

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 RH №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

under 14 years inclusive at acute appendicitis and its complications. In complicated appendicitis was carried out the drainage, when heavy late in peritonitis the method of choice in the treatment of was software sanitation of abdominal cavity. From 223 children (9%) had complications of acute appendicitis with local peritonitis was revealed in 126 cases, appendicular infiltrate in 6 cases, periappendicular abscess in 26 cases, diffuse – 65.

THE RESULTS OF THE STUDY

We analyzed perioperative antibiotic prophylaxis (PAP), the incidence of infection in the area of surgical intervention in the Department of purulent surgery, surgery for acute appendicitis.

The object of the retrospective study was history of 1368 children who underwent appendectomy in 2008 - 2014. From this group excluded patients with complicated appendicitis. According to the existing international recommendations in the quality product for DAD at appendectomy were selected amoxicillin/clavulanate (Amoxiclav). This drug has a high activity against the most common pathogens iohw for appendicitis (gram-negative organisms and anaerobes). 2012-Amoxiclav was administered at a dose of 30 mg/kg once intravenously 30 minutes before the start of the operation, or cephalosporins 2nd generation. The effectiveness of prophylactic antibiotic administration was evaluated according to the incidence of infection in the field of surgical intervention in the postoperative period.

The analysis showed that until 2011, when not held perioperative antibiotic prophylaxis, the frequency of infections in the surgical intervention was 7.5%. After turning on perioperative antibiotic prophylaxis is mandatory in practice, the frequency of infections in the field of surgical intervention has decreased significantly and amounted to 0.44 percent.

Antibiotic therapy after surgery are appointed on the basis of identifying the etiologic agent, the most significant of the pathogen. In bacteriological sowing purulent effusion from the peritoneal cavity in our study, the dominant etiologic agents were gram-negative bacteria of the family Enterobacteriaceae (*Escherichia coli* – 60,29%), 5.14% in Association

with *Pseudomonas aeruginosa*, sensitive to gentamicin, amikacin, ciprofloxacin. 8.82% of *Pseudomonas aeruginosa* were sown as the only causative agent sensitive to ciprofloxacin, cefepime and imipenem. *Enterococcus faecium* was sown 2.94%, in one patient the Association of *Escherichia coli*, *Pseudomonas aeruginosa* and *Enterococcus Faecium* proceeded in the postoperative period with the formation of somawansa intestinal abscess that required reoperation. Combined flora identified 11.02% - *Str. Faeceum*, *adorifera Serratia*, *aspergillus* spp, staph epidermidis, kl pneumonia. The lack of growth identified in the 16,91% of cases, which, in our opinion, is connected with a preceding antibiotic therapy for patients transferred from other hospitals.

Antibacterial treatment of appendicular acute peritonitis is empirical and is determined based on the most significant pathogen (*Escherichia coli* – 60,29%). Currently as the drug of choice for initial therapy are appointed cephalosporin 3 generation, which allow to effectively influence important aerobic and anaerobic bacteria. Alternative its use in