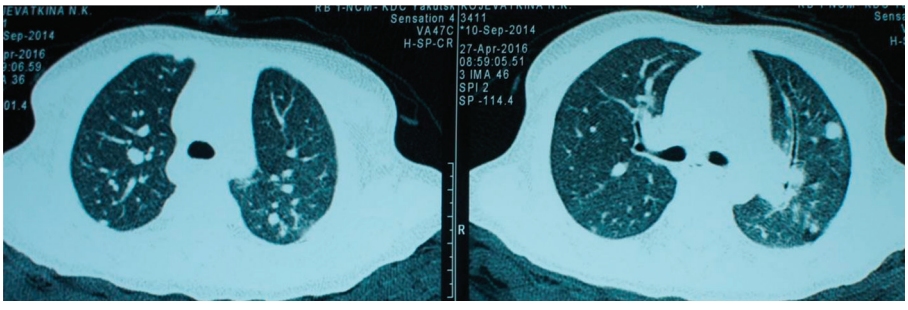

Fig.3. Remote metastases to the lungs in a child of 1.5 years

of recurrence and metastasis of the tumor in the postoperative period, despite the establishment of a benign variant of tumor, the patients after the operation must necessarily be observed in a pediatric oncologist. In our study, all children in the postoperative period were under the supervision of a pediatric surgeon, AFP screening, examination of a surgeon, ultrasound of the perineum and retroperitoneal space were carried out once every 6 months, and in the first 6 months after the operation - MRI under a general sedation inpatiently.

CONCLUSIONS

1. Teratomas of the sacro-coccygeal area are in most cases diagnosed antenatally (80% according to the study).

2. The level of AFP in the neonatal period is not a diagnostic criterion of malignancy, but it can serve as a screening method in the postoperative period.

3. In the postoperative period, patients should be observed in a pediatric oncologist at any histological conclusion, as the probability of malignancy and recurrence of the tumor is high thereafter.

4. In 30% of cases in our study, the teratoma of the sacro-coccygeal area gave malignancy.

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OPTIMIZATION OF SURGICAL TREATMENT OF ACUTE ADHESIVE INTESTINAL OBSTRUCTION IN CHILDREN

ABSTRACT

The article describes the experience of treatment of acute adhesive intestinal obstruction. The authors analyzed the literature data of etiopathogenesis of the disease, changed terms of radiological investigations, diagnostic laparoscopy is used for diagnosis and assessment of severity of adhesions in children. The effectiveness of the using of laparoscopy in urgent inflammatory operations in children in reducing the frequency of adhesive intestinal obstruction is proved; diagrams of prevention of adhesion obstruction of the abdomen are given. As a result of activities, the frequency of intra-abdominal complications reduced to three times.

Keywords: adhesive intestinal obstruction, children, laparoscopy.

RELEVANCE

At present, in the modern emergency abdominal surgery of children, the problem of adhesion process has not lost its relevance. Despite of the intensive development of minimally invasive technologies in abdominal surgery, when with the help of high-tech equipment it is possible to reduce significantly the traumatic nature of surgical interventions, the number of immediate and long-term complications caused by the adhesive process does not decrease [2]. About 1% of all hospital admissions to surgical hospitals and 3% of laparotomy are performed about adhesive disease, and in 60-90% of cases these processes are the cause of the acute intestinal obstruction [4].

According to the literature, 55-70% [1, 2, 3, 4, 5, 6] of patients after abdominal surgery have the adhesion process in abdominal cavity that can lead to such a severe complication as acute adhesive intestinal obstruction (AAIO) [1]. Postoperative lethality in unfavorable course of AAIO is 16-25% [4].

At present, the issue of timely diagnosis of acute adhesive process remains topical, despite of the existing recommendations for the diagnosis of adhesive intestinal obstruction. The intraoperative pattern is presented by

irreversible ischemic impairment of blood supply. The traditional radiological method widely used so far for this purpose, the passage of barium, the recommended multiplicity of radiological investigations are not sufficient for the timely diagnosis of acute conditions. In this regard, the change in the interpretation and multiplicity of the investigations and the use of highly informative diagnostic methods for AAIO (laparoscopy, ultrasound) are topical.

