The H-type anorectal malformations in girls

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ABSTRACT

The anorectal malformations are presented by wide spectrum of nosological forms. Many aspects of the surgical treatment of the rectogenital fistulas in normally formed anus remain to be debatable because they are described insufficiency in the literature.

Material and methods: During the period from 2004 to 2015 in the clinic there were treated 210 girls of the age from one day to 15 years with ARM, of them 17 (8.1%) girls were with H-type. The patients were examined and underwent the operative treatment by the developed technique. Results: In 4 (23.5%) patients localization of the malformation was related to the anoventibular type, in 8(47.1%) – to rectovestibular – intermediate form, in 5 (29.4%) –high form of which 2 had rectovaginal fistula. Invaginational extirpation by A.I.Lyonushkin was performed in 3 (17,6%) patients, fistula liquidation by anterior-sagittal approach – 5 (29,4%). In 8(47,1%) patients including repeated surgeries in the recurrences were carried out by the technique developed in the clinic. Conclusion: In intermediate forms and lower localizations of the fistulas there were indicated one-step correction, comparatively better results were obtained in liquidation of the fistula with pulling-through of the anterior wall of the rectum. In high (rectovaginal) fistulas this type of operation should be performed after application of the preventive double sigmostoma.

Key words: Anorectal malformations, H-fistulas, Girls, Diagnosis, Treatment

INTRODUCTION

Anorectal malformations (PRA) are common congenital abnormalities are a big part Proctologic childhood diseases. The frequency of the ATM in recent years does not tend to decrease and, according to different authors, ranges from 1 in 2000-9000. More frequent fistulous form - up to 90%. The frequency of certain clinical entities are also different. Boys more frequently rectourethral atresia with fistula, the girls - with rectovestibular fistula. Numerous works are mainly devoted to aspects of diagnosis and surgical treatment of atresia with rectovestibular fistulas in girls. These rare forms a fistula with normal anus formed remain poorly understood. H-type fistula at the ATM first described Bryndorf and Medcen in 1960 (op. Jain P. et al.). The frequency of this type of structure in the anorectal abnormalities, based on different authors, ranged from 2.4 to 3.2%. According to Le LI et al. (2010), generalized the clinical material one clinic, from 1274 patients with ATM 182 (14,29%) consisted of patients with H-type fistula. Pathology is observed in boys, but less frequently than in girls, is more common among the inhabitants of Asia than in North America and European countries. The girls mostly fistula opens into the vestibule, rarely - in the labia or the vagina. Therefore, distinguished by low and high localization forms with different laying fistulous, signified by some authors as N -type or other names. On the pathogenesis of H-type fistula with normal anus formed a final opinion no. It is not excluded innate and acquired genesis of the disease. Some authors occurrence of fistula associated with congenital causes. Among them are supporters of this pathology as an option to double tubular colon. However, histological studies do not always prove faithful to this judgment. According to other researchers, this type of fistulas occur as a result of myocardial inflammation.

The choice of surgery for fistula with normal anus formed is not defined. In the publications of different authors stated that the intervention was completed by one of the methods included in the spectrum of operations at the International Congress in Kriekenbeke. In most publications, the girls are given preference front anorektoplastike or transanal access. In the works of individual authors surgeries were performed without preventive colostomy. At low forms most of the authors consider it expedient to surgery without imposing stoma, and in cases of rectovaginal fistula - required the formation of colonic fistula. The complication rate - from 5 to 30%, among them the most frequently observed fistula recurrence. In
some observations noted independent recurrent fistula closure. But often held repeated surgical interventions. The purpose of research - to analyze the clinical and anatomical features, diagnosis and results of surgical correction of the H-type fistula with normal anus formed for girls based on the clinic.

MATERIALS AND METHODS

The clinical bases of the Department of Hospital Pediatric Surgery with the course of oncology TashPMI were in 2004-2015, at the examination and treatment of 210 girls aged from 1 day to 15 years from the ATM; of which 17 (8.1%) consisted of patients with H-type. Distribution of patients according to nosological forms and evaluation of surgical correction of the results carried out in accordance with the International Classification adopted in Krikenbeke, in 2005. Patients underwent a comprehensive clinical studies to evaluate the anatomical and functional condition of the perineum and sphincter apparatus of the rectum and beam diagnostic techniques: ultrasound of the internal organs in order to identify co-morbidities; contrast X-ray examination of the rectum; MSCT spine.

