old. All newborns had symptoms of early adhesive intestinal obstructions and 7 children had late complications of NEC such as late adhesive intestinal obstruction (3 patients) and intestinal stenosis (4 patients). Clinic and laboratory examination, X-ray and sonographic diagnostic methods have been performed in these patients.

Results. Majority of newborns with NEC and intestinal obstruction were premature (81,82%). Among 7 patients of older age 4 children were born premature too. The main reasons for development of intestinal obstruction were the hypomotors of fixed intestinal loop and necrotizing area with formation of infiltrates around intestinal perforation and preperforated damages of the intestinal wall. The late complications of NEC were diagnosed in 7 children, which had late adhesive intestinal obstruction and intestinal stenosis. Ischemic damages (dysfunction of vascularization of the peritoneum and intestinal wall), long-term infection in the abdominal cavity and other pathological factors are the most frequently reasons of intestinal obstruction after NEC in children. All patients were operated. 2 newborns (18,28%) have died. The reason of mortality was neonatal sepsis with multiple organ failure.

Conclusions. 1. Prematurity, ischemia of intestinal wall and intraabdominal infection are the main risk factors of the intestinal obstruction in NEC. 2. The main types of intestinal obstruction in NEC are adhesive intestinal obstruction and intestinal stenosis. 3. The surgical treatment prognosis in children with intestinal obstruction after NEC is positive.

TRENDS AND RESULTS IN ACTUAL TREATMENT OF SPLENOPORTAL POSTSPLENECTOMY TROBOSIS

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Introduction. The splenoportal venous thrombosis axle (TAVS) postsplenectomy has an important role in general morbidity. There is still no common decision on the current treatment scheme.

Purpose: To identify dynamically clinical-imagistic changes in the evolution of TAVS.

Material and methods. In our study were included 74 splenectomized cirrhotic patients. For the 41 studied patients, we applied a strategy to prevent the occurrence of TAVS, namely: fraxiparin / peroxide cleanser, as prophylactic doses. We evaluated factors associated with treatment outcomes

Results. 11 patients (14.8%) were diagnosed with TAVS after post-splenectomy, 5 men and 4 women with an average age of 42.3 ± 3.5 years. Approximate time from splenectomy was 6 months (1-13 months). TAVS patients used as therapy antiplatelet-dual-anticoagulant medication, in addition to the complex use of low molecular weight heparins also included oral administration of a platelet antiaggregant (150 mg ticlid, nugal, plavix, clopidogrel 75 mg, aspirin). Decisions on time and duration of administration were taken on a case-by-case for each patient. The protocol analysis shows a positive response in 82% of cases that shows a amelioration of post-operative thrombocytosis, increasing the speed and volume of portal flow. Post-treatment retromyosis within 6 months was present in 2/11 patients.

Conclusion. Factors that influenced the incidence of TAVS after postsplenectomy were: significant splenomegaly, functional thrombocytosis, child score, perioperative prophylactic treatment.

PANCREATIC INSULINOMAS – CLINICAL, DIAGNOSTICAL AND THERAPEUTICAL ASPECTS

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Introduction. Insulinomas are neuroendocrine tumors with low incidence (1-4 persons per million of general population), and represents 1-2% of total pancreatic neoplasm.

Material and methods. The study presents the results of surgical treatment applied to 9 patients diagnosed with pancreatic endocrine tumor (PET) - between 1993 - 2016 in the Department of surgery Nr.2

The diagnostic management has included a clinical and laboratory examination, (glycemic profile, the glycemic index during hypoglycemic and convulsive crises, glycemic levels after the administration of glucose solutions of 40%, assessment of the level of serum insulin, echography, CT, MRI.

Results. The symptomatology is dominated by neuropsychiatric symptoms – 8 (88,8%) cases, adrenergic symptoms – 6 (66,6%) cases, digestive - 5 (55,56%) cases and Cushingoid syndrome 1 (11,1%) case. After evaluating the glycemic profile, the glycemic level of hypoglycemic and convulsions crisis was within 2-3,0mmol; the glycemic level after the administration of glucose solutions of 40% was 3,8-5,5mmol, the level of serum insulin was increased 32,45U/mL, level of C-peptide - 4,6 ng/ml. The elective surgeries included: tumor enucleation in 5 (55,6%) cases, corporeal-caudal pancreatectomy with spleen preservation in 3 (33,33%) cases, corporeal-caudal pancreatectomy with splenectomy in 1 (11,1%) case. Mortality and morbidity perioperative were 0.

Conclusion. Delays in diagnosis are caused by a non-specific symptomatology (cardiac, neurological, psychiatric symptoms), the pancreatic enucleoresection being the treatment of election.

THE INFLUENCE OF PAEDIATRIC MINIMALLY INVASIVE SURGERY ON THE HOSPITAL TREATMENT DURATION

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Purpose: to explore the possibility of shortening hospitalization after high complexity paediatric surgical operations.

Materials and methods: in 2014 - 2017 47 children (1 - 17 years old) were operated. Children were discharged from the hospital after medical stabilization, further treatment on an outpatient basis.

Results: 41 patients (19 boys and 22 girls) with abdominal pain were operated. In 23 cases were destructive forms of acute appendicitis. Of these, 8 patients with peritonitis (4 - generalized peritonitis).

Cryptogenic peritonitis simulating acute appendicitis in 6 girls, 1 girl had torsion of ovarian cysts. In 1 case (3.5 year old) was a penetrating abdominal trauma and loops of the small intestine, in 2 - recurrent intestinal invagination.

Also, 2 children with hydronephrosis completed by plastic ureteropelvic junction, 4 patients with vesicoureteral reflux was performed injection plastic of the ureteral orifice and detrusor injections with botulinum toxin. In all cases underwent endoscopic surgery without conversion to open surgery. Children with «emergency» diagnosis were discharged from the hospital on the 3,5 days (1-5,5 days), planned patients on the 4 days. One patient with hydronephrosis and 1 child with generalized peritonitis have the longest hospital stays (8 and 5,5 days respectively).

In case with hydronephrosis accidental removal of ureteral stent was the cause of ureteropelvic anastomosis obstruction and prolonged hospitalization. In all cases further treatment on an outpatient basis were without complications.

Conclusion: laparoscopic surgery in children certainly carries many advantages. These include less pain, rapid recovery, shorter hospital stay, less wound complications and better cosmetic result. The laparoscopic technique in comparison with medical and economic standard practically reduced the hospital stay period into halve without increasing of complications. Laparoscopic surgery in infants and young children will become more widely accepted.

REPEATED SURGERY FOR RECURRENT VARICOCELE IN CHILDREN

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The frequency of varicocele recurrences after surgery is an extremely variable quantity (0,5-35%). Most studies show that microsurgical inguinal or subinguinal ligation of veins provides significantly fewer relapses (0,5-3,7%).

During the period 2009 - 2016, we treated 14 patients 12,5-17 years age with recurrent varicocele. At 4 ones previously produced retroperitoneal ligation of testicular veins by open access, 9 - laparoscopic ligation. In 13 cases, laparoscopic ligation of residual testicular vein was performed. In 1 patient relapse was occurred after an open ligation of testicular vein. Based on angiography results with measurement of venous pressure in the left renal vein we had decided to hold subinguinal microsurgical ligation veins. 4 months after that operation varicocele grade 3 relapsed again. We performed laparoscopic revision and clipping of the residual veins and simultaneous microsurgical ligation of expanded venous plexus in the scrotum by skrototomy through the Vesling's line. Follow-up of 14-42 months demonstrate an absence of recurrence. In 2 patients in the development of a hydrocele occurred in the earl postoperative period, which disappeared after 4.5 and 8 months spontaneously. Another patient after repeated laparoscopic procedure suggests decrease of volume of the left testis by 35% relative to the right.

Conclusion. According our experience we can recommend laparoscopic ligation of residual testicular veins as good choice in children with relapse of varicocele.

ONE-DAY HOSPITALIZATION EXPERIENCE IN CHILDREN'S SURGICAL DEPARTMENT

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Purpose: To analyze the effectiveness of stationary substitution technologies in pediatric surgery

Materials and methods: 482 children with typical surgical diseases from 1 to 17 years old were operated in the period of 2014-2017. Different types of local and general anaesthesia were used for operations, including combination of intubation anaesthesia and mechanical ventilation. All patients were discharged home on the day of the operation.

Results: 190 patients with phimosis were operated for the indicated period (of these, 86 under anesthesia, 104 under regional anesthesia). Also, 44 patients with hydrocele and spermatoceles were operated under general anaesthesia, 21 - with cryptorchidism (including 5 - laparoscopic surgery), 53 - with umbilical hernia, 42 - with inguinal hernia (all by endoscopic method), 19 - with varicocele (17 laparoscopic surgery), 28 - syndrome of an acute scrotum, 30 with short frenulum of foreskin, 4 with cysts in the neck, 32 with benign tumors of different localization, 4 with vesicoureteral reflux, 15 with extensive tissue trauma. The average stay at the hospital, including the preoperative period was 4 hours.

Also, 2 children with acute bronchospasm after extubation were cured by conservative methods. 2 patients had bleeding from the wound in the early postoperative period, one of them required repeated anaesthesia and revision. Purulent-septic complications were not identified. The pain syndrome was moderately expressed and successfully stopped at home by the use of non-narcotic analgesics.

Conclusion: the most common operations in childhood can be performed within «one-day» hospitalization without increasing the incidence of postoperative complications.

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Background. The presence of an acute inflammatory and destructive process in the abdominal cavity is commonly a contraindication to the one-stage laparoscopic herniorrhaphy.

Material and methods. From 2010 to 2017 986 children, 5-14 years of age, were admitted to hospital with a clinical picture of acute abdomen for surgical treatment. During laparoscopy in 53 patients (33 boys and 20 girls) a persisted processus vaginalis (PPV) was found: unilateral in 48 cases and bilateral in 5 cases. In 37 children from this group various destructive forms of acute appendicitis (in 10 cases complicated by local peritonitis with or without intraabdominal abscess and in 7 – by general peritonitis) were diagnosed as well as 10 - pelvioperitonitis, 4 - acute mesenteric lymphadenitis, 1 - ovarian apoplexy, 1- torsion of omentum. All patients underwent simultaneous procedures - both inflammatory focus sanitation and subcutaneous endo-assisted ligation (SEAL) of PPV.

Results. There was no conversion in any case. When the inflammatory focus was reorganized (appendectomy, ovarian resection, etc.) SEAL was performed according to our modification. SEAL duration was not more than 8 minutes for unilateral hernia and 10 minutes for bilateral one. Postoperatively, all children received a standard therapy. In all cases the postoperative period was favorable. Complications in abdominal cavity or inguinal canals were not observed. Ultrasound examination and blood tests confirmed a complete relief of the inflammatory process. All patients were discharged with full recovery.

Conclusion. Simultaneous laparoscopic herniorrhaphy in children with acute inflammation in the abdominal cavity does not increase the risk of postoperative complications.

A RETROSPECTIVE CLINICAL STUDY OF 735 SCOLIOSIS TREATED BY POSTERIOR SEGMENTAL RACHISYNTHESIS

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This is a retrospective study of 735 patients with scoliosis who underwent surgery in Pediatric Orthopedic Department of Central Emergency Hospital for Children "Grigore Alexandrescu" Bucharest and also in the private hospitals "Regina Maria" and "Sanador" in a 15 years period between 1999 and 2013.

The study relates to the cases of scoliosis treated by segmental rachisynthesis by posterior approach, but also includes some cases in which the posterior and the anterior approach were combined. The patients were between 6 and 44 years old and most of them were female (82%). We used different techniques of rachisynthesis such as: SCS (Spinal Clip System), Moss-Miami, XIA, CD-Legacy, USS II.

Regarding etiology, 93,12 % of scoliosis were idiopathic forms, 2,03% congenital, 1,09% in patients with Recklinghausen disease, 1,09 % in Marfan syndrome, 0,94% in cerebral palsy, 0,63 % in both spinal amyotrophy and posttraumatic and 0,47 % in muscular dystrophies.

According to topographic form, 37,66 % were double thoracal and lumbar scoliosis, 29,06 % thoracal scoliosis, 18,28% thoracolumbar, 13,12 % lumbar, 1,25 cervicothoracal and 0,63 % triple curve scoliosis.

SURGICAL TREATMENT OF THE ADHESIVE INTERSTITIAL OBSTRUCTION IN CHILDREN

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Introduction. Adhesive intestinal obstruction (AIO) is one of the most difficult and unsolved problems of the abdominal surgery in children.

Aim of the study. To explore the possibility of using hyaluronic acid solution for the treatment of intraperitoneally adhesions in children.

Methods. 84 children were operated on AIO. The children were divided into two groups. HAS was not used in I group (56 patients). HAS was used in II group (28 patients). The follow-up of children from 1 to 4 years.

From 84 patients on AIO: 21 (25 %) operated on for early adhesive intestinal obstruction, 63 (75 %) – on late adhesive intestinal obstruction. Recurrent AIO was in 12 (14,29 %) children.

Results. In the I group (56 children) in the first year after surgery with adhesion syndrome turned 13 (23,21 %) children, up to 4 years - 20 (35,71 %) patients. In the II group (28 children) adhesion syndrome (cured conservatively) over 3 years postoperative period turned 2 (7,14 %) patients, indicating the effectiveness of hyaluronic acid solution for the purpose for treatment of the adhesions abdominal cavity in children.

Conclusion. The hyaluronic acid solution is effective in the treatment of adhesive intestinal obstruction in children and is accompanied by a recurrence of the adhesion syndrome 7,14 % (n=28 children) on the difference in the group without using it – 35,71 % (n=56 children).

SMITH-PETERSEN OSTEOTOMY EFFECTIVENESS COMPARED TO ANTERIOR RELEASE PROCEDURES IN SURGICAL TREATMENT OF LENKE TYPE I IDIOPATHIC SCOLIOTIC DEFORMITIES

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Introduction: rigid idiopathic scoliosis deformities are traditionally treated using a two-stage approach. However, multilevel Smith-Petersen osteotomies allow to mobilize the main curve and to omit the anterior release stage.

Materials and methods: the results of 72 patients aged from 14 to 21 years with an idiopathic scoliosis of Lenke type I and angle of deformity from 70° to 90° (average angle 81.3°) were analyzed. In 35 patients, one-stage treatment was performed in combination with multilevel Smith-Petersen osteotomies. In 38 patients – two-stage operative treatment (anterior release + posterior fusion) was performed. In all patients, the deformities were rigid (correction of less than 25% with the traction test). All patients were examined radiographically. Radiographs were performed right after surgery and 3, 6 and 12 months after surgery.

Results. In-group I the average degree of deformity was 72.67 °. The mobility of the main curve in all cases was below 25%. All patients underwent SPO (from 5 to 8 levels). Correction and fixation were carried out using hybrid and screw instrumentation. The average correction angle was 49.94 ° or 68.7%. In-group II the average degree of deformity was 73.92°. The mobility of the main curve was below 25%. All patients underwent anterior release (4 to 6 levels of discectomy). Over the next 7-14 days, halo-gravity traction was carried out. The second stage was performed using posterior correction and fusion using hybrid or screw instrumentation. The average correction angle was 48.73°, or 65.9%.

