DIFFERENTIAL APPROACH TO SURGICAL CORRECTION OF PATHOLOGICAL HIP JOINTS IN CHILDREN WITH JCP
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Examples of the treatment of pathological hip joints in children with juvenile cerebral palsy (JCP) are presented with reference to severity of locomotor insufficiency, neurologic deficiency and hip pathology. Methods for surgical treatment of various locomotor problems are described.
Key words: juvenile cerebral palsy, locomotor insufficiency, hip joint, surgical treatment.

ESTIMATION OF FORMATION OF THE ACETABULUM IN CHILDREN WITH TORSION HIP SUBLUXATION
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Aim. To develop criteria for malformation of acetabular fossa in children with dysplastic torsional subluxation of the hip using computed tomography.
Patients and methods: The study included 67 patients aged 4-71 yr (IV, V, VI age periods) examined by hip CT. Main group included those with dysplastic torsional subluxation of the hip (antetorsion over 40-45°), the control one was comprised of the patients without hip pathology. Parameters for comprehensive assessment of acetabular fossa formation included frontal inclination angle and sphericity angle, relationship between the fossa and the proximal surface of the femur – the extent of bone coverage of the head in the axial plane and horizontal acetabular angle in the axial plane.
Results. Comparison of the above parameters demonstrated the difference between fossa formation and spatial relationships of hip and pelvic components. Correlation between sphericity angle and frontal inclination angle in the axial plane was established.
Conclusion. Analysis of CT data revealed diagnostically significant criteria for acetabular fossa formation and thereby evaluate its changes in children with dysplastic torsional subluxation of the hip
Key words: computed tomography, dysplastic torsional subluxation of the hip.

DIAGNOSTICS AND TREATMENT OF OSTEOID-OSTEOMA IN CHILDREN
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The data on diagnostics and treatment of osteoid-osteoma of different localization in 59 children and adolescents are summarized. Clinical and radiological diagnostic criteria are described. A complex of radiological methods based on differential indications for use (roentgenography, osteoscintigraphy, computed tomography) is proposed in combination with the algorithm of examination of the patients with suspected osteoid-osteoma allowing to quickly detect the tumorigenic process. Critical aspects of surgical intervention are specified. Macroscopic changes and microscopic features of the tumour along with dynamics of bone tissue regeneration in the surgical area are described in detail.
Key words: osteoid-osteoma, diagnostic algorithm, differential diagnostics, treatment.

TENDON-MUSCLE TRANSPOSITION IN CHILDREN WITH LONG-STANDING FIBULAR NERVE LESIONS
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This paper deals with the use of tendon-muscle transposition in children with long-standing fibular nerve lesions. The surgical technique is described along with evaluation of immediate and long-term results of the treatment.
Key words: fibular nerve, tendon-muscle transposition, neurogenic foot deformation.
THE ROLE OF CLINICAL AND INSTRUMENTAL METHODS IN DIAGNOSTICS OF OVERACTIVE BLADDER IN CHILDREN

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The study included children aged 4-7 (n=29), 8-11 (n=43), and 12-17 (n=7) years with overactive bladder. Analysis of urinary diaries revealed a decrease of the mean total bladder volume to 49.9 ± 14.5, 73.1 ± 3.5, and 78.9 ± 1.2 ml respectively. The volume profile is markedly shifted to the left and has a specific configuration in the absence of uroflowmetric abnormalities in 86% of the patients. An additional urodynamic study involved 24 children. No significant correlation was documented between urinary diary data and results of retrograde cystometry (correlation coefficients 0.0038-0.0108). Mean bladder volume in 75% of the cases was greater than upon the first urinary urgency but smaller than upon the second urge. The maximum effective bladder volume in 92% of the cases was equal to or greater than the volume at the second urinary urgency. Coefficients of correlation between ladder volume and intrabladder pressure did not exceed 0.078—0.256. It is concluded that an urinary diary can be used to calculate the bladder adaptive capability in children without conducting an urodynamic study.

Keywords: hyperactive bladder; urodynamical research; diary of urinations; children.

DIAGNOSTICS AND SURGICAL TREATMENT OF REVERSED INTESTINAL ROTATION IN CHILDREN

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Reversed intestinal rotation is a rare pathology described in a few publications. It more frequently occurs in adults than in children. Intestinal malrotation accidentally encountered during laparoscopy for acute abdominal surgical pathology is difficult to diagnose even by an experienced surgeon. 2.9% of newborn and breast-fed babies with intestinal malrotation are supposed to suffer reversed rotation. This paper was designed to summarize our own clinical observations and literature data on various aspects of diagnostics and surgical treatment of reversed intestinal rotation. The study included 107 in children with malrotation including 3 with reversed intestinal rotation. All of them had the chronic recurrent disease with partial intestinal obstruction. Clinical, laboratory and radiodiagnostic (ultrasound, CX-ray, CT) methods were used. The surgical strategy was chosen based on the results of pre- and intraoperative observations. Correction was performed by separating anomalous peritoneal cords, eliminating the causes of recurrent intestinal obstruction, downward bowel displacement and exteriorization of sigmoid colon from under superior mesenteric artery. In no case it was necessary to cut the colon or re-anastomose it in front of the artery. The necessity of partial resection of an excessively long colonic segment remains a matter of debate.

Keywords: malrotation, diagnostics, treatment, children.

PHAGOCYTIC INDICES IN DISSEMINATED POST-SPLENECTOMY SPLENOSIS IN EXPERIMENT

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An experimental model of evolution of disseminated post-splenectomy splenosis (DPS) was developed to estimate its influence of phagocytosis of peripheral blood leukocytes. The study included 5 groups of animals: controls, asplenic animals on days 30 and 100 after surgery, model animals on days 30 and 100 after surgery. The data obtained suggest the presence of splenosis-affected areas maintaining phagocytic indices on day 30 after surgery in contrast to the early postoperative period when phagocytosis is markedly suppressed.