RESULTS AND DISCUSSION

Analysis of the material showed that the ATM in girls - is a variety of abnormalities, characterized by atresia, contraction or expansion of different length at the level of the distal rectum with fistula sexual or perineum, or presented in the form of bezvischevyh forms or cloaca with large anatomical variations. 4 patients had a combination of various types of anorectal anomaly: in 3 - cloaca with rectal pouch, from one H-type fistula with stenosis of the anus. The age of patients with H-type fistula during surgery corresponded to 3 months. up to 1 year in 7 (41.1%); from 1 year to 3 years in 2 (11.8%); 3 to 6 years, 7 (35.3%); from 7 to 15 in 2 (11.8%). The reason for the parents of sick children to be served vulvovaginita progression of events and the selection of liquid feces and gas from the vestibule. The amount of discharge of patients was different depending on the diameter and location of the fistulous opening in the lumen of the colon. In broad fistulas constantly observed a noticeable amount of discharge. In a narrow fistula during discharge volume increased during the act of defecation.

The history of all patients observed the phenomenon of urinary tract infection and external genital organs as vulvovaginita. Two girls suffered perianal abscess at the age of 1 and 2 months. On a residence conducted conservative treatment. In 7 (43.75%) patients had intermittent diarrhea with mucus. In 1 (6.25%) was observed delay of a chair, in the course of the survey set short anorectal stenosis.

In most cases, the clinical diagnosis was not easy. The main profit for diagnosis inspection of the perineum, external genitalia, and rectum. In 16 (94.1%) children anus was formed normally, only 1 (5.9%) marked by the phenomenon of stenosis. In 13 (76.5%) patients with the typical localization of the anus, in 3 (17.6%) there was a forward displacement of the anus: in 2 small (index anal position - 0.38), and 1 - a marked (index anal position - 22 ). In 11 (64.7%) patients with fistulous diameter more than 5mm was clearly visible place opening of the fistula in the vestibule. In 3 (17.6%) patients during the fistula with a narrow and 2 (11.8%) of rectovaginal fistula with pinpoint localization fistula bellied managed using a probe inserted through the mouth of the fistula from the vestibule or in the lumen of the rectum. Thus it is possible to reliably determine the level rectogenitalnogo reports and the final form of the anatomical localization of H-type fistula by A. Holschneider. and J.Hutson, 2006 (Fig. 1).
the fistula in relation to the midline of the perineum - closer to small labia right or left. Indirect signs confirming the occurrence of the process as a complication of myocardial purulent inflammation in the perineum are revealed deformation of the labia and sclerotic changes in the mucous membrane in the vestibule and the adjoining areas of the perineum. In resected fistulous histological study, the majority of surveyed identified the lining formed by squamous epithelium, predominantly circular arrangement of muscle with the presence of nerve plexus, which corresponds to the intestinal structure and indicates the innate origin.

It is necessary to conduct special research methods to identify associated anomalies of other organs and systems. Ultrasound and CT scan - a study of the spine should be performed in all cases to clarify the often combined spinal abnormalities, urinary tract and cardiovascular system. Associated malformations were observed in 4 patients, two of them - multiple. One - sided uretrogidronefroz, malformation of the spine; in the second ageneses coccyx and dolichosigma.