Conclusion: the use of Smith-Petersen osteotomy in patients with rigid idiopathic Lenke type I scoliosis with a degree of deformity between 70° and 90° allows for one-step correction that yields comparable results with two-stage surgical treatment. The number of SPO levels should be at least 5.

THE USE OF NITINOL RODS IN STABILIZATION OF THE LUMBAR SPINE FOR PATIENTS UNDER 21 YEARS

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The outcomes of surgical treatment of 25 young patients with degenerative diseases of the lumbar spine in two groups were compared in patients with nitinol rods (dynamic stabilization) without spondylosis and with rigid lumbar fixation of titanium rods.

Men - 12, women - 13, the average age is 17.6 years (from 16 to 21 years). These patients are divided into 2 groups depending on the stabilization method. Clinical and radiological results were monitored at least 1 year after the operation.

In our study we used nitinol rods of 2 standard sizes - 60 and 80 mm. The size and curvature of the bending of the rods is calculated from the average anatomical parameters characteristic of the lumbar spine and lumbosacral junction.

In all groups, there were no statistically significant differences in preoperative values and in the control periods of observation of the VAS (for both the back and the lower limb), Oswestry and SF-36 between patients with nitinol and titanium rods ($p > 0.05$).

In both cases (rigid and dynamic stabilization), statistically significant changes were noted in the post-operative period ($p < 0.01$). In both groups, in comparison with preoperative values, improvement was observed in all control periods, which were highly statistically significant ($p < 0.01$).

When studying the mobility in stabilized segment with dynamic nitinol rods, it is determined that the mobility, which persists in 1 segment, averages 4.8° . This index is within the limits of measurement error (up to 5°), however, when measuring mobility in two segments, the mobility is 9.6° .

Transpedicular fixation of the lumbosacral spine with the use of nitinol rods is an effective technology that allows to keep movements in the lumbosacral spine in combination with a stable fixation. Further study of this technology should continue, including with reference to deformations of the spine.

RISK FACTORS AND SURGICAL TREATMENT OF CRANIOVERTEBRAL STENOSIS IN PATIENTS WITH MAROTEAUX-LAMY SYNDROME (MUCOPOLYSACCHARIDOSIS TYPE VI)

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Introduction. Atlantoaxial instability with the outcome of myelopathy and spastic tetraparesis are commonly described in patients with MPS VI type. The accumulation of glycosaminoglycans behind the odontoid process leads to a gradual development of the spinal canal stenosis and compression of the spinal cord in the cervical spine. These lesions lead to neurological disorders and loss of quality of life.

Methods. Nine patients with MPS type VI. Of them 3 males and 6 females aged 14 to 35 years (mean age 20.8 years). All patients presented with craniovertebral stenosis of some degree and underwent posterior spinal canal decompression with cervical fusion. Neurological symptoms were observed in 7 of all cases preoperatively. Functional assessment and evaluation of neurological status was conducted in all cases. CT and MRI evaluation was performed at the atlantoaxial level before surgery and at follow-up.

Results. The average follow-up period was 2.9 years. Seven of the nine patients demonstrated regression of neurological symptoms. In two patients the neurological status was unchanged. Solid fusion was achieved in 6 cases. Complications from surgery we observed in 3 patients. One patient died one year after surgery due to unrelated causes, there was one case of pseudarthrosis one case of implant instability and one case of early postoperative wound suppuration.

Conclusion. The majority of patients with type VI MPS present with some degree of spinal stenosis at the atlantoaxial level. Based on our experience, these patients require close neurological and radiographic monitoring as early as possible. In our view, surgical treatment of patients with type VI MPS should be considered before the onset and progression of neurological symptoms.

INDICATIONS FOR SURGICAL TREATMENT OF THORACOLUMBAR KYPHOSIS IN PATIENTS WITH MUCOPOLYSACCHARIDOSIS

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Introduction. Circumferential fusion of kyphosis in patients with MPS is currently accepted as the most effective surgical approach. However, long-term results remain debatable. This study assesses the effectiveness of posterior-only compared to circumferential fusion.

Methods. Eleven patients (7 male, 4 female) with MPS and thoracolumbar kyphosis underwent surgical treatment. Hurler Syndrome (type I) was diagnosed in 5 patients, Morquio Syndrome (type IV) in 2, and Maroto-Lamy (type VI) in 4 patients.

Indications for surgical treatment included more than 40° kyphosis, sagittal spinal imbalance, progressive neurological symptoms and severe pain. In 3 cases, patients underwent circumferential arthrodesis combining anterior and posterior approaches. In 8 cases, instrumentation included hooks and/or pedicular screws, placed two levels above and two levels below the deformity apex. The follow-up period ranged from 2 to 5 years.

Results. In 8 cases solid spinal fusion was achieved. Complications after surgical treatment were observed in 4 patients (36%). PJK developed in one case 2 years after surgery, pseudarthrosis was observed in one case, wound supuration was observed in one case, and a broken metal rod in one case.

Conclusions. Surgical treatment of MPS patients with thoracolumbar kyphosis is accompanied by a high risk of complications when circumferential stabilization is performed. Most authors and our data show that the most optimal method of surgical treatment of thoracolumbar deformation is dorsal correction and fixation in combination with a wide laminectomy at the level of stenosis. The second stage includes the anterior decompression and interbody fusion. However, if the patient's lung function is dramatically compromised, and a high risk of respiratory complications exists, surgery may be limited to only posterior correction and fixation in conjunction with a wide laminectomy, which allows to achieve a comparable level of fixation with a lower risk of complications.

SURGICAL TREATMENT OF SEVERE DEFORMITIES OF CERVICO-THORACIC JUNCTION

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In this study, the outcomes of surgical treatment of severe spinal cervico-thoracic deformities are evaluated. An analysis of 8 patients who underwent surgery between 2012 and 2015 is presented. Mean age was 11,2 years (range from 2 to 18 y.o.). In 6 patients KFS with cervico-thoracic kyphosis was observed. In 2 patients, both 2-year-old girls, there was anterior displacement at the Th1 vertebra, most likely due to congenital dislocation. In 2 cases type I neurofibromatosis was observed. All the patients with KFS presented with neurological deficit: four patients presented with inferior paraparesis and two patients – with tetraparesis due to cervical myelopathy. In all cases staged surgical treatment was performed: halo-traction for 10-14 days, then occipito-cervico-thoracic instrumented fixation as the 2nd stage. In one case, anterior cervical multilevel fusion with autografting was performed as the 3rd stage. In all but one patient full-scale 3D models of the vertebral column at the deformity level was manufactured based on CT-scans. Mean follow-up time was 18,8 months (range 12-36). In all cases, sufficient correction was achieved. In two cases, there was improvement in neurological status. In two cases fractures of one of the 2,5 mm rods in occipito-cervical instrumentation were observed. This condition requires reoperation and additional reinforcing occipito-cervical fixation using cortical peroneal autograft.

Conclusion. Due to the severity and complexity of congenital deformities of the cervico-thoracic junction, full-scale 3-D models are indispensable for understanding anatomical relationships and for surgery planning. Halo-traction is recommended for preoperative correction and neurological complication prevention.

APPLICATION OF FULL-SCALE THREE-DIMENSIONAL MODELS IN PATIENTS WITH SEVERE SPINE DEFORMITIES

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Introduction. Correction of severe spinal deformities remains challenging. Our objective was to describe our experience using three-dimensional (3D) models and individual implants for the correction of severe spinal deformities.

Methods. Full-scale 3D models were custom-made for 20 patients with different types of spinal deformities: 5 patients with severe spondylolisthesis, 3 patients with upper cervical deformities, 2 patient with neurofibromatosis, 2 patients with paralytic scoliosis, 7 patients with severe congenital deformities of spine, one patient with tumor of sternum. 3D models were manufactured using rapid prototyping from CT data. In all cases 3D models were used for planning surgical interventions. Using models as a template, individual implants were created for the fixation of the spine in 11 patients. In 2 patients with C1-C2 deformity, anterior transoral C1-C2 fixation using individual plates was performed. In one 9 yrs patient with neurofibromatosis, secondary deformity and sacral hypoplasia, and in 4 patients with paralytic and congenital scoliosis instrumental deformity correction was performed combined with lumbo-pelvic fixation using individual iliac plates. In 4 patients with spondylolisthesis, additional anterior L5-S1 fixation using individual plates and long threaded cages was performed, in one patient with tumor of sternum a custom-made sternum substitute implant was manufactured.

Results. The follow-up period was 2 years, with neurological restoration and stable fixation in all cases.

Conclusion. Full-scale 3D models offer a useful tool in preoperative planning, allowing full-scale stereoscopic recognition from any direction and distance with tactile feedback. Full-scale 3D models can be effectively used for creating individual implants.

THE RARE OBSERVATION OF MECKEL'S DIVERTICULUM NECROSIS WHICH THE GIRL HAD WITH THE SUSPICION OF FALLOPIAN TUBE TORSION

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Meckel's diverticulum occurs clinically only while development of complications (peptic ulcer with probable hemorrhage and centesis – 43%; bowel obstruction on the background of the bowel obstruction and intussusception - 25,3%; diverticulitis - 14%, urachal fistula – 3,4%) and is relatively rare. Torsion of the appendages of the uterus takes the 5th place in the structure of urgent gynecological pathology and occurs in almost 3% of girls. We introduce our own observation, which presents difficulties in the preoperative diagnostics of these conditions.

Girl of 15 years old was hospitalized complaining on pain in the lower abdomen, diarrhea up to 3 times per day. In the blood tests minor inflammatory changes were detected. While ultrasound the parovarian tubular formation up to 7 cm long with signs of infiltrative changes from the right side was revealed, which did not allow to exclude an isolated torsion of the fallopian tube. Diagnostic laparoscopy was performed, and it was detected that the uterus and appendages were without signs of inflammation and of normal sizes. At a distance of 30 sm from the ileocecal angle the phagedenic changed Meckel's diverticula up to 7 sm long twisted at the base was detected. Laparoscopic removal of the diverticulum and appendectomy were performed. The postoperative period proceeded smoothly, the girl was discharged home in a satisfactory condition on the 6th day.

Conclusion: all girls with a clinical picture of the "acute abdomen" are advisable to perform diagnostic laparoscopy regardless of the results of laboratory diagnostics and ultrasound. In most cases it is possible to perform the curative stage of laparoscopy without conversion.

THE METHOD OF RECTOPLASTY AT COLOGENIC CONSTIPATIONS FOR CHILDREN

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The aim of our work was to reduce postoperative complications by reconstructive repair of anatomic-functional features of rectum.

This method provides realization of the main stage of operation according to one of the used methods. The conclusion of operation includes the reconstructive repair of anatomic features of rectum's internal surface by creation of three pairs of transverse plicas of the rectum.

After bringing down the healthy part of the descending colon at a distance 4-5cm from the internal anal sphincter along the lateral and medial surfaces, at the level of the interweaving of the muscle lifting the anus into rectum's longitudinal muscle layer. On each side of the intestine, three serous-myorrhaphies are put at a diameter of $\frac{1}{3}$ (distance between stitches is 1.0 ± 0.5 cm), in a way that two opposite duplications of rectum's transverse plicas with depth-1,5 cm could be formed at tightening of the stitches.

The next stage of reconstructive operation was to determine the distance from the upper edge of the internal sphincter to the parietal peritoneum. It is at this level that the second pair of duplicator of rectum's transverse plicas (at $\frac{1}{3}$ dm of intestine) is formed, after bringing down of healthy intestine's part.

At the level of the symphysis projection in the region of sacral flexure, the third pair of duplicator of rectum's transverse plicas is formed in a way one lip is located on the anterior- lateral surface and the second one is formed at 1cm above the first on the posterior- lateral surface.

All three pairs of duplicator of rectum's transverse plicas are formed spirally, relatively longitudinally to the axis of the intestine.

The groups of children who were operated by the offered method didn't have postoperative complications in any clinical observation. The method of this proposed pelvic rectoplasty at cologenic constipations for children gives an opportunity to form natural anatomic formations of the neorectum in the form of transverse plicas without additional dissection of the bowel wall. The repair of anatomic relief of mucous neorectum helps to save the natural and reserve functions of the rectum.

As thus, we think that creation of "artificial" transverse plicas is an effective, technically and easily performed by the method of pelvic rectoplasty surgery.

PELVIC OSTEOTOMY IN THE SURGICAL TREATMENT OF EXTROPHY OF THE BLADDER

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Introduction. Among combined congenital malformations one of the most difficult is bladder extrophy (BE), which is combined with a significant discrepancy of the pubic bones.

Material and methods. We observed 12 children with BE in age from 1 to 14 years, the period of observation ranged from 1 to 10 years, while patients had a discrepancy pubic bones for a distance of more than 5 cm. Treatment for 8 children was conducted after failed initial correction in different regions of Ukraine.

Results. The treatment of children with extrophy must begin with the first day of a child's life. The best option is a primary plastic of the bladder by local tissues with bilateral osteotomy of the pelvis. Our experience suggests that the disappearance of the pubic bones without osteotomy leads to prolapse of the bladder and recurrence of the defect, making it extremely difficult the subsequent treatment and minimizes the chances of the patient to the abilitation of the bladder. One of the main stages is a bilateral iliac osteotomy according to Salter and the formation symphysis of the pubic bones. The surgery is performed by two teams of surgeons, first performs orthopedic stage, and the urological team is create own or artificial bladder. After osteotomy, the distal fragments of the iliac bone rotated inward and downward, and in the pubic bones on both sides was introduced over the guide screw, which was subsequently used for the formation of pubic synostosis and fixing in contiguous position on a special plate. Iliac bone fragments were fixed by pins through the bone.

Conclusion. The use of pelvic osteotomy allows to restore the anatomical relations of the urogenital diaphragm and the pelvic floor muscles that contributes to the retention of urine and feces, and thereby facilitates social rehabilitation of patients. Orthopedic stage of surgical rehabilitation of children with extrophy the key to the success of urological interventions and prevention of violations of gait due to elimination of external rotation of the lower limb and normalize pelvic balance.

SINGLE EVENT MULTILEVEL SURGERY ON THE LOWER LIMBS IN CHILDREN WITH CEREBRAL PALSY

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Introduction. Treatment of children with CP with different pathological settings and multiplanar deformities of the lower limbs in need of systematization and differentiated approach.

To compare the efficacy of the differentiated use of simultaneous multilevel interventions in the lower extremities, with the standard phased treatment of pathology of the hip, knee and feet in children with cerebral palsy.

Materials and methods. We have examined and treated 125 children with CP, aged 4-16 years, the level of motor activity of GMFCS: in 10 patients - I level, 26 - II level, 29 - III, 37 - IV, 23 - V. The children were divided into two subgroups (primary - 60 patients and the control group - 65). The mean follow-up - 6.4 years. Examination - according to the standard procedures: before and during treatment - clinical, radiographic, biomechanical, neurological, ultrasound, electromyography and muscle dynamometry.

