SURGYCAL TREATMENT OF CHILDREN WITH GASTROESOPHAGEAL REFLUX: 15 YEARS EXPERIENCE

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Introdactions. 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 gernia - 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 synromes.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 opearations were performed (thoracoscopic closure of ductus arteriosus, lung resection, etc.). 15 patients were laparoscopicaly 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 – trough 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 gastroesophagoanasthomosis, aspiration pneumonia, hiatal hernia.

Discussion. Stomachesophagoplasty 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.