All patients with H-type rektogenital anastomosis performed surgical correction. 13 (82.4%) children of primary surgery performed in our clinic. 3 (17.6%) were relapsed after surgery invaginative extirpation fistula in other hospitals. In 15 (88.2%) patients initiated radical correction without imposing stoma. In 2 (11.8%) - after the imposition of double-barreled sigmastomy: one child of H-type fistula due to severe somatic background, due to anemia; the second child with a rectovaginal fistula. Invaginative extirpation by AI Lényushkin made 3 (17.6%) patients, the elimination of fistula anterior sagittal access - 5 (29.4%). 9 (53%) patients were reoperations for recurrent conducted by adopting the procedure liquidation of the fistula with bringing down the front wall of the rectum we developed ways to "Surgical correction at intermediate and low sinus forms of anorrectal abnormalities in children" (Patent for invention of the Republic of Uzbekistan UZ IAP 04995). Adapted from the method carried out as follows. Fringing cut mobilized fistula hole, slit continues distally in front of the perineum in the middle of the seam to the upper contour of the anus. Next we continue the incision in a crescent along the perimeter of the anus, covering 2/3 of its circumference, leaving intact the posterior pole. Dissection of the perineum muscles, mobilization of fistula and rectum from the surrounding tissue in a distal direction along the side surface of the wire to the mucocutaneous junction. Implemented by the department of the rectum from the posterior vaginal wall and levatornyh muscles in the proximal direction. The length of the mobilization, and relegated resection depends on the localization of the fistula in the rectum. Mobilization of the proximal part of the rectum is achieved around the entire circumference of its relegation to 2-2.5 cm. Subsequently, as you move the front of its walls and floor fixation with the restoration of the integrity of the muscle complex at a distance of 0.7 to 1 cm is possible to free relegated front body wall outside the ring above the anal rectal fistula hole. Resection relegated anterior rectal wall, bearing the fistula, fistula is conducted from the top in an oblique direction to the corners of the skin incision wounds to normal after excision of the rectum wall stood at the semilunar skin incision, and fistula - within the excision zone. Rebounding front portion of the external sphincter. By the edges of the crotch crescent wounds on interrupted sutures stitched circle Resected front wall of the rectum. Perineal wound sutured in layers.

When using this method, the rear portion of the sphincter apparatus remains intact. Achieved access to fistula course, relegated batch resection of the anterior wall of the rectum completely eliminated the fistula. The formation of a new mucocutaneous transition carried out a full portion of the rectum. The mobilization of the entire circumference of the rectum in the proximal segment and only its front wall in the distal ensures sufficient for bringing down the length of the intestine. Layerwise restore anatomical structures crotch eliminates the formation of strain and an acute angle in the rectum, provides a distance between the vagina and the rectum is closer to physiological. Complications associated with the conduct of this operation, we have not seen.

The high efficiency of this type of operation when H-type anorectal abnormalities in girls confirmed in publications by other authors. Of the 14 initially operated in our clinic patients, 11 (78.6%) postoperative period was uneventful. In 3 (21.4%) patients had complications. Two were from rectovestibular fistula, one - with a rectovaginal fistula in the presence of rectal fistula recurrence of stenosis occurred. These patients conducted invaginative extirpation fistula (1) and the front anorectoplastik (2).

The results of treatment were studied in 13 (76.5%) of 17 children operated on in a period of 1 year to 5 years after surgery. Treatment efficacy was assessed by objective data on the basis of clinical examination, the appearance of the perineum and performance of functional studies closing apparatus of the rectum. A good result was observed in 10 (77%) - the normal form of the perineum, the absence of the act of defecation disorders, functional studies Parameters closing apparatus of the rectum within the normal or moderately reduced. A satisfactory result in 2 (15.4%) - the normal form of the perineum in the presence of moderate defecation disorders (constipation, amenable to medical and dietary correction or periodic kalomazanie). Functional studies Indicators sphincter apparatus of the rectum are reduced. Unsatisfactory results in 1 (7.6%) - deformation of the perineum, the signs of stenosis or insufficiency of the anal sphincter with distinct manifestations of disorders of defecation (persistent constipation or kalomazanie). Indicators of functional studies of the sphincter apparatus of the rectum sharply reduced.

CONCLUSIONS

1. Our observations correlate with the literature on the rarity of the H-type fistula among ATM (8.1%) and the probability of having rektogenital fistula with congenital or acquired origin different localization levels. The presence of an inflammatory component increases the risk of fistula.
2. Diagnosis of low variants of H-type fistula publicly available clinical methods, however, to identify associated
anomalies and assessment of the obturator rectum apparatus requires a set of relevant studies.
3. At higher (rectovaginal) fistulas and unfavorable somatic background Child radical surgery feasible after imposing a preventive double sigmostoma. At the intermediate and low localization of the fistula should be one-step correction during treatment of urogenital inflammation and intestinal dysbiosis.
4. The choice of operation depends on the height of fistula localization. At intermediate and high localization, recurrent fistula preferred intervention, involving the elimination of fistula with bringing down the front wall of the rectum.

REFERENCES