Results. In children aged 4-8 years, 27 children of the main group, depending on the severity and type of pathologic deformities of the lower limb joints simultaneously performed soft tissue intervention at the level of the hip, knee, ankle joints and also eliminate the deformity of foot. Postoperatively, main group were provided with orthoses for verticalization and walk or performed immobilization in a cast for 3-4 weeks to maximize the rapid mobilization for 3-5 days after surgery. In the control group intervention performed successively on each of the limbs without performing hemiepiphysiodesis with immobilization by cast. After 4-6 weeks after surgery children from both subgroups were received rehabilitation treatment. In children aged 8-16 years, 33 children of the main group simultaneously were performed soft tissue surgery at the level of the joints of the lower limbs in combination at an interval of 1-1.5 months corrective intertrochanteric hip osteotomy and operations in the pelvic component. The postoperative period was performed similarly to the above principles.

Findings. The obtained data of retrospective assessment of long-term results of simultaneous multi-level interventions in the lower extremities authentically indicate the prospects application of this technique in children with cerebral palsy. Due to an early activation, children from the study group have significantly improved locomotor activity compared to the control group.

SURGICAL TREATMENT OF HIP JOINT PATHOLOGY IN CHILDREN WITH CEREBRAL PALSY

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Introduction. The pathology of the hip in children with cerebral palsy is one of the most severe in pediatric orthopedics and occupies one of the most important problems in the surgical treatment of this pathology. The incidence of children with cerebral palsy 2 in 1000, where spastic hip subluxation and dislocation depends on the severity of the disease and forms of cerebral palsy, variable between 2,5% with spastic hemiplegia and 75% in children with quadriplegia.

Objective. To present the experience an integrated approach surgical treatment of hip joint pathology in children with cerebral palsy.

Materials and methods. We treated and carried out a retrospective study of 144 children with subluxation and dislocation of the hip. The children were divided into two main groups. The first group included 128 patients (179 hips) (activity level of GMFCS: 41 patients - II level in 49 - III, 18 - IV,) and is divided into two subgroups by age: 1st - children from 2 to 6 years (54 patients); 2nd - 6 - 12 years (74 children). Mean follow-up of 5.8 years. The second group of patients included 16 patients (25 hips) aged 4 to 8 years, with valgus deformity of the proximal femur with a tendency to decentration and subluxation of the hip. The level of motor activity of GMFCS: 7 patients - II level and 9 - III. In this group performed hemiepiphysiodesis of the proximal growth plate of the femoral head on the medial surface. Mean follow-up of 2.6 years. The examination was conducted according to generally accepted methods: before and during treatment - clinical, radiographic, biomechanical, neurological, ultrasound, electromyography and muscle dynamometry.

Results. Among the 54 children (1st subgroup) in 37 children aged 2-6 years, depending on the severity and type of pathological positions of the joints of the lower limbs, we performed soft tissue surgery at the level of the hip joint (adductors and subspina iliaca myotomy, cutting off tendons m.ileopsoas from the lesser trochanter), combined with intervention on the bone components of the hip joint (36 children) (intertrochanteric osteotomy of the femur and pelvic osteotomy - if indicated). In the 2nd subgroup among the 74 children soft tissue surgery performed in 56 children, combined with intervention on the bone in all patient. Postoperatively children were provided by orthoses for verticalization and walk or performed immobilization in a cast for 3-4 weeks from the upper thigh to the toes to maximize the rapid mobilization for 3-5 days after surgery. After 4-6 weeks after surgery children both subgroups received standart complex of rehabilitation treatment. The initial value of the cervico-diaphyseal angle was an average of $156^{\circ} \pm 8^{\circ}$, after surgery $118^{\circ} \pm 5^{\circ}$, and after 5 years - the angle averaged $123^{\circ} \pm 6^{\circ}$. The acetabular index before surgery was $31^{\circ} \pm 5^{\circ}$, immediately after surgery, $14^{\circ} \pm 4^{\circ}$, and after 5 years - $16^{\circ} \pm 3^{\circ}$.

In the second group of patients, we used the intervention on the medial part of the growth plate of the femoral head - of temporary or permanent hemiepiphysiodesis using a metal implant or bone auto- or allograft. These surgery did not require immobilization in a cast, the children were transferred to upright position on 3-5 days after surgery. According to methods underwent surgery of 25 joints in 16 patients, only 3 joints observed lack of effect of carrying out the intervention. The initial value of the cervico-diaphyseal angle was an average of $159^{\circ} \pm 6^{\circ}$, and after 2,6 years - $149^{\circ} \pm 5^{\circ}$.

Findings. Obtained data show that surgical treatment of hip joint pathology in children with cerebral palsy should be execute differently according to age, form of cerebral palsy and the level of physical activity. We have seen that standard methods of surgical treatment is effective but perform hemiepiphysiodesis in preventive surgery of the hip joint in children with neurological disorders as the prevention of instability of the hip is a promising method of treatment.

CONCEPT OF CONTINUOUS PASSIVE MOTION IN MEDICAL SYSTEM OF REHABILITATION FOR PATIENTS WITH PATHOLOGY OF HIP AND KNEE (HJ & KJ) JOINTS

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Introduction. An integral part of the rehabilitation treatment for the pathology of the musculoskeletal system is mechanotherapy - one of exercises form that is carried out using various devices and apparatus. In the 70 years of XX century orthopaedic surgeon Robert Salter developed a biological concept of continuous passive motion - CPM-therapy (Continuous Passive Motion).

The aim: to sum up the efficiency of continuous passive motion therapy in medical system of rehabilitation for patients with pathology of (HJ & KJ) joints

Methology. The 2 groups of clinical adult patients were explored. The patients were identical age, sex, type of pathology and type of surgery. The first, control group includes 59 people (84 joints), the second, main group includes 90 people (130 joints), who were operated for pathology of KJ and HJ (arthroscopy and endoscopy). The control group got the standard rehabilitation, patients of second group performed continuous passive motion on domestic Parr «Legtronic» except standard rehabilitation. A survey of patients conducted by conventional techniques before and during treatment.

Results. The results of two groups were compared and it was developed that CPM-therapy with domestic Parr apparatus is better for patient's progress in complex restorative treatment of patients with disorders of the knee and hip joints in the postoperative period. This one leads to significantly shortening the rehabilitation of 31%, increases range of motion compared to the control group, with a significant decrease in pain, neurotrophic and myotonic syndromes. It was noted that patients have a positive mental attitude and the desire to "work" on Parr for a long time (from 2 to 8 hours a day!)

Conclusion. The expediency and high efficiency of the developed domestic device «Legtronic» for automatic movements in complex restorative treatment of disorders of the knee and hip joints that allows it to recommend broad clinical use in orthopaedic and trauma departments, rehabilitation and health centres.

THE PRINCIPLES OF SAFE CORRECTION AND THE CHOICE OF THE METHOD AT TREATMENT OF PECTUS EXCAVATUM AT CHILDREN

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Purpose: improvement of results of diagnostics and treatment pectus excavatum (PE) at children.

Materials and methods. The result of treatment of 113 children aged from 4 to 17 years operated from 2006 to 2017 concerning PE in MRRCI (18 girls and 95 boys) is analysed. Middle age is 12 years. 15 of them were operated in the open way, on Salamaa-Paltiya-9, on Ravich-6. A lot of sequels during and after operation led to refusal of open methods of surgical treatment of PE. Since 2009 to all children operated concerning PE the low-invasive thoracoplasty of Nass procedure was executed. In the preoperative period to 88 patients the multispiral computer tomography with 3D reconstruction is carried out to avoid possible intraoperative complications. Non-standard installation and installation of two CB allows to achieve more physiologic and cosmetic form. Epidural and general anesthesia were used for all patients. The thoracoplasty with use of a video thoracoscopy excludes possible complications, promotes stable and reliable bracing of CB. Use of a sternal elevator for 76 patients proved safety of carrying out CB through a forward mediastinum. Epidural anesthesia and non-steroidal drugs provided optimum anesthesia during the postoperative period. The postoperative period depressed twice and made \approx 7 days.

Results: in a catamnesis of patients from 2 months to 3 years, at 88% from 113 operated the good cosmetic result is received. The total of early complications decreased to 5 that makes 4,4% (a hydrothorax-2, pneumothorax-3). At 3 patients in the late period after operation decubitus in the field of edges of CB are noted that demanded its excision from 1 child.

Inputs. Use of a low-invasive thoracoplasty allowed to reduce quantity possible intra-and postoperative complications, achieve the best cosmetic result and reduce hospitalization terms twice.

THE FIRST EXPERIENCE OF LOW-INVASIVE CORRECTION OF PECTUS CARINATUM AT CHILDREN BY ABRAMSON PROCEDUR

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Purpose: justification of relevance of use of a low-invasive method of correction across Abramson and improvement of treatment of pectus carinatum (PC) at children.

Materials and methods. The result of treatment of 7 boys aged from 12 up to 17 years operated from 2012 to 2017 concerning PC in MRRCI was analyzed. 4 of them were operated in the open way on Ravich. A lot of sequels during and after operation led to refusal of open methods of correction of PC. In the period from 2015 to 2017 three children were operated by Abramson's method. Dynamometer researches proved the efficiency of Abramson's method. The multispiral computer tomography with 3D reconstruction was carried out and allowed to avoid possible intraoperative complications. During the operation were used epidural and general anesthesia. Allocation of ribs in places of bracing of stabilizers to a periosteum without injury of a pleura allowed to reach the best stability and reliability of fixatives, reduce a pain syndrome and avoid a possible injury of intrathoracic organs. Epidural anesthesia in combination with analgetics intramuscularly provided optimum anesthesia during the postoperative period. This method leads to faster recovery after operation, 5 days vs 10 days.

Results: the catamnesis collected from 1 month till 2 years is positive. At 1 patient the early postoperative period was complicated by the intense pneumothorax caused by a rupture of a bulla of an apex of the right lung. The thoracoscopic atypical resection of the violent changed site of a lung is executed.

Inputs. Using of Abramson's method allowed to reduce quantity possible intra-and postoperative complications, achieve amazing cosmetic result and reduce terms of hospitalization by 2,5 times.

RIGOTTOTOMY AND LIPOFILLING IN THE TREATMENT OF POST-BURN DEFORMATIONS IN CHILDREN: OUR EXPERIENCE

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Actuality: rigottotomy and lipofilling is a method of surgical correction of post-burn deformities and scars. Rigottotomy increases the area of the reconstructed segment, which in the future, when performing lipofilling, allows to restore the contours and volume.

The purpose of the study: evaluation of the advantages of this method compared to classical surgical operations.

Patients and methods: we evaluated the results of treatment of 25 children with post-traumatic deformities and post burn scars and deformities of various localization. The stages of surgical correction: the first stage - the actual liposuction (tumescent). The second stage (primary) - preparing a donor bed to transplant fat cells. Implementation of rigottotomy (formation of channels crossing the scarred tissue in different planes) which are filled with lipoaspirates. The third stage - subcutaneous and/ or intradermal injection of lipografts to fill the volume with contour deformities.

Patients divided into groups: the first group is about 10 children with a contoured deformation (post-burn and post-traumatic). The treatment was performed in several stages (at least 3). The first step is to fill no more than 20-30% of the area of the defect. For surgical correction of patients of this group were mainly used fat grafting. The second group of 9 children with hypertrophic scars and contractures of large joints. First stage is aggressive rigottotomy and subsequent intradermal injection of lipografts to correct contractures. The third group is a group of 6 children with post-burn scars, violations of the structural composition of the skin. All patients have necessitated the 1-2 stages of lipofilling in combination with rigottotomy that helped to improve the quality of the skin and partly to eliminate cosmetic defect.

All patients have received a good cosmetic and functional result. There were not any complications.

Conclusion: advantages of this technique are: reducing the time of hospitalization; elimination of cosmetic defects and deformities; formation and recovery of the subcutaneous fat layer; improve the elasticity of the skin;

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We conducted a retrospective analysis of pharmacological treatment of infantile hemangioma (IH, vascular hyperplasia) with beta-blockers (enteral use of Propranolol and topical use of Timolol) in our pediatric surgery department. This method performed from 2014 to 2017 at our center. The protocol of examination and treatment developed to provide rare but serious side effects of Propranolol administration including hypoglycemia, wheezing, hypotension, and bradycardia. 78 children were treated with propranolol at the dosage 2mg/kg/day. In 17 cases we use topical 0,1% ointment of Timolol. The age of the children ranged from 10 days to 13 months, 51 female and 27 male. The treatment duration was from 5 to 13 months. Positive clinical effect it obtained at all patients. Side effects of propranolol administration were observed in 4 cases, after 5-6 month of treatment (bradycardia) which disappeared after the treatment withdrawal. In 3 cases after cancelling treatment, we determined the recurrent of hemangioma, but not to the initial size. Our experience confirms the efficacy and safety of treatment with beta-blockers in accurate compliance with protocol management.

BIOFEEDBACK TREATMENT IN CHILDREN WITH BLADDER/BOWEL NONNEUROGENIC DYSFUNCTION

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Purpose: Bladder / bowel dysfunction is a relatively frequent condition of various etiologies in children. The aim of the study was to evaluate the informative value of transperineal sonography of the pelvic floor muscles in determining the indications and evaluating the effectiveness of biofeedback therapy in children with bladder / bowel dysfunction.

Material and methods. From 2010 to 2016, 128 (69 girls and 59 boys) aged 5-14 years (mean 8.9 ± 3.1) with bladder / bowel nonneurogenic dysfunction were included. 56 (43,8%) of children complained of difficulty during urination, incomplete emptying of the bladder and 8 (6,2%) - incontinence, in 64 (50%) children had chronic constipation with incontinence. All children before and after treatment

were examined with Disfunctional Voiding Symptom Score, a Bristol stool scale, uroflowmetry with determination of residual urine and EMG of pelvic floor muscles and with transperineal ultrasonography.

Results. The results of a comprehensive study showed decrease in the flow rate on average by $37 \pm 12\%$, the volume of residual urine did not exceed 30%, and an increase in activity of the pelvic floor muscles was noted on the EMG curve. All patients were diagnosed with a paradoxical movement of the pelvic floor muscles. It was an indication for therapy with biological feedback.

Patients were underwent biofeedback therapy clinical improvement was noted in all cases. Improvement in the form of uroflowmetric curve, the amount of residual urine did not exceed the permissible values in 38 patients, and in 18 the amount of residual urine decreased to 15-17%. The stress urinary incontinence in all children was absent. In 6 children the faecal incontinence disappearance There was an increase in frequency stools and reduction of episodes of the faecal incontinence in other. In control transperineal ultrasound, complete disappearance of paradoxical movement of the pelvic floor muscles was noted in 45(34%) cases, and positive dynamics - in other patients.

Conclusions. The method of biofeedback therapy is effective in bladder/bowel nonneurogenic dysfunction. For detection and monitoring patients with this pathology can be recommended safe and simple methods - dynamic transperineal ultrasonography.

MINIMAL INVASIVE OPERATIONS IN INFANTS WITH CONGENITAL URINARY TRACT DISORDERS

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Purpose. To rate retrospectively the results of using minimally invasive surgical operation in treatment of obstructive disorders in infants.