Postoperative adhesions disrupt the quality of life of young people all over the world, leading to repeated surgical operations, chronic pelvic pain and female infertility [3, 6]. The main cause of adhesions is the operations performed on the abdominal organs for inflammation, primarily for acute appendicitis and its complications.

Therefore, the search for reliable methods of early diagnosis and means of preventing the development of AAIO remains an actual problem in emergency abdominal surgery.

The aim of the research was to improve the results of surgical treatment of children with acute adhesive intestinal obstruction.

MATERIALS AND METHODS

In our research we examined the status of a patient in admission, the analysis of radiological investigations, the intraoperative pattern, the choice of surgical technique and the presence of postoperative complications.

Since October, 2005 laparoscopic appendectomy has been the main method in our clinic in emergency surgery. In 2006, the extent of laparoscopic operations in urgent states was 15%, in 2014 laparoscopy was performed in 94.5% of cases with all urgent conditions. Most of emergency operations are carried out for acute appendicitis and its complications - 2388 appendectomies.

The analysis of patients operated for AAIO from 2006 to 2016 in the Department of Purulent surgery was carried out. In most cases (215), these were the patients after the surgery for diffuse appendicular peritonitis. The analysis does not include children who have been operated routinely. The age of the patients were from 4 to 14 years. The frequency of adhesive complications after laparoscopic treatment of appendicular peritonitis was 2 cases (0.93%). After laparotomy operations (some children were operated in central district hospitals), the incidence of AAIO was 8 cases (3.72%). All intra-abdominal adhesions developed when performing urgent surgical interventions, when purulent-inflammatory process was localized in the abdominal cavity.

The extent and duration of conservative therapy, the terms of differential diagnostic activities in cases of suspected AAIO, depended on the stage and phase of disease.

For late adhesive intestinal obstruction (LAIO), when the main pathological mechanism is strangulation, patients are operated immediately upon admission to the hospital after short-term postoperative preparation. These measures in the acute phase of adhesive obstruction were no more than 3 hours. In 2 cases, when strangulation revealed an unavoidable change in intestine, the conversion and resection of the necrotic area was performed.

The complex of conservative therapy for early adhesive intestinal obstruction (EAIO) may be more prolonged. Diagnostic laparoscopy in almost all cases allowed to establish the correct diagnosis and it was performed in 4 cases.

The intraoperative pattern for acute adhesive intestinal obstruction depends on the degree of adhesion process and the method of the earlier performed operation. In 2 cases, the children were previously operated for diffuse peritonitis with laparostomy. When diagnostic laparoscopy was performed, unidentified adhesions in the laparotomic incision area were detected in these patients, it was possible to restore the intestinal permeability by laparoscopic viscerolysis with the help of electrosurgical equipment «Harmonic». In 4 patients operated early in CDH for diffuse peritonitis with laparotomic access without laparostomy, the attempt of laparoscopic viscerolysis was unsuccessful because of the severity of the paresis and adhesion process in the intestine.

In the case of massive, adhesive processes, a laparotomy was performed with software sanation of the abdominal cavity and using a gentle “manual decompression” technique of the contents of the small intestine into a thick one. The intestinal loops were laid using the method of intestinoplication by Noble, without the use of adhesive substances (1 case).

RESULTS AND DISCUSSION

The traditional radiopaque method for diagnosis of acute adhesive intestinal obstruction is informative for the diagnosis of EAIO, it takes a long time to confirm or exclude this disease. For LAIO, the presence of clinical symptoms of strangulation, radiological investigations should be performed every 1-2 hours.

The use of laparoscopy in the most frequent urgent operations in children - with acute appendicitis, purulent peritonitis and intussusception, can significantly reduce the percentage of postoperative adhesions.

Diagnostic laparoscopy in the AAIO allows to confirm or exclude the diagnosis and estimate the prevalence of adhesions and choose the optimal surgical treatment tactics.

In laparotomy operations, the method of choosing to perform decompression of the intestine is the method of sparing «decanting» of chyme into the large intestine, which leads to an earlier recovery of intestinal peristalsis, reduction in postoperative complications. In addition, we perform a blockade of the mesentery of the small intestine with a 0.25% solution of novocaine in a volume ranging from 20-30 ml to 60-80 ml, depending on the age of a child.