Keywords: splenic injury, disseminated post-splenectomy splenosis, splenectomy, phagocytic indices.

ASSESSMENT OF ADEQUACY PARAMETERS OF THE INFLAMMATORY RESPONSE IN CHILDREN WITH SEVERE FORMS OF SUPPURATIVE SURGICAL INFECTION

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Correct evaluation of an intense and acute inflammatory process is essential for the successful treatment of children with severe surgical suppurative infection and adequate correction of concomitant changes. We studied the relationship between activity of the inflammatory process in children with acute hematogenous osteomyelitis, acute pyodestructive pneumonia and selected clinical and laboratory characteristics.
Parameters of the adequate inflammatory response (PAIR) corresponded to the optimal variant of the inflammatory process, i.e. normoergic inflammatory reaction. Comparison of these data with PAIR values allow for quantitative assessment of the inflammatory reaction, its adequate medicamental correction (activation of hypoergic reaction and suppression of hyperergic one), and substantiation of surgical strategy. **Key words:** suppurative surgical infection, children, inflammatory reaction, pneumonia, osteomyelitis.

**DH-1403-039**

**A PROGRAM FOR THE CONSERVATIVE TREATMENT OF HEMANGIOMAS IN CHILDREN**
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A total of 31 hemangiomas were treated during 2012-2013. Criteria for inclusion in the treatment program and its peculiarities are described including the original method for the choice of indications for conservative treatment. In all cases, hemangiomas and concomitant clinical symptoms were effectively eliminated. It is concluded that treatment of hemangiomas must be conducted on an individual basis. The correct choice of indications for the treatment allows to choose the proper time of its onset prior to the active growth of hemangiomas. Propranolol therapy and/or laser-assisted removal of the tumors are considered to be the most effective, safe, and acceptable methods for the management of patients with hemangiomas. **Key words:** children, hemangioma, treatment, propranolol, laser.

**DH-1403-041**

**SPECIFIC TOPOGRAPHIC ANATOMICAL FEATURES OF PARATHYROID GLANDS**
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Total thyroidectomy is the optimal method for the treatment of thyroid cancer in children. Its specific complications include accidental removal of parathyroid glands. Knowledge of their embryological development is a key factor ensuring correct surgical intervention. The aim of this study was to elucidate topographical anatomical features of parathyroid glands and prepare the theoretical basis for 3D modelling of their localization in the anterior cervical region. The study was conducted on 217 corpses of the subjects who died from diseases unrelated to neck pathology. The shape and localization of the glands were registered. Parathyroid glands in zones 2-3, 3, and 3-4 are known to develop from the 4th branchial arch. Glands IV are set equally apart from the midline to which their axis is minimally tilted in the frontal plane. The distance between their ventral surface and the dorsal surface of thyroid gland is unrelated to the zone where parathyroid glands are localized; it does not exceed 0.1 cm. Glands in zones 1, 1-2, 2, 4-5, and 5 are referred to as glands II. The lower their localization the closer (ventrally) they are to the midline and the smaller is angle η. Parathyroid glands localized at the level of the lower third of the thyroid gland (zone 4) may be of different origin. Differentiation between embryological origin of parathyroid glands in zone 4 is possible on an individual basis. **Key words:** thyroid gland, parathyroid glands, thyroid cancer, topographic anatomy, embryological development.

**DH-1403-044**

**REPEATED LAPAROSCOPIC FUNDOPLICATIONS IN THE TREATMENT OF GASTROESOPHAGEAL REFLUX IN CHILDREN**
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The main problem in the surgical treatment of gastroesophageal reflux in children is relapses after gastrofundoplication. Their diagnostics frequently reveals the discrepancy between clinical symptoms and results of instrumental studies. Asymptomatic disease takes place in the presence of the obviously non-functional cuff even though certain patients have the same complaints as before treatment despite the normally functioning fundoplication cuff. The commonest cause of relapses is splitting of the cuff and its displacement into mediastinum. The validated risk factors include the cuff placement technique and suturing diaphragmal crurs. Some currently available fundoplication techniques allow the frequency of relapses following the primary surgical treatment of children and adolescents to be decreased. **Key words:** gastroesophageal reflux disease, Nissen laparoscopic fundoplication, hiatus hernia, fundoplication cuff, relapse.
HISTORICAL ASPECTS OF MODERN METHODS FOR THE SURGICAL TREATMENT OF ABDOMINAL FORMS OF CRYPTORCHISM

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Surgical treatment of abdominal forms of cryptorchism is a matter of ardent discussion aimed to specify optimal methods for orchiopexy. The success of surgery depends on the position and size of the testicles to be relocated. Alternative methods are significantly different in the possibility to preserve testicular vessels and overcome difficulties arising from the impossibility in certain cases to compensate for their insufficient length and to ensure adequate position of the testicles in the scrotum. This review summarizes experience with the treatment of abdominal forms of cryptorchism gained in the past decades. Analysis of advantages of various surgical technologies allows to specify further directions of development of modern algorithms in surgery of abdominal cryptorchism.

Keywords: cryptorchism, abdominal forms, surgical treatment.

A CASE OF PANCREATIC CYST IN A 12-YEAR OLD CHILD

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A case of pancreatic cyst in a 12-year old child is reported that for the first time manifested itself as painful abdominal syndrome. The potential of ultrasound study, CT, and MRT in the MRCPG regime for diagnostics of this pathology is illustrated. The method of its endoscopic treatment is described with reference to indications and results of relevant research.

Keywords: cyst, pancreas, laparoscopy children.