Materials and methods. From 2007 to 2016 1057 patients (257 boys and 614 girls) with a mean age of 5.5 month (range 1m – 5 years) were treated. The patients were classified on four groups: the first - 69 boys with posterior urethral valve associated urodynamics disorders; the second group – 67 patients with duplication and ureterocele; the third group - 170 patients with congenital nonrefluxing megaureter; the fourth - 751 patients with VUR. In all cases minimal invasive surgeries were preferable: transurethral primary valve ablation; endoscopic incision ureterocele, one-J-standing megaureter, endoscopic correction of vesicoureteral reflux with bulking agents.

Results. Transurethral resection of the posterior urethral valve was performed for all patients of the first group - for 56 (81,2%) in one step, for 13 (18,8%) in two steps. Transurethral resection of ureterocele was performed in 53 patients (79,1%) of the second group. 132 patients in the third group was treated with stented of ureter, endoscopic correction of vesicoureteral reflux with bulking agents was performed for patients of the fourth group: collagen for 454 patients (605 ureters), Urodex for 122 patients (189 ureters) and Vantris for 76 patients (121 ureters). The patients were followed according with to a program with repeated US, renal scintigrams (DMSA), frequency/volume chart observation. These investigations were assessed in 4-8-12 and 24 weeks. Antibacterial prophylactics were given and recurrent UTIs were registered, in 76 cases (7,2%) when the disorder wasn't eliminated, minimal invasive reoperation or open surgeries were carry out.

Conclusions. Minimal invasive surgical operations can be performed in babies. They allow to normalize urodynamics and high success rate can be achieved avoid complex reconstructiv operations.

A MODERN METHOD OF TREATMENT OF LONG BONES SOLITARY BONE CYST.THE USAGE OF MINIMAL INVASIVE OSTEOSYNTESIS AND BONE GRAFTING (ALLOGRAFT AND SYNTHETIC MATERIALS)

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Benign bone tumours represents an old but challenging issue (by frequency, morbidity and continuous studies of multiple methods of treatment). Simultaneously with the evolution of technology and the studies regarding bone physiopathology, new surgical techniques are developed and applied everyday.

The aim of this study is to find a simple but effective technique to cure this condition in childhood and adolescence.

This study was performed between 2009-2014 in the Pediatric orthopedic dept. of the Clinical Hospital for Children M.S. Curie-Bucharest and contains 101 patients. We divided the patients in several groups, according to localization, complication of the disease and symptoms at admission. We considered the follow-up of radiographs, disappearing of the clinical symptoms, relapses and the time for full recovery.

The mean follow-up time was between 3-36 months. Complete healing has been achieved in 90% of the cases. We found 2 relapses in which we performed secondary surgery.

The method we've used was effective and it can also be applied in cases of delayed healing or pseudarthrosis, therefore it is our goal to standardise this method.

Material and method:

- we studied 101 patients diagnosed with SBC of the long bones in a period of 4 years;
- we divided these patients in 2 groups, first group with SBC without fracture; the other SBC complicated by pathological fracture;
- another classification was made by localization: 28 were situated in the proximal metaphysis of the humeral bone, 44 were situated in the proximal femur, 14 were located in the proximal tibia, 6 in the distal tibia, 9 on fibula;
- the average age was 9,3 yrs old;
- the male to female ratio was 2,3:1.

The method we've performed was surgical: under general anesthesia we localized the lesion with C-Arm image intensifier, with a minimal incision we treated the cyst by curettage, cauterisation, filling with graft material followed by elastic reinforcement. We also performed a biopsy. The histological appearance confirmed the previous diagnosis.

Results:

- we achieved complete healing in 90% of cases; in 9% we found incomplete filling of the cavity and 2 cases relapsed;
- the average follow-up time was 12 months, first postoperative radiography was taken at six weeks.

Conclusion: This method of treatment is effective and rather simple, with low morbidity rate and low postoperative complications. It is considered expensive because of the need of fluoroscopy and the titan elastic nails, but the total cost is lower than other methods of treatment. The physical recovery after surgery is rapid, so the child is able to perform sport activities soon after the operation. Because of the benefits of the grafting material, the relapses are rare and the mechanical properties of the titanium nails give strength and elasticity to the bone. This method of treatment can be used in the situation of delayed consolidation because it enhances the healing of the affected bone and it stabilizes the site.

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Introduction. Pancreatic pseudocysts (PPC) developed in 23% of patients following pancreatic trauma and endoscopic retrograde pancreatography demonstrated duct injury in half of these (grade III pancreatic injury). Pancreatitis and PPC formation due to abdominal blunt trauma in children were considered quite rare medical conditions.

Methods. We report a case of abdominal trauma in a 9 year old child due to animal aggression (cow dug stroke on the epigastric) that resulted in post-traumatic pancreatitis and PPC formation. We evaluate the objective status of the patient, laboratory and ultrasound examinations, before and after endoscopic treatment.

Results. PPC development has been manifested by progressively increasing abdominal pains, vomiting, loss of appetite, significant weight loss.

The objective exam relates an underweight patient, moderate mucocutaneous pale, reduced fat tissue, Bichat's atrophic Bula; abdomen slightly distended, compliant to respiratory movements, deformation of the epigastric contour, sensitive epithelial tumor at the epigastric palpation. At the abdominal US examination was identified the clearly delimited lesion at the pancreas tail, with impure transonic content, without vascular sign, diameter – 5 cm; 15.05.2014 – lesion of the corporeal-caudal pancreas, with impure content, diameter – 10 cm, left kidney pushed back, liquid collection in the recto-vesicular and perihepatic space.

Endoscopic treatment consists of trans-gastric punctured of the PPC, and aspirated ≈ 1 L of impure serum-sanguinous fluid, and mounted 2 drainage prostheses pigtail 10Fr/9cm. **Post-interventional evolution**, under treatment (antibiotic, analgic, anti-inflammatory) – good general condition, without fever, resumption of nutrition on day II, with good digestion tolerance, the hospital discharge on the 6th day post-interventional.

Abdominal MRI – no pancreatic pathological fluid collections, without peritoneal fluid collections, normal enter and extrahepatic bile ducts appearance. In 28.07.2014: esophago-duodeno-scopy with extraction of drainage prostheses.

Conclusions. Image exploration plays an essential role in the diagnosis, treatment and monitoring of PPC, with significantly lower post-operative recovery and complication rates in endoscopic treatment and marked decrease of the period of hospitalization.

FOCAL NODULAR HYPERPLASIA OF THE LIVER IN A BOY OF 13 YEARS OLD

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Introduction. Focal nodular hyperplasia of the liver is one of the most common benign liver new growths. Most often the disease is manifested in women aged 30-40 years. The incidence ratio of women to men is 10: 1. The emergence of this pathology is associated with the response of hepatocytes to the local vasculature malformation. The indications for operative intervention are pain in the liver or progressive growth of the tumor. The operation is also recommended, when it is impossible to conduct differential diagnosis with other bulk liver diseases.

Case report. The boy of 13 years old was find out to have the formation of liver 81x65x68 mm by size, that became the reason of hospitalization in our clinic. The patient didn't complain about his state of health, the temperature of body was normal. The results of laboratory research methods were concordant to age norm. Existence of new growth in 6th and 7th hepatic segments projection was proofed by ultrasound and CT. We found out, that the formation was hypervascularized, located partially out of hepatic parenchyma and had clear contours with centrally localized dense fibrous tissue. Access was implemented by laparotomy high resection, hepatic duodenal ligament was niped and the tumor was removed by atypical resection of liver. Hemostasis is achieved by stitching, coagulation of the wound surface with an argon-plasma coagulator "PlasmaJet" and powdering by "PerClot". The postoperative period passed without any complications, the patient was discharged in satisfactory condition on 7th day after surgery. Repeated inspection after 3 months has show satisfactory child's condition again. No data for relapse of the disease there.

Conclusion. The tactics of treating FNH of liver, that arose in childhood, presuppose surgical resection. This is due to the trend towards intensive growth of tumor in conditions of child's organism.

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The problem of the digestive haemorrhage in children's faeces is serious and complicated in respect of diagnostic search. Digestive haemorrhage it is considered a rare cause of bleeding, compared to those of the gastro - intestinal. In case of haemorrhage located in the small intestine, exact location of the lesion is often very difficult, both clinically and endoscopically, which implies the need for additional investigations.

Material and methods. This work contains a retrospective analysis of five patients operated in the last two years.

The cases presented here were carefully selected of a total of twenty patients with inferior digestive haemorrhage treated in our clinic in the last five years, in eleven of them was identified a small bowel pathology.

In all cases, the intraoperative diagnosis revealed an atypical cause of digestive haemorrhage.

Surgical treatment can be characterized as such:

- revision of abdominal cavity, diagnostic enterotomy - 1 case
- segmental enterectomy – 4 cases

Discussions. A rare cause of acute lower digestive haemorrhage to the children is tumore Gist rupture.

Child's surgeon face the problem of the early diagnostics of a digestive haemorrhage and of the determination of an optimal volume of laboratory and instrumental methods of examination of a child. Most patients with inferior digestive haemorrhage require complete digestive tract endoscopic exploration. Endoscopic exploration of the small bowel is very difficult to perform, and the digestive haemorrhage located in small bowel requires emergency operation.

Conclusions:

Digestive haemorrhages localized in the small intestine presents difficulties clinical and endoscopic diagnostic and is a current surgical problem.

The best technique to solve is segmental enterectomy with entero- entero anastomosis.

ENDOSCOPIC TREATMENT OF VESICoureTERAL REFLUX USING POLYACRILATE POLYALCOHOL BULKING COPOLYMER (VANTRIS)

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Purpose. Recently published data on high recurrence rate following successful treatment of VUR has prompted the search for different injectable substances with non- biodegradable nature. We have evaluated an outcome of endoscopic correction VUR utilizing Vantris as a new non- biodegradable tissue-augmenting substance in study.

Material and methods. From 2011 to 2016 331 patients (117 boys and 214 girls) with a mean age of 3.56 years (range 8m – 14 years) were treated with Vantris. VUR was unilateral in 219 and bilateral 112 patients comprising 443 renal refluxing units (RRU). Of these, primary VUR was present in 371(86%) RRU and 72(14%) were complex cases. Reflux was grades 1 to IV 68(15,3%), 266 (60%) and 109(24,6%) RRU respectively. Patients were monitored with US at 1, 3, 6 and 12 months, and 2 and 3 years VCUG - 1 and 2 years.

Results. Reflux resolved in 411 RRU (92, 8%) after first injection, in 9 (2%) after second and in 2 (0,45%) after third injection respectively. VUR improved to grade 1 in 16 (3,6%) ureters, which needed no further treatment. Injection failed to correct reflux in 3 (0, 7 %), which were then treated with ureteral reimplantation. None showed VUR recurrence. US demonstrated normal appearance of kidneys in all but 15 (3,2 %) patients. VUJ obstructions requiring ureteral reimplantation developed in 2 (0,47%) ureters. Two (0, 47%) RRU requiring stent insertion due to deterioration ureterohydronephrosis resulted in complete resolution of obstruction. Seventeen (5%) patients suffered afebrile and 2 (0,6%) developed febrile UTI. None demonstrated VUR recurrences.

Conclusion. The results of this survey confirm that endoscopic subureteral Vantris injection is a simple, safe, and effective outpatient procedure for treating VUR in patients over 2-3 years.

INTESTINAL ANASTOMOSES IN NEWBORNS AND CHILDREN OF EARLY AGE IN COMPLICATED CLINICAL CASES

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The application of intestinal anastomoses in newborns and young children under circumstances of multiple atresia, thrombohemorrhagic processes and infection of the abdominal cavity can be complicated by the development of inconsistency of the anastomoses.

In the study, the analysis of the results of treatment of 385 children with intestinal anastomoses due to diverse intestinal pathology in newborns and young children over the last 5 years have been performed. All the patients have been on treatment at the Children's Clinical Hospital of Kharkov National Medical University. We have gained the experience of application of the original anastomosis in 64 children, namely: with complex intestinal malformations (29), necrotizing enterocolitis (25), ulcerative necrotic enterocolitis (6), and other pathology of the abdominal cavity organs. Indications for use of the developed technique of intestinal anastomosis have been pathological processes complicating the course of the wound process and predicted long-term disorders of the digestive tract evacuation. The characteristic property of the anastomosis technique is a preliminarily semi-enclosed demucosation of the proximal intestinal loop with the excessively reserved seromuscular sheath, which allows to define clearly the limits of viability and isolate reliably the suture line long the whole length using the sutural or glue fixation by the demucosated part. The method does not prolong practically the time for application of the intestinal anastomosis in comparison with standard techniques. One of the patients have undergone 7 anastomoses, five children - 3, and ten children - 2. In none of the cases of the "muff-shaped" anastomosis application has the dehiscence occurred.

The study of the autopsies has showed preserved viability of demucosated flaps. The analysis of long-term results using the developed method of intestinal anastomosis, taking into account a growing organism, has demonstrated absence of stenotic phenomena and passage problems in the connected segments of the intestine.

Thus, the experience of application of muff-shaped anastomosis allows to make a conclusion about its high reliability in newborns and children of early age with complex surgical situations.

MORPHOMETRICAL ANALYSES OF THE SKULL IN CHILDREN WITH POZITIONAL PLAGIOCEPHALY

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Introduction. Positional plagiocephaly (PP) is a type of cranial deformity caused by repeated external pressure on the head. Today is well known that this condition is not only cosmetic problem but have a higher risk of other medical problem too. Our previous study had shown a higher incidence of malocclusion among school children with cranial deformities. But anyway there are no detailed information about the situation of these condition in adult children.

The aim of this study was to evaluate relation of PP with the maxillo-mandibular area, and the evolution PP in time.

Material and method. Morphometric analysis of the base skull were performed in children with cranial deformity, type PP. 10 patients with PP were included with right side location of PP. Children were divided in two groups according to the age of patients. In first group were included 5 patients with average age 1 year, and in second group 5 patients with average age 10 years.

The symmetry of each hemibase was determined by the crista galli-sella turcica-opisthion angle (CSO). The hemibases were symmetric if their angle was equal to 180°. The symmetry of the exobaze was determined by angles, traced from an anatomic median line to sella turcica and meatus (MSM) and from median line to sella turcica to temporo mandibular fosa (MStmF). The body length and ramus height of the mandibular were measured. Data were analyzed within each group and between each group.

Results. There were no significant asymmetry in the length of mandibular body and height of the mandibular ramus in both groups. All children with PP were determined with a deviation of the CSO angle to left side. The hemibaze was slightly asymmetric in first group, and significantly greater in adult children. The MSM and MStmF angles were greater in left side than in right side in both groups (MSM left and right side 115°-107°, MStmF left and right side 102°-98°).

Conclusion. The PP has a higher risk of deformation on the endobaze and exobaze that can lead to different type of malocclusion.

ENDOSCOPIC METHODS TO RESET THE ESOPAGIAN TRANSIT IN CHILDREN WITH ESOPAGIAN STENOSIS

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Introduction. Since the 15th century various methods of treatment of oesophageal stenosis have been proposed. Endoscopic stricturoplasty is one of the current methods of endoluminal expansion.