In a part of children with a tendency to form keloid scars prognostically we can expect the development of postoperative adhesions complications. To this group of patients we consider to prescribe a preventive course of treatment of such complications with drugs that reduce the synthesis of collagen. We conducted a course of therapy with Cuprenyl in capsules from 7th day after laparoscopic operation and from 10th day after traditional operation (after removal of the joints) once a day for 14-21 days in the following dosage: up to 6 years - 0.7 mg (1/2 capsule), 6-14 years - 0.15 mg (1 capsule), over 14 years - 0.3 mg (2 capsules) and a course of electrophoresis with potassium iodide lasting 10 sessions.

Macrophages, plasma proteins with a high concentration of fibrinogen, mesotheliocytes play a major role in the development of adhesions and they are present in the post-operative fluid of the abdominal cavity. Extensive soft adhesions are formed within 72 hours after laparotomy. Programmed sanation of the abdominal cavity, conducted after 48 hours, reduces the development of a massive adhesive process in the abdominal cavity. Refusal from suture the peritoneum with laparotomy also reduces the risk of adhesion formation.

After discharge from the hospital, all patients are on dispensary registration with a pediatric surgeon in a polyclinic at the place of residence, and 2 times a year they undergo anti-adhesion physiotherapy.

CONCLUSION

Thus, in order to improve the diagnosis and treatment of patients with various forms of AAIO, diagnostic laparoscopy should be used more widely. As AAIO often occurs after surgical interventions for acute appendicitis, especially its

complicated forms, so laparoscopic appendectomy and abdominal sanitation are advisable in order to significantly reduce the level of intra-abdominal adhesions in these diseases. As a result of optimization of surgical treatment of urgent abdominal pathology in children, the frequency of adhesive intestinal obstruction in the Purulent Surgery Department of the Pediatric Center decreased from 3.25% three times.

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PERIOPERATIVE ANTIBIOTIC PROPHYLAXIS AND ETIOTROPIC ANTIBACTERIAL TREATMENT OF APPENDICULAR PERITONITIS IN CHILDREN

ABSTRACT

The article describes the analysis of perioperative antibiotic prophylaxis and etiotropic antibacterial treatment of appendicular peritonitis in children on the data of the Purulent Surgery Department of the Pediatric center RHN№1 - NCM of Yakutsk, Republic Sakha (Yakutia). We proved effectiveness of perioperative antibiotic prophylaxis, the incidence of infections complicating surgical interventions has decreased. Etiotropic antibacterial treatment of appendicular peritonitis in children reduced the frequency of intra-abdominal complications to three times.

Keywords: perioperative antibiotic prophylaxis, complicated appendicitis, children.

BACKGROUND

Perioperative antibiotic prophylaxis (PAP) at abdominal surgery with a risk of purulent-inflammatory complications is a compulsory measure. Most domestic authors are united in their views regarding the appointment of perioperative antibiotic prophylaxis, but the choice of drug, its efficiency, manifested in the reduction of infections in the field of surgery in pediatric surgery remains debatable.

The priority role of antimicrobial therapy in the treatment of purulent process is obvious, its adequacy largely determines the outcome of the treatment. The selection of the right modes and schemes of ABT is able to stop the course of infection to improve the prognosis and reduce treatment time. Meanwhile, the question about the rationality of the purpose of ABT. One of the ways to improve the efficiency of ABT is the full possession of information about the etiology of the pathogen and its sensitivity. The data on microbial structure, its dynamics and antibiotic resistance of microorganisms, the resulting large-scale multicenter studies it is impossible to fully use when conducting antimicrobial therapy in the conditions of a particular region. Each region has a number of distinctive features requiring consideration in the planning of antimicrobial therapy.

The above facts explain the need for analysis of the etiological agent and its sensitivity to antibiotics.

MATERIALS AND METHODS

Every year in the purulent surgery department of the Pediatric center of Republican hospital №1 – National center of medicine of Yakutsk is carried out more than 250 operations for acute appendicitis and its complications. From 2006 to 2016 operated 2388 children