Material and methods. A study was conducted on a group of 30 children aged one month -17 years, hospitalized at the Pediatric Surgery Clinic, diagnosed with esophageal stenosis. The barium transit reveals dilation in the suprastenotic region; Superior digestive endoscopy finds lumen narrowing. Of the total patients undergoing dilation (30 patients), 8 (26.6%) were patients with esophageal atresia subjected to surgical esophagoplasty, two (6.6%) - with achalasia of the heart, one (3.3%) - with axial transyathal hernia complicated with esophageal stenosis. 19 (63.3%) patients had strictures developed as a result of ingestion of foreign substances and bodies with different degrees of chemical aggression. Prior to endoscopic treatment of children, anti-inflammatory, spasmolytic, oily preparations were indicated. During the endoluminal treatment, patients received spasmolytic, reparative and antibiotic indications. Dilatations were performed under general anesthesia combined with spontaneous breathing and full monitoring. Dilation procedures were performed under visual control via the videoendoscope. Two types of dilators were used: balloon dilator and Savory-Gilliard dilator. The endoluminal treatment cure consists of sessions. Interruption between sessions was 1-3 days.

Results. A positive result was considered when the strictures were dilated to the size corresponding to the patient's age, consistent with the published classifications. The total duration of a treatment course was at most one and a half years. The end of the treatment showed that the evolution was favorable at 66.6%. In 20% of cases, patients are still in treatment. At 3 (10%) the dilation procedure was complicated by perforation. Two out of patients with complications over 3 months restored the sessions of dilation. Surgical esophagoplasty was performed in one patient.

Conclusion. Endoscopic stricturoplasty has been shown to be effective, less aggressive, is the only method of endoluminal resolution of esophageal stenosis.

DISABLING THE LOWER RESPIRATORY WAYS IN CHILDREN WITH FOREIGN BODIES

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Introduction. Aspiration of the foreign body is the accidental penetration by pharynx and larynx of objects or pieces of objects, food in the lower airways, which produce a state of asphyxia with vital danger to the child. **Material and methods.** A retrospective study was performed on a group of 123 children aged 11 months -16 years, hospitalized for the period 2013-2017 at the Mother and Child Institute. Diagnosis at admission: pneumonia, bronchopneumonia or foreign body suspected in respiratory tract. In order to establish the diagnosis, paraclinical methods - radiography and bronchoscopy were used. Of the total number of patients, 81 (65.8%) and 42 (34.1%) were hospitalized in an emergency. Endoscopic diagnosis and foreign body extraction were performed with two types of bronchoscopes: Karl Storz pediatric rigid bronchoscope and flexible BF 3C 160 and BF 1TQ 170 Olympus videobronchoscope. Clinical cases of the greatest difficulty have been resolved by a mixed approach. The origin of foreign bodies: organic - 79 (64.2%), inorganic in 44 (35.7%) children. The location of foreign bodies was the following: tracheal level -1.8%, right bronchus lumen - 64.7%, and left - 33.5%. Associated decubitus lesions were present in 11.3% of cases.

Granular masses at the foreign body level were documented in 67.2% (34.2% of them were with the duration of the presence of the foreign body up to 7 days). Contact bleeding during extraction occurred in 16.7% of cases. In 4.8% cases the bronchial mucosa was not affected. In 5 cases (4.0%) the foreign body was deeply incarcerated in the bronchial wall.

Results. Extraction of foreign bodies by flexible videobronchoscope was obtained in 7 patients (5.6%). By rigid bronchoscope foreign bodies were extracted from 111 patients (90.2%). In 5 children (4.0%) access to visualization to the foreign body was possible via flexible videobronchoscope, but extraction – via rigid bronchoscopy.

Conclusion. In the pediatric prenatal extraction of foreign bodies in the lower respiratory tract, the main part belongs to rigid apparatus bronchoscopy with the selection of the age-appropriate insertion tube.

SURGYCAL TREATMENT OF THE PECTUS EXCAVATUM IN CHILDREN

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Nuss repair of funnel chests is used increasingly, but has a high bar dislocation rate. The authors intended to reduce this by technical modifications of the original Nuss technique.

Methods: In 350 patients from 6 to 17 years of age (mean, 12.4 ± 3.8) were operated by Nuss procedure at the Filatov Children's Hospital in Moscow for the last 10 years. 37% of patients had Sindromalny pathology.

Operation technique: The bars were placed from left to right with use of specially metal conductor; introduced of the T-shaped plate; fixing of both ends of a plate. Plate was removed in 4 years after surgery.

Results. Duration of operation averaged 38 ± 7 minutes. Terms of hospitalization averaged $8,5 \pm 2$ days. Thoracoscopy was used only at 8 (2,2%) patients. From them 4 patients were previous operated by Paltia plate repair, at 3(0,8%) patients – after sternotomiya for correction of CHA and 1 patient after a pulmonectomiya. Simultanny operations were done in 4 (1,1%) patients: Thoracoscopical ductus arteriosus repair - 2 patients, Thoracoscopical resection of a lung - 2 patients.

Complications: pneumothorax – 2(0,5%), gemathorax– 2(0,5%), plate shift – 1(0,2%) patient. One patient observed hyper correction of the chest. In 98% we had the excellent cosmetic and functional result. Residual deformation was observed - 7 (2%) patients. All patients were reoperated with excellent results.

Conclusion. The modified technique more safely and has reduced the incidence of bar dislocation.

ENDOSCOPIC DIVISION OF THE VASCULAR RINGS IN CHILDREN

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Introduction. Congenital anomalies of the aortic arch such as a double aortic arch and a right-sided aortic arch can result in a severe respiratory failure, which requires emergency surgery. Modern equipment and accumulated experience make it possible to perform thoracoscopic surgery for this type of pathology.

Materials & methods. A total of 16 children (age from 1 months to 17 years, weight from 3,3 to 64 kg) who underwent thoracoscopic division of vascular rings from 2008 to 2016 in Filatov Pediatric Clinical Hospital No.13 were included in the study. The timing of surgery depended on the clinical picture and the severity of the respiratory failure. There were two types of vascular rings: double aortic arch - 7 children (40%), right-sided aortic arch with Botallo's duct - 9 children (70%).

Results. Mean operating time was 57 minutes. The average length of stay was 10 days. There was no intraoperative complications. In early postoperative period there was bleeding in one child due to failure of clipping the the distal segment of the aortic arch which required thoracotomy. Postoperative chylothorax was observed in one child, which was treated conservatively.

Conclusion. The latest advances in surgical methods allowed to make thoracoscopic division of vascular rings in infants and children the method of choice with detailed intraoperative visualisation of the anatomy of the defect and secure mobilization of large vessels. Thoracoscopic surgery for congenital anomalies of the aortic arch is feasible to improve the postoperative outcomes and reduce the time of hospitalization.

SURGYCAL TREATMENT OF CHILDREN WITH GASTROESOPHAGEAL REFLUX: 15 YEARS EXPERIENCE

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Introduction. Laparoscopic fundoplication for gastroesophageal reflux disease (GERD) is one of the most common procedures performed in children. We have used laparoscopic Nissen fundoplication (LNF) over the past 15 years as the procedure of choice. The aim of this study is to evaluate the effectiveness and long-term results of LNF on a large clinical material.

Materials and methods. Since 2001, in 785 children with GERD had LNF performed. The median age was 4.7 years. Weights of children ranged from 2,7 to 120 kg. Long term results were evaluated over 2-15 years after operation. Indications for surgery were ineffective conservative treatment in all cases, severe esophagitis - in 383(56%) children, growth retardation - in 365 (46%), hiatal hernia - in 225 (30%), peptic stenosis - in 123 (15%), respiratory complication - in 143 (18%) children. Severe neurological disorders were found in 324 patients. In 21% GERD was associated with genetic syndromes. Analysis of the treatment results tracked the following: 1) intraoperation complications; 2) postoperative complications; and 3) relapse of disease. Treatment results showed the absence of clinical displays of the disease, the knocking over of reflux-esophagitis, and the absence of GERD, according to pH-monitoring.

Results. Hyatoplasty was performed in 32% of the cases. And in 39 children with huge hernias of esophageal apertures of a diaphragm a hernial sac excision and hyatoplasty was carried out. The average operating time was 51.3 ± 25.2 minutes. Intraoperative complications occurred in 11 (1.5 %) children (perforation of the stomach - 4, wound of a spleen - 4, pneumothorax - 3, and oppression of heart activity - 1). Postoperative complications developed in 15 (1.9 %) children (mediastinitis - 1, dysphagia - 8, and diarrhea - 6). Intraoperation complications in 2 cases required conversions to open operations. There were no mortalities. In 19 patients simultaneous operations were performed (thoracoscopic closure of ductus arteriosus, lung resection, etc.). 15 patients were laparoscopically operated after failed previous open fundoplications. Good results were achieved in 678 (91,5%) patients. Relapse of the disease were found in 67 patients. In all cases, repeated LNF were performed. The positive results were gained totally in all children with GERD.

Conclusion. LNF is a radical method of treatment of GERD in children, which has positive results after primary operation in 92% of cases.

ESOPHAGEAL SUBSTITUTION IN CHILDREN. GASTRIC TRANSPOSITION

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For a long time colonic esophagoplasty were operations in choice in our institution. From 2009 we introduce stomach esophagoplasty to evaluate the results and long-term outcome of this surgical option as well as to provide a comparative analysis of this technique and colonic esophagoplasty.

Materials and methods. From January 2009 till May 2015 44 children underwent stomach esophagoplasty in Filatov Children's Hospital, Moscow. The patients were aged from 2 months till 13 years. Esophageal atresia was present in 15 (34%) cases, esophageal strictures - in 16 (36.4%), peptic stenosis - in 8 (18.2%), other disorders - in 5 (%) children. To evaluate both short-term and long-term outcomes we consider the following data: clinical examination, questionnaires, esophago gastroduodenoscopy, X-ray contrast study of GIT. In 32 children (72.8%) the stomach was moved through the posterior mediastinum, in 12 (27.2%) patients - through the anterior mediastinum.

Complications. In early postoperative period we had the following complications: pneumonia, pneumothorax, gastric-intestinal bleeding, eventration, enterocolitis, jejunum perforation. In the long-term follow up we diagnosed stenosis of gastroesophagoanastomosis, aspiration pneumonia, hiatal hernia.

Discussion. Stomach esophagoplasty is more easy from the technical point of view. Operation time makes from 50 minutes till 2 o'clock and 40 minutes. We had no necrosis of transplant. In 8 children this operation was made after unsuccessful colonic esophagoplasty. Average stay in the intensive care unit was 6 days. Feeding behavior of the patients after stomach esophagoplasty is strictly regulated by the compelled guidelines.

Conclusion. Stomach esophagoplasty has its advantages and drawbacks. Our experience presents the comparative analysis of the outcomes of colonic esophagoplasty and stomach esophagoplasty, guidelines of how to choose the best way of esophageal repair. The above described surgical option gives way to more opportunities for a surgeon and helps to improve treatment outcomes in children with esophageal disorders.

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The question of feasibility of laparoscopic Kasai procedure for biliary atresia in infants has been a subject of discussion for a long time, and still remains unsolved.

110 children with different bile duct malformations were operated on in our clinic since 2000. The first laparoscopic Kasai portoenterostomy was performed in January, 2008 to a 2 month old child. Since then, laparoscopic Kasai portoenterostomies were performed in 42 children with biliary atresia. The age of the children varied from 50 days to 3.5 months. The mean weight of the patients was 4693 ± 767 g. 24 patients between the years 2000-2008 were operated on by conventional ("open") procedures.

All procedures were performed with 4 to 5 trocars using 3 and 5-mm ports. Excision of the fibrous biliary remnant was performed laparoscopically in all cases. The Roux loop was fashioned outside of the abdominal cavity through the umbilical incision in 23 children, and in 18 infants the Roux loop was performed laparoscopically. Laparoscopic biliary reconstruction was performed successfully in all patients.

Results: 79% of children who underwent laparoscopic Kasai had a normal postoperative bilirubin level, whereas the other 9 children did not drain bile and required liver transplantation. In the "open" surgery group, 74% of patients had good results. The duration of laparoscopic Kasai procedure was significantly longer than open surgery ($p < 0.05$). There were no conversions. We observed significantly fewer complications (40%) after laparoscopic hepaticojejunostomy than after traditional hepaticojejunoduodenostomy (84.6%, $p < 0.05$). The average length of stay in the ICU, and the duration of analgesia after laparoscopy was significantly lower than after open surgery ($p < 0.05$). Cholangitis was found in 21.4% in the laparoscopic group and 25% in the open surgery group. Intraperitoneal adhesions in patients who underwent liver transplantation were less pronounced after laparoscopy, compared with open Kasai procedure.

Conclusion: Our experience leads us to conclude that laparoscopic Kasai operations can be used as the procedure of choice in the treatment of children with biliary atresia.

PORTAL HYPERTENSION IN CHILDREN: 27 YEARS' EXPERIENCE OF SURGICAL TREATMENT

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Surgical procedures are known to be most effective in preventing variceal bleeding (VB) in children with portal hypertension (PH). The quality of life, possibility of the portosystemic encephalopathy, and the deterioration of liver function after shunt procedures in children with PH are the aim of our study.

Methods. 718 children with PH were treated in our hospital since 1989. 639 (89%) had extrahepatic PH. 577 patients underwent portal systemic shunting (PSS). In 81 children Rex-shunts were performed. In 24 patients Sugiura operations were done.

Endoscopies, Duplex scanning, biochemical tests and psychoneurological evaluation were performed after a one-year period. 172 patients were evaluated in 5-18 years after surgery to determinate the long-time results.

Results: Re-bleeding occurred in 21 (3,7%) children with PPS. In the long-term period portal perfusion (PP) after PSS decreased down in 84%. No patient developed portal-systemic encephalopathy. No signs of liver function deterioration were found. The re-bleeding rate after Rex-shunt was 5,5%. In patients with Rex-shunt, a normal PP was restored in the early postoperative period. The Sugiura procedure produced the highest rate of re-bleeding – 25%. In 12 patients, we combined the Sugiura procedure with planned endoscopic sclerotherapy in the postoperative period. This decreased re-bleeding to 8,3%.

Conclusions. The PSS is an effective and method of preventing of VB and does not seriously degrade quality of life of the child. The Rex shunt effectively restores PP in the post-operative period. In cases when shunt surgery is not possible, the Sugiura procedure is the operation of choice with endoscopic sclerotherapy for remnant varices.

LAPAROSCOPIC PROCEDURE OF CELIAC ARTERY COMPRESSION SYNDROME IN CHILDREN

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Background. The celiac artery (CA) compression syndrome (CACS) is a rarely diagnosed disorder, which is characterized by chronic abdominal pain and vegetative symptoms. The role of surgical treatment in CA decompression has been discussed controversially by numerous authors.

Patients and methods. Three patients (median age, 15 years) diagnosed with CACS underwent laparoscopic decompression. The patients presented with chronic abdominal pain, vegetative symptoms and a reduced quality of life. Doppler sonography showed an increased blood flow velocity of the CA with maximum of 190-300 cm/s (mean 205 cm/s). CT angiography and angiography demonstrated a characteristic hook-shaped appearance of the CA with severe localized compression.

Results. All patients underwent laparoscopic decompression of the CA. Four or five ports were used during laparoscopic approach. The procedure consisted of division of the median arcuate ligament and complete mobilization of the CA from its origin on the aorta to its trifurcation. Average operating time was 65 minutes, and the average length of stay was 4 days. We did not observe any complications. Postoperatively all patients were immediately free of abdominal pain. Doppler sonography showed a marked reduction in CA blood flow velocity. An increase of vessel diameters to normal dimensions was documented by postoperative CT angiography.

Conclusions. Laparoscopic treatment of celiac artery compression syndrome offers a novel, safe, reliable and, compared to open surgery, less invasive approach. The surgical treatment is indicated in patients with characteristic symptoms and typical findings at Doppler sonography and CT after exclusion of other abdominal pathologies.

SLIDE TRACHEOPLASTY IN CHILDREN WITH CONGENITAL TRACHEAL STENOSIS

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Introduction. Congenital tracheal stenosis (CTS) is a rare life-threatening condition that often requires early surgical intervention. Treatment of CTS remains challenging.

Patients and methods. Between 2011 and 2016, 16 patients underwent slide tracheoplasty. The median age at surgery was 14.9 months (range, 18 days - 10.5 years). The median body weight was 9.4 kg (range, 1.8-32.8kg) at operation. Thirteen (81%) patients had long-segment CTS (>50% of total tracheal length), including 6 (38%) patients with tracheal stenosis extended to the bronchus. Abnormal bronchial arborization presented by an anomalous right upper lobe bronchus was detected in 6 patients. Fourteen (88%) patients had associated cardiovascular malformations, which were previously operated on 5(31%) patients and simultaneously operated on 8(50%) patients. These defects and CTS were repaired with intraoperative usage of ECMO in 9(56%) patients versus conventional ventilatory support under cardiopulmonary bypass (CPB) in 7(44%) patients.

Results. There was no airway-associated mortality. One child died for some technical reason. Another died of multiple organ failure one year after the STP. The median follow-up period for the survivors was 2.2 years (range, 0.2 - 5.1 years). In these 15 patients, the median duration of ventilatory support was 8 (range, 1-25) days. The median duration of postoperative hospitalization period was 36 (range, 8-64) days, including the median duration of ICU stay 26 (range, 6-42) days.

Post-STP airway intervention (bougienage or laser photocoagulation) was necessary in 6 of our patients, no one required additional surgical procedures, stenting was not required either. All survivors (100%, 15 out of 15) were asymptomatic at last follow-up.

Conclusions. Our data suggest that children with CTS benefit from the usage of ECMO and the policy of simultaneous surgical treatment of associated cardiovascular malformations. Moreover, using intraoperative ECMO provides comfort conditions for surgeons facilitating a technically complicated operation and decreasing intra- and postoperative risks of common complications.

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Purpose: Achalasia of the esophagus is a rare disorder in children, its symptom can mimic common childhood illnesses. In this study, the tactics of managing children with the corresponding pathology and evaluating the effectiveness of ongoing surgical treatment at the Filatov Children Hospital are considered.

Materials. From 1991 to 2016, in the Filatov Children Hospital was treated 39 patients with achalasia. Since 2011, all patients (27 cases) have undergone laparoscopic Heller cardiomyotomy with Dor fundoplication. The average age was 9.9 (4-15) years. The most frequent symptoms were vomiting (81%) and dysphagia (70%). Weight loss was observed in 48.1% of patients and chronic cough in 25%.

Results. All children underwent laparoscopic Heller cardiomyotomy with Dor fundoplication. Intraoperative complication - damage to the mucosa of the esophagus occurred during cardiomyotomy in 2 cases (7.4%), which were cured during the laparoscopic procedure. There were no open procedures. Six (22.2%) required repeated intervention: pneumatic dilations (n = 2), balloon dilatation (n = 2) and re-surgery (n = 2).

Conclusions. In our study, laparoscopic Heller cardiomyotomy in the case of achalasia of the esophagus is effective in 77.8% of children. We recommend this operation with Dor fundoplication, and believe that it is the operation of choice in the treatment of achalasia in children.

VALUE OF EARLY DIAGNOSIS OF DISEASES OF THE URINARY SYSTEM AT NEWBORNS AND CHILDREN OF THE FIRST MONTHS OF LIFE

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Relevance. The number of children of early age with congenital urological pathology, in particular obstructive uropathy, steadily grows and is registered at 5–14% of newborns.

The aim of research: to improve results of treatment of children with urological pathology by improvement of diagnostics and optimization of terms surgical treatment.

Patients and methods. On the basis of department of children's surgery of the Tyumen State Medical University the analysis of results of treatment of 117 children with obstructive uropathy (boys-75 (64%), girls - 42 is carried out (36%). Patients were divided into two groups. The first group made 44 (38%) the child at which pathology of an urinary system was revealed after the birth, already at accession of complications (temperature increase of a body, a leukocyturia and a gematuriya, pains in lumbar area). Age range of these patients made from 1 to 15 years. The second group - 73 (62%) newborns. Pathology at them was revealed in antenatal period by means of a ultrasound sonography. Treatment to these patients was carried out from the first days of life.

Results. Early detection of this pathology and timely surgery before emergence and accession of a secondary infection of an urinary system improved results of treatment of these patients, having reduced quantity of complications from 28.3% to 1,4%.

Conclusion. Early detection of this pathology created prerequisites for early surgery before emergence and accession of a secondary infection of an urinary system. This circumstance is decisive in prevention of postoperative complications, and also the satisfactory immediate and remote results of treatment.

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The diagnosis and treatment of poly-rheumatism remains a current problem that draws the attention of specialists from different medicine fields.

Multiple forms of trauma associated with children result from mutual worsening syndrome that complicates polytraumatism diagnosis and treatment. Around 47-76% of these children are interned in extremely serious conditions (Гордев В.С., Цыбулькин Э.К., 2010).

Material and methods. During the last 2 years, 188 children with associated trauma were treated in our clinic. The share of children traumatized in road accidents is about 76.2%. Associated traumas are classified as follows: 24% craniocerebral dominance, 11% dominant abdominal polytraumatism, 65% locomotor dominant. The diagnosis of a poly-traumatization follows three main principles: determining the state of conditions; rapid and complete check of lesions; prioritisation of injuries and determination of the order in which they will be treated.

The assessment of seriousness of conditions and the polytraumatism condition prognosis were appreciated according to the methodology proposed by Tibin (Цыбин, 2001), to the craniocerebral trauma in Glasgow. Treatment of politraumatized patients was done in the order of the dominant syndrome.

Results. The treatment methods were chosen depending on the prioritisation of the injuries regarding their dangerousness degree to the patient life. The interventions performed were:

laparotomy + surgical treatment of osteoarticular lesions 12 children

Laparotomy + cerebral decompression; 4 children

Cerebral decompression + surgical treatment of osteoarticular lesions 11 children

Surgical treatment of wounds + osteosynthesis 87 children.

The results obtained were satisfactory, 2 cases complicated with infection of adjacent tissues.

Conclusions.

For polytraumatism diagnosis it is useful to use modern, minimally invasive methods.

It is necessary to carefully monitor the change of the dominant outbreak throughout the treatment period and to surgically intervene at the right moment.

IMPROVED METHODS OF TISSUE EXPANSION IN TREATMENT OF CHILDREN WITH EXTENSIVE DEFECTS OF THE SKIN

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Introduction. Large surface skin defect closure after extensive burn trauma remains an important issue in plastic and regenerative surgery. Deficit of intact skin dictates a careful and creative approach to donor skin surfaces. Skin stretching technique using endo expansion device is a promising approach to treat large skin defects. It allows a significant reduction of scar surface area. Application of this technique for free dermal transplants allows receiving skin grafts similar to normal skin.

The goal of this approach is to form a full-thickness skin flap of a desired size in cases where traditional skin donor surface areas are limited or not available. The resulting skin flap could be used on various body parts.

The purpose of the study is to further characterize and advance the method of skin surface expansion for auto-grafting.

Purpose: to increase the potential of the expansion dermatension.

Materials and methods. In 2006-2017 years 25 patients age 4 years to 17 years with large-surface skin defects were treated using skin stretching technique. 24 patients had burn trauma and one patient had a trauma related to a car accident. All patients had scar deformations and various degrees of contractures, which were associated with significant limitations in their everyday life.

Either large (120 mm x 45 mm) or small (90 mm x 45 mm) skin stretching devices were placed endoscopically. Radio knife "Surgitron" and hydro knife "Versa jet" were used for incisions. Skin stretching was achieved by gradual expansion of latex ballooning devices using 0.9% Normal Saline over a period of 4-8 weeks. Various body areas were used as a donor site for skin stretching based on individual cases- back, lateral chest and abdomen.

4 patients received local intra dermal injections of botulinum toxin at the site of implantation of skin expansion device 3-4 days prior to the procedure.

Results. Using skin stretching devices we were able to get full-thickness donor skin surfaces ranging from 60 square centimeters to 300 square centimeters. Wounds were closed using adjacent skin tissue. Small linear normotrophic scars were formed as a result. 4 patients had some degree of peripheral necrosis at the edges, which were successfully treated using conservative methods. Scar deformations and contractures were corrected in all patients.

Conclusions. Skin stretching technique has been proven to be a useful method in managing large surface skin defects in pediatric patients with various burn trauma, scar contractures, other traumatic causes of skin defects. Skin stretching technique allows receiving a full-thickness auto skin graft of a desired size similar to normal skin. This method solves a problem with lack of skin auto-graft for closure of large surface wound areas.

THE INCIDENCE OF THE POSTOPERATIVE PERITONITIS IN DIGESTIVE SURGERY IN CHILDREN. CLINICAL AND THERAPEUTICAL ASPECTS

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Postoperative peritonitis are the result of the defects a first surgical intervention and therefore they are a complication of the digestive surgery. In pediatric surgery they appear in the digestive surgery in new-born and infant or as a complication in the postoperative evolution of a acute appendicitis in small children or teenagers, usually, after interventions in the emergency department or other surgical departments.

The authors are analyzing the incidence and the causes of the postoperative peritonitis admitted and treated in the pediatric surgery department in the last 25 years.

THE VOLUME OF THE DENTAL PULP CHAMBER DETERMINING BY USING CONE-BEAM COMPUTED TOMOGRAPHY

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Introduction Cone-beam computed tomographic (CBCT) imaging is a valuable tool in dental practice. It is widely used in endodontic treatment for the root canal morphology examination. The aim of this study was to verify whether clinical use of CBCT imaging can accurately acquire parameters concerning molar pulp chamber landmarks, which are important data to help start a successful way to calculate the number of stem cells in the dental pulp. Therefore, the purpose of this study was to use CBCT to calculate the volume of the pulp chamber at different tooth groups.

Material and methods. This study conforms to protocols approved and in accordance with the ethics committee's requirements, informed consent was obtained from each patient. Morphologic measurements of 120 maxillary and 120 mandibular molars (from 40 patients, aged 18-45 years) were included in this study. CBCT images were taken using a Kodak 9500 (Dental Systems, Carestream Health) operated at 90 kVp with a voxel size of 300 μ m and a field of view of 90 150 mm. All scans were taken following the manufacturer's recommendation protocol. According to the examination requirements, C-shaped roots, single-rooted molars, crowned teeth, and teeth with caries and/ or restorations violating the pulp chamber were excluded. All measurements were taken on the coronal plane view.

Results. In the present study, we used CBCT imaging to gather information regarding pulp chamber volume. With the scanned 3-dimensional images, we were able to clinically determine the pulp chamber parameters using a standardized and defined spatial approach.

Conclusions. The data we collected here serve as a proof of principle for the analysis of dental landmarks before collecting stem cells. In this particular study, existing CBCT scans were used to provide useful information that can be used as a guide for determine volume of the pulp chamber.

CONGENITAL MALFORMATIONS OF CENTRAL NERVOUS SYSTEM, SPINAL NEURAL AXIS AND OSSEOUS CRANIAL SYSTEM: DIAGNOSTIC AND TREATMENT MANAGEMENT

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Congenital malformations of the central nervous system, of the neural spinal axis and of the cranial skeletal system are a more and more actual pathology. Its incidence increases year by year by more and more severely forms and associations. One of the most actual and most common congenital anomaly is: hydrocephalus (3-4 cases per 1.000 newborns), which puts us a lot of problems in solving it. The hydrocephalus of the newborn allegedly an increase of the volume of the skull due to the increase of the amount of cerebrospinal fluid and its accumulation under pressure in the fluid compartments that has as result the expansion of these cavities on account of the brain substance. The treatment of hydrocephalus requires a variety of methods, which are selected depending on the form and severity of the disease.

A complex of anomalies of the neural spinal axis are disrafie thorns:

Congenital malformations caused by the incomplete development of the neural tube during the fetal embryogenesis (approximately on the 20-th day).

Their frequency is 4-5 cases per 1.000 newborns. The treatment is exclusively surgical and requires a great skill in tissue of the tissue defects.

The cranial malformations include craniostenosises, which are affections characterized by premature, primitive closure of one or more skull sutures that may cause an increase of the intracranial pressure and cosmetic deformities. Their incidence is about 1 at 1.000 newborns. The indications for surgical treatment are functional, cosmetic, psychological, endocrine.

The correct management in the diagnosis and treatment of congenital malformations allows children with these abnormalities the possibility to reduce completely or partially the neurological and esthetic difficulty.

ENDOVIDEOSURGICAL TREATMENT OF CHILDREN WITH HERNIAS OF THE ANTERIOR ABDOMINAL WALL

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Laparoscopic operations in children with various types of hernias of the anterior abdominal wall are performed by us since 1994. During this time, more than 3000 sugical interventions were performed in children aged from 10 days to 18 years. Most patients had indirect inguinal hernias. The original laparoscopic technique consisted in hermetic sealing of the hernial orifices. In 15% of patients, was diagnosed a bilateral hernia, which did not appear clinical signs until laparoscopic intervention. Depending on the size of the hernial orifices, hernias were divided on small hernias (inguinal ring up to 1 cm) - 768 children (relapse - 0.26%), medium size hernia (inguinal ring from 1 to 2.5 cm) - 1726 people (relapse - 0.11%), large hernias (inguinal ring more than 2.5 cm) - 227 people (relapse - 5.7%). During repeated interventions, it was found that the relapse of the disease is associated with a defect in sealant sutures at large hernial gates. The technique of surgery for hernias of a large size is supplemented by a double seam of the inner inguinal ring, which allows to minimize the tension of the tissues.

Rare hernias of the abdominal wall were encountered in 9 cases. In 5 children were found a femoral hernia, corrected by laparoscopic isolation and mobilization of the hernial sac, followed by plastic surgery of the defect in the abdominal wall with a vicryl mesh. In two cases in the hernial sac an omentum was fixed. Children were examined 6 months after the operation - no pathology was found. In 3 patients during laparoscopy, a direct inguinal hernia was diagnosed. The hernial defect was sowed after complete mobilization and separation of the hernial sac without the usage of a mesh implant.

Endovideosurgery today successfully competes with traditional methods in the treatment of various hernias of the abdominal wall in children, allowing to determine the type of hernia, to improve the technique of surgery in time, perform radical intervention atraumatically with respect to the sex gland.

WAYS OF INCREASING EFFICIENCY OF ANTIBACTERIAL THERAPY AT THE FESTERING-INFLAMMATORY DISEASES AT CHILDREN

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Introduction. One of the reasons of unfavorable results of treatment is low efficiency of antibacterial therapy. One of the new perspective therapeutic strategies is the application of extracorporeal antibacterial therapy (EABT) providing the directed transport of drug in the hearts of inflammation.

Aim. Improving the results of treatment of patients with a heavy festering infection.

Materials and methods. From 2005 to 2017 101 operations of EABT were conducted at 35 children with heavy infections: peritonitis, osteomyelitis, destructive pneumonias, urology pathology, sepsis. Auto leucocytes and red corpuscles were used as the vectors of the directed transport AB.

Children were given a preliminary infusion in a volume of 10-15 ml/kg with balanced crystalloid solutions. After taking away blood in amount of a 10% from VCB, it was centrifuged. Then the day's dose of the chosen antibiotic (in accordance with the sensitiveness of microorganisms) was added to cellular mass. The cellular mass was diluted by physiologic solution and poured to the patient. Remote plasma after conducting of session of discrete plazmaferes was returned to the patient. (stat. patent No. 38834). Extracorporeal antibacterial therapy was conducted in one day for 1-3 sessions with subsequent transition on descalation antibacterial therapy.

Results. Duration of stay in intensive therapy and general duration of stay in the permanent establishment are lower in a basic group compared to a control group. The normalization of leucocytes formula of blood and quicker (on the average on 2-3 days) normalization of temperature of body at patients were established.

Conclusion. EABT, being one of the variants of the directed transport of medications is the effective method of treatment of heavy festering infection at children.

RECONSTRUCTIVE SURGERY OF CHEST MALFORMATIONS IN CHILDREN

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Introduction. Chest deformities occur approximately in 1-2% of the population. During the growth of the organism chest deformities aggravate, press and deviate the heart and lungs, causing disorders of the respiratory and cardiovascular systems. Thoracoplasty is a pathogenetic surgery.

Purpose. Improvement of the quality of life of children with chest deformities, by the application of advanced technologies in surgical treatment.

Material and methods. In the Clinic of Pediatric Vertebrology, Orthopedics and Traumatology during the years 2012-2015, 21 children aged between 5 and 14 years old with congenital chest malformations were operated: 12 (57.1%) children with excavated chest, 9 (42.9%) patients with chest deformity caused by scoliosis with „thoracic hypoplasia syndrome" -14 boys (66.7%) and 7 girls (33.3%).

Results. Good results (no complaints, functional disorders of the lungs and heart are not obvious, chest deformation was removed) - were observed in 19 (90.5%) patients. Satisfactory results (a slight deepening in the anterior wall remains, there are no complaints) - 2 (9.5%) patients.

Conclusions.

1. Conservative treatment or delayed surgical treatment led to irreversible disorders and complications of the functions of internal organs.
2. Surgical correction of severe chest deformities is the only method that allows to prevent the progression of internal organs dysfunctions.
3. Mini invasive Nuss procedure is the most beneficial method of correction of deepening chest deformities.

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Relevance. In the 60-ies of the last century among orthopaedic surgeons noted particular enthusiasm about the effectiveness of corset treatment, which was replaced by a negativity in the 80-ies. In scientific publications of the time you can even see the categorical statements that corset treatment generally inefficient and it has no place in the Arsenal of orthopedic surgeons. In the 90-ies the situation changed after the works of J. Lonstein, J. Carlson. These authors on a large material demonstrated how progressing scoliosis, and the opportunity to compare the results of corset treatment with the natural course of the disease. The first theoretical studies on the possibility of using CAD/CAM technology in medicine was proposed in the mid 80-ies, in the future, these technologies are widely used in dentistry, then in orthotics. The emergence of scientific publications confirming the efficacy of the corset Cheneau, along with the new computer technologies allow for a conservative treatment at a qualitatively new level.

The purpose of the study. Improving the efficiency of use of correction corsets type Cheneau, made by technology CAD/CAM in the treatment of idiopathic scoliosis in children and adolescents.

Material and methods. From 2010 to 2016 analyzes the results corset the treatment of 136 patients (26 boys and 110 girls) with idiopathic scoliosis who completed the corset-stage of treatment: 54 (39%) or being corset treatment: 82(61%). Static corset (made by technology plaster cast) was used in 64 patients, dynamic corset (manufactured by the technology of 3D modeling) applied in 72 patients.

Static corsets were made in the following organizations: orthopedic enterprise MODES of Zito – 20, and prosthetic enterprise Belarusian NIITO – 19, orthopedic enterprise, Federal state institution, St. Petersburg, NCEP them. G. A. Albrecht Of Ministry Of Labor Of Russia 25. Of the 72 corsets, manufactured by the technology of 3D-modeling (CAD/CAM) technology, 24, manufactured CCtec Deutsches Korsettzentrum GmbH & Co KG, Germany, 17 - Regnier Orthopaedie GmbH, Germany and the 31 Russian-German company "RK".

The patients' age from 3 to 19, the angle of deformation ranged from 20 to 50 degrees Cobb on the front spondylograms, made standing. Patients were corset treatment according to the method permitted in combination with regular physical therapy (Schroth therapy). The study used the final results of corset treatment 25 patients with static (group a) and 25 with dynamic (group B) model of corset Cheneau.

Evaluation of results was carried out according to the following parameters: average time of adaptation to the corset, a correction of the angle of deformation in the process of corset treatment and after the treatment, the results of scoliometer (rotation of apical vertebra) during and after the end of treatment, the average life of the corset.

Results. Corrective corset allows you to change the scoliotic deformation of the body in the growth process of the child, thus preventing the progression of the deformity and providing a correction.

The average time of adaptation (time to 18-21 hour/day) to the corset of the patients in the group A amounted to 21 to 28 days, group B: 14 to 20 days. The average angle of deformation before treatment was 31 degrees according to Cobb ($30,7^{\circ} \pm 5,5$). Primary correction in brace were conducted after adaptation of the patient to the orthosis (3 months after the appointment of the corset) and achieve a time worn per day, 18-21 hours in radiographs of the spine performed in a corset standing. The average correction in group A and in group B was 33% and 35% and allowed to reduce the average angle of deformation from 31 to 20 degrees. The average angle of deformation after the abolition of the corset (according to x-ray of the spine in terms of 6-9 months) was in group A: $27,7^{\circ} \pm 4,6$ and $25,4^{\circ} \pm 3,8$ in group B by reducing the primary (maximum) angle of 3.3(10.6 per cent) and 5.6 (18,1%) respectively.

According to the results of scoliometer in the group A and rotation of apical vertebra is reduced by 4° in the course of treatment and at 1° after the abolition of the corset. In group B, the rotation of the apical vertebra is reduced by 6° during treatment and 3° after the cancellation. The average lifetime of a static corset was 7 ± 2 months, dynamic 14 ± 3 months. Thus, adaptation to dynamic corset is on average 1.5 to 2 times faster than static corset. We identified no fundamental difference to the primary correction in the groups studied, however in the long-term (6-9 months after full withdrawal), we have obtained the best results in derotation and correction of scoliotic arc in the group of patients with dynamic corsets.

Conclusions. The effectiveness of corset treatment depends on the following factors: the personal involvement of the patient - time wearing of a corset per day, the degree of correction as well as technology which made corrective corset. The use of dynamic corsets Cheneau in the treatment of scoliosis allows earlier to adapt to the orthosis, swiping more effective derotation in the treatment process with the best performance of the final result of applying the corset. Corsets made using the technology of CAD/CAM have longer service life.

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Introduction. Sciatica is a common disease, between 73% and 85% of the general population will experience at least one episode of sciatica due to spinal disc herniation and nerve root irritation. Percutaneous intradiscal techniques of nucleoplasty can be applied as an intermediate measure between conservative treatment and surgery, with a view to avoiding the adverse events associated with surgical discectomy. In some specialist centers, good results were obtained with pure ethanol, mixed with ethylcellulose to increase its viscosity and enhanced with radio opaque material.

Material and methods. A total of 49 patients were included in this study and treated with radio opaque gelified ethanol and intraarticular steroids of a lumbar and cervical intervertebral disk hernia. We evaluated each patient's pain levels during the procedure itself and then after 3-4 and 8 weeks, and 4, 8, 12, 24 months after procedure.

Results. Pain levels immediately after the procedure were markedly lower than before the procedure. There were no complications. Two months after procedure administration, the initial pain level had fallen by an average of 84 %. The outcome was quite stable over time (mean follow-up: 2 years). Short-term follow-up with magnetic resonance showed little or no changes in the intervertebral disk but there was discordance with clinical signs. Long-term follow-up magnetic resonance showed a dramatic reduction in hernia volume. Very good or good results were obtained in 42 (89,1%) of the 49 patients, fair - in 16 cases and bad in 3 cases (8.6%). Only 2 cases with a bad outcome at lumbar level went to surgery.

Conclusion: This preliminary study shows the efficacy and inoccuity of this substance. More especially, it demonstrated the absence of complications and recidivates in the immediate and long-term follow-up for more than 3 years for the first cases.

INFLUENCE OF SURGICAL CORRECTION OF INGUINAL HERNIA AND HYDROCELE ON TESTICULAR BLOOD FLOW IN CHILDREN

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Inguinal hernia and hydrocele affect the blood circulation of the testicle. Surgical trauma may change testicular blood flow.

Objective. To study changes in blood flow parameters in children with pathology of the processus vaginalis, requiring surgical correction, using the analysis of ultrasound data.

Materials and methods. We observed 87 boys from 3 to 17 years old, operated for congenital inguinal hernia and hydrocele. As a control group we examined 34 boys without pathology of the reproductive system. Patients held Doppler ultrasound the day before surgery, at 1 and 7 days after. Peak systolic flow velocity, end-diastolic flow velocity and resistance index were studied.

Results. The resistance index on the affected side was higher compared with the control group before operation ($p < 0,05$). The values of peak systolic and end diastolic blood flow velocities were lower than in the comparison group ($p < 0,05$). Resistance index increased compared with preoperative period 1 day after surgery ($p < 0,05$). Values of flow velocity parameters decreased to 4-9 % compared to values before the operation. The resistance index decreased ($p < 0,05$) to near baseline figures a week after the operation. Peak systolic and end-diastolic flow velocity raised to 15-21 % compared to the preoperative period. However, the intensity of the blood flow in the affected testicle remained lower than in the control group ($p < 0,05$).

Conclusions. The blood flow of affected testicle in children with inguinal hernia and hydrocele is initially decreased. Early postoperative period is characterized by intensification of testicular parenchyma's ischemia. Postoperative blood flow in the affected testicle is improved a week after surgery, but the lack of blood supply to the testicle is retained.

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Introduction. The peptic ulcer disease (PUD) is an uncommon condition in paediatric surgical practice, more than half of cases are diagnosed predominantly when complicated. However, complications of PUD, particularly the perforation of the gastric or duodenal ulcer, are life threatening surgical emergency in this age group.

Aim: The aim of our study was to analyse the clinical features, diagnosis and management of perforated peptic ulcer (PPU) in children.

Materials and methods. The data of children diagnosed with PPU at Institute of Emergency Medicine, Moldova were reviewed. The patients' age, sex, anamnesis, clinical features, examination results, operative findings and methods, medication therapy and outcomes were assessed. Statistical analysis was performed using the χ^2 , Student t test, and multivariate logistic regression for possible risk factors.

Results. There were 18 boys aged 15 to 17 years (mean age 16.5 years \pm 0,17 (95% CI: 16,15- 16,85)) included in the study. Fifteen patients (83.33%) were admitted in the first six hours after their abdominal pain started. Five patients had co-existing clinical events before PPU. All of the patients manifested acute abdominal pain. Physical examination revealed positive peritoneal signs in thirteen patients (72.22%). Radiography showed subdiaphragmatic free air in 8 patients (44.44%); this was the most important tool for establishing diagnosis. Thirteen patients (72.22%) underwent laparotomy (30.76% of them were covered with an omental patch, 61.53% were repaired with Judd, 1 patient with resection) and 5 were surgically treated with laparoscopic simple suture of the perforation and placement of an omental patch. Three patients (16.66%) had postoperative complications. The average hospital stay was 7,56 \pm 0,39 (95% CI: 6,73- 8,37 days (range, 4-11 days). There were no mortalities. All recovered fully.

Conclusions. Gastroduodenal perforated ulcer in pediatric age group is an uncommon entity; hence, it is not usually considered in the differential diagnosis of acute abdomen in these patients. PPU should be suspected in adolescents who manifest acute abdominal pain and have peritoneal signs. Laparoscopic repair is safe and should be the gold standard for treatment of perforated peptic ulcer in children.

LAPAROSCOPIC MANAGEMENT OF PANCREATIC LESIONS IN CHILDREN

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Background. This review is the representation of our experience of laparoscopic approach to various pancreatic lesions in series of paediatric patients.

Material and methods. 45 children aged from 1 month to 16 years diagnosed with congenital anomalies and acquired lesion of the pancreas underwent surgical treatment with the use of laparoscopic techniques. The following laparoscopic procedures were carried out: excision of gastric ectopic pancreas (n-19); external drainage, fenestration or Roux-en-Y cystojejunostomy of pancreatic cyst (n-8); excision of gastric duplication cyst of the pancreas, pancreatic lymphangioma or pancreatic hydatid cyst (n-4); spleen-preserving distal pancreatectomy or central pancreatectomy with distal pancreaticogastrostomy for solid pseudopapillary tumor (n-4); lateral pancreatojejunostomy for chronic relapsing pancreatitis and pancreatic ductal dilatation (n-3); enucleation of insulinoma (3); 95% near total pancreatectomy for congenital hyperinsulinism (3).

Results. In 44 (97,7%) patients the undertaken laparoscopic procedures were successfully completed with no intraoperative complications occurred. The conversion to open distal pancreatic resection was required in 1(2,2%) case when laparoscopic dissection was very much complicated due to massive inflammatory changes in the peripancreatic tissue. Postoperatively, 1 (2.2%) patient developed small bowel obstruction due to Roux-en-Y anastomosis kinking which necessitated open anastomotic reconstruction. In 2 (4,4%) patients pancreatic fistula occurred after insulinoma enucleation and were successfully managed with ocreotide treatment. The rest 41 (91,1%) patients made prompt and uneventful recovery. At follow up, no evidence of recurrent pancreatitis or any associated gastrointestinal symptoms were recorded.

Conclusion. Laparoscopic surgery for congenital anomalies and acquired lesions of the pancreas in children is feasible and safe if performed by skilled laparoscopic surgeon who should be experienced in the open complex operations on the pancreas.

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Introduction. Alimentary tract duplications are congenital malformations which can occur anywhere from the mouth to anus. Their anatomical presentation varies widely and so their clinical picture, often making their management a challenge for the surgeon.

Material and methods. We reviewed the medical records of 24 consecutive patients diagnosed and treated for ATD from 2006 to 2015 by our team.

Results. The clinical presentation ranged broadly from recurrent abdominal pain or feeding difficulties to GI bleeding or bowel obstruction. Most of the ATDs were ileocecal (33%), followed by jejuno-ileal and colon, esophageal and duplication of the oral structures, rectal and anorectal. We feature an esophageal duplication cyst associating esophageal atresia. We also note a case of complex caudal duplication syndrome involving the ileum, appendix, cecum, colon and rectum assessed into a multidisciplinary team with very good outcomes. In half of the cases (50%) removal of the duplication required corresponding enterectomy.

Conclusions. Alimentary tract duplications are rare malformations with a broad spectrum of anatomical particularities. Their clinical presentation and imaging studies can be misleading and in many situations intra-operative findings complete the picture of the case. Multidisciplinary approach is mandatory in complex cases in order to bring up the best results.

LIPOBLASTOMA: A RARE NEOPLASM OF CHILDHOOD

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Introduction. Lipoblastoma is a rare mesenchymal tumor of the infancy and childhood, arising from embryonic fat tissue. It is considered to be benign since no metastases have been reported so far, but long term recurrence is well known. Most the tumors occurred on the trunk or on the limbs, while head and neck or genitalia are exceptional sites.

Material and methods. A revision of the lipoblastomas we treated in the last five years was made. We considered clinical and histopathological aspects, preoperative assessment, surgical approach and outcomes.

Results. We experienced four cases of lipoblastoma in the last 5 years. Their age at presentation varied from neonates to early childhood. The anatomical distribution of the tumor broadly varied: posterior paravertebral space, gluteal region, neck and intrascrotal. The main preoperative study tool was computed tomography. Complete excision was possible in all cases and no recurrences were noted so far.

Conclusions. Lipoblastomas are very rare neoplasms with unspecific localization and an atypical evolutive behaviour. Complete surgical excision and long term follow up is mandatory.

THE TREATMENT OF THE ULTRASHORT FORMS OF HIRSHPRUNG'S DISEASE IN CHILDREN

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The aim of the study was to estimate the efficacy of sphincterotomy in patients with the rectal forms of Hirschsprung's disease with ultrashort aganglionic segment.

Methods. From 1991 to 2015, 203 children with persistent chronic constipation, receiving conservative therapy were observed in our pediatric surgery departments. Confirmed positive effect was not possible despite of the complex conservative therapy. The inspection included X-ray examinations, prophylometry, rectal biopsy by Swenson. Prophylometry revealed hypertone of the anal canal and sphincters in all patients. By the histology data, agangliosis the same was found in all patients and the diagnosis of Hirschsprung's disease, ultrashort aganglionic segment was positioned.

For the treatment of these patients were used two methods of surgical intervention: Lynn's operation from 119 patients (58,6%) and posterior myectomy at 84 patients (41,4%).

Results. Next outcomes were evaluated through 3 months in all patients. After the Lynn's operation good result was in 34% of patients, a satisfactory- 34%, unsatisfactory result-32% of patients. In patients operated using the posterior myectomy, a good result was 29,8% of patients, a satisfactory-53,6%, unsatisfactory result-16,6% of patients. All patients was carried out step-wise rehabilitation therapy.

Long-term outcomes were evaluated through 12 months in all patients. After the Lynn's operation good result was in 55% of patients, a satisfactory-45%, unsatisfactory results were not. In patients operated using the posterior myectomy, a good result was 29,8% of patients, a satisfactory-53,6%, unsatisfactory result-16,6% of patients.

Conclusion. In the dynamics of the greatly increased number of patients with good and satisfactory results at the expense of poor results, especially in the group after Lynn's operation. Consequently, the Lynn's operation showed greater effectiveness for treatment of children with ultrashort form of Hirschsprung's disease.

HISTORY OF TISSUE TRANSPLANTATION IN THE REPUBLIC OF MOLDOVA

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Introduction. The successful history of tissue transplantation in the Republic of Moldova has its origin in the early 1960s. The most frequently tissues transplanted were the skeletal tissues and cornea. Numerous problems in the field were reported within the Joint Programme CoE-EC for 2004 – 2006 by the Council of Europe's experts with further support in the implementation of priority strategies related to human substances procurement and transplantation. The activities concerning the implementation of the legislation in accordance with the European Union requirements started in 2004.

Materials and methods. The Law no. 42-XVI, which sets the framework in the field of transplantation, was developed and adopted by the Parliament on March 6, 2008. In 2010 in compliance with the provisions of the above-mentioned Law the Transplant Agency was established with the major goal to implement efficiently the state policy in the field of transplantation of human organs, tissues and cells. The estimated current needs for tissues are: bone marrow transplants at 40 - 50 per year, valve transplants at 100 patients, and of cornea – at 150.

Results. The first multi-tissue human bank was authorized in 2013. Pursuing the scope to improve donation and transplantation of tissues and cells the existing Law no. 42-XVI was completed by Law no.103 in 2014, and covers all the human tissues and cells. On March 2013 the cornea procurement and transplantation were re-launched. From year to year the total number of tissues transplanted is increasing, so, in 2016 there were 605 tissues transplanted to 232 recipients (46 children) compared to 243 tissues transplanted to 174 recipients (23 children) in 2013.

Conclusion. The establishment of an efficient transplant system contributes to cover the country's needs in tissues for the patient's treatment.

DETERMINATION OF THE LEVEL OF BIOLOGICAL INFLAMMATION MARKERS IN PATIENTS WITH ANORECTAL MALFORMATIONS AND MALFORMATIONS OF THE URINARY SYSTEM

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Aim of the study. To conduct research of the maintenance of cytokines in the serum of blood and urine for children with anorectal malformations in the dynamics of chronic pyelonephritis.

Methods. Determined repertoire of the main pro-inflammatory and anti-inflammatory cytokines in urine (IL-1 β , IL-6, IL-8, TNF- α , IL-10, IL-1RA) by the ELISA method in 3 points of research: at arrival of the patient in a hospital, prior to antibacterial therapy, in 5-7 days from the beginning of a course of treatment and in 1,5 months after treatment. 54 children with chronic pyelonephritis were examined: 40 patients who had a combination of congenital defects of an urinary system to defects of anorectal area (1 group) and 14 children - without anorectal of defects (the 2nd group). Average age of patients were 4,5 \pm 3,6 years old. The group of comparison was made by 20 children with small surgical pathology (umbilical or inguinal hernia) in the preoperative period stratified on age and sex.

Results: In the 1st group the reliable increase in concentration of IL- (p<0,007), IL-6 (p<0,003), IL-8 (p<0,003), TNF α (p<0,003) in all three points concerning group of comparison was registered. In the 3rd point of IL-1 β (p<0,003), IL-6 (p<0,003), IL-8 (p<0,003) and TNF α (p<0,002) in urine reached the maximum result. In the 2nd group increase of the IL-8 level (p<0,005) concerning group of comparison is noted. The maintenance of TNF α in urine in the 3rd point was much higher, than in the 1st and the 2nd points. Concentration of IL-1 β , IL-6, IL-8 in children's urine of the 1st group was authentically above indicators of the 2nd group.

Conclusion. Monitoring of cytokines in urine is a perspective noninvasive method of an assessment of inflammatory process of an uric path at children with anorectal malformation.

PEDIATRIC DEPARTMENT EXPERIENCED IN CHILD BURNS TREATMENT (10 YEARS)

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Introduction. The treatment issue of children with thermal traumas is a debated topic even to this day. According to the Department of Burns and Plastic Surgery data, the burns make up 5% to 6% of all acute pediatric traumas. Thermal lesions, depending on the complications that developed and their severity, are divided into: flame burns (14.2 %); burns through contact with hot solids (9.6%); electric burns (3.4%); Though the majority is caused by hot liquids (72.8%).

Aim of study. Research of the results of management and treatment of children with thermal injuries, in the Department of Burns and Plastic Surgery in Republic of Moldova.

Materials and methods. During the past 10 years (2007-2017) in the Department of Burns and Plastic Surgery, there were treated 5715 children with burns (0-3 years 50.6%, 4-7 years 24.4%, 8-18 years 25%). Superficial burns -2844 (55.2%). Deep burns – 2871 (44.8%). Patients hospitalized with burn shock (S>15% TBSA) – 645 children.

Surgical treatment (excisional debridement of the burn, autodermoplasty, limb amputation) – 2820 children with thermal lesions.

Results. Respecting certain phases in the system, when providing medical assistance to burned children, allowed avoiding any severe complications, decreased the death rate and post burn disabilities.

Evacuation of burned children with thermal lesions in critical conditions is done in the first 2-3 hours after the trauma, and implies anti-shock treatment at the trauma site and during transportation. Information about the burned children is received through Sanitary Aviation non-stop. It offers the possibility of movement of the consultant doctor to the trauma site. The accumulated experience indicates, that the beginning of intensive care at an early stage (adequate thermal shock therapy, septic complications prophylaxis, early surgical reconstruction of affected skin) allows the obtaining of positive results in this surgical pathology.

Mortality review in ten years (2007-2017) (0.15; 0.5; 0; 0.28; 0; 0.24; 0.12; 0.11; 0; 0;) shows the dynamics and the tendencies of the treatment process in Pediatric Burns Department.

Conclusions. Moderately positive results in the burned children treatment depends on rational tactics:

Fast evacuation of the child with severe thermal lesions in to the specialized unit (Department of Burns) during the first few hours of the acquired injury;

- Anti-shock treatment during transportation;
- Guarantee of primary conditions for effective treatment in the Burns Department;
- 2 intensive care wards;
- Up-to-day surgical devices (necrotomes, electric dermatomes, perforators, electro coagulators);
- Non-stop access to blood, blood components, skin substitutes;
- The most efficient burns "treatment method" is prophylaxis;
- Statistics shows that due to prophylaxis the incidence of burns in the Republic of Moldova decreased up to 20 %.

DIRECT TISSUE EXPANSION IN SURGICAL TREATMENT OF BURNS AND BURN AFTER MATH FOR CHILDREN

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Introduction. Surgical treatment, of burns and deformed scars on children, is required even after many years after the trauma, often during the whole growth period of the child. Reconstruction of the profound tissue defects (disclosure of the cranial bones, joints, functional structures of the extremities) presents serious difficulties.

The reconstruction method through direct tissue expansion of the intact tissues, bordering with the defected one, allowed coverage with functional tissue, which proved its efficiency in treatment of burns and their aftermath.

Materials and methods. During the past 15 years (2002-2017) in the Department of Burns and Plastic surgery, there were treated 58 patients (7-18 years old) with the method of direct tissue expansion:

1. Profound thermal burns – 8
2. Electric burns – 10
3. Post burn alopecia – 32
4. Scar deformations of head and neck - 6
5. Scar deformations of the extremities – 2

Results. With 41 patients were obtained good results; with 14 – satisfactory. Complications in post-surgical period developed with 3 patients (in 2 cases – marginal necrosis of the flap, in 1 – infection of the cavity and as a result - necessity to remove the expander). The developed complications were resolved with the help of other reconstructive methods.

Conclusions. In the reconstruction surgery of burns and their consequences, direct tissue expansion has a particular place with certain indications:

1. The need of donor tissue of certain quality (color, elasticity, hairy tissue).
2. Intact plastic material (skin, fatty tissue, fascia).
3. Aesthetic efficiency of the plastic material.

TREATMET OF INFANTILE HEMANGIOMAS

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During last year in the Regional pediatric clinical hospital of Kharkov 53 children with volume, noninvoluting and complicated hemangiomas were treated. There were 39 children under 1 year old, 10 children from 1 to 3 years old and 4 children over 3 years old. Before treatment, patients were scheduled lab tests, USG of internal organs and brain, CT, MRI, and histological analysis of biopsy materials. Indications to different methods of treatment were determined by type, localization, size, intensity of growth and stage of tumor's development. Surgery was performed on 19 children. Conservative treatment was assigned for 34 children. Systemic therapy with propranolol was conducted for 19 children. In 15 cases we used permanent compressive therapy with additional applications of timolol 0,5 % three times a day. Children under 1 year old with fast growing hemangiomas were administered with propranolol in therapeutic dose of 2 mg/kg a day. Complete cure was observed in 12 cases. In 7 cases stabilization of growth was achieved but there remained significant residual changes such as excessive tissues which required surgical interventions. Surgery was performed on 19 patients; for 3 of them cytoreductive surgery. During the interventions we used high-frequency electric coagulator in "overlap" regime. After cytoreductive surgery volume of tumor decreased and partial devascularization led to discontinuance of growth. Plastic material for further reconstructive surgery was preserved. Basic criteria for prescribing therapy which combined compression and local timolol 0,5% were moderate growth intensity, with localization on the extremities, head, chest where it is possible to perform effective compression. Within one month significant regression was observed. It was manifested as decrease of volume and area of tumor, paleness and absence of volume restoration after removal of compression.

Usage of high-frequency electric coagulator, significantly improves conditions and results of surgical treatment.

Combining local treatment of β -adrenoblockers and permanent compression is very effective in treatment of hemangiomas in children.

COMPARATIVE ASSESSMENT OF ENDOVIDEOSURGICAL ACCESSES IN TREATMENT OF CONGENITAL HYDRONEPHROSIS IN CHILDREN

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Purpose. Recently published data has confirmed that the most widespread methods of treatment primary hydronephrosis in children are endovideosurgical. But there are no significant objective criteria for choosing the optimal access: transperitoneal or retroperitoneal. We have evaluated an outcome of laparoscopic treatment hydronephrosis utilizing different access.

Material and methods. Since 2008 to 2017 331 children (95 girls, 236 boys) with congenital hydronephrosis were underwent 342 endovideoscopic operations. Mean age 3.56 years (range 3m – 18 years). In 305 children was used transperitoneal access (TPA) and in 26 – retroperitoneal (RPA). We used the technique of dismembered pyeloplasty by Anderson-Hynes. Drainage was performed by an antegrade or retrograde JJ stent. Follow-up ultrasound was performed on 2 and 5 days after the operation. The ureteral stent was removed at 6-8 weeks after the operation. The continuance of hospitalization was 5-7 day.

Results. 296 patients : 297 with TPA (mean age 4,8 years) and 25 with RPA (mean age 1,9 years) undergoing pyeloplasty were examined after 1-3-6-12 months. The duration of the operation with TPA was 80 ± 40 minutes, and with RPA - 110 ± 40 minutes ($p < 0,05$). No UTI were seen. There was no difference in renal pelvis diameter (% improvement) between the two groups (TPA- 66% and 62% in RPA; $p=0,6$). 3 patients (1,1%) with TPA required re-intervention (2 ps -stent replacement and 1p - re-operation), no patients with RPA required re-operation. **Conclusion.** Despite of the good clinical outcome of treatment with difference accesses and statistical significance the results, the absence peritoneal injury and probability urinary extravasation make RPA in congenital hydronephrosis optimal in young children.

OROFACIAL CLEFTS IN CHILDREN - CLINICAL AND TERAPEUTICAL ASPECTS

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Orofacial clefts are the most encountered facial malformation and they represent a congenital malformation with a particular impact, not only from the aesthetic point of view, but also from the functional point of view, with profound repercussions on the child's psychosomatic development.

The therapeutic approach to these congenital defects of the cranio-facial structures requires a close collaboration between the pediatric surgeon, the orthodontist, the logoped, and it is often necessary even a psychological approach to these cases.

The authors are presenting the experience of the Pediatric Surgery Clinic of the Craiova Emergency County Hospital in the surgical approach of the cases of orofacial clefts in the last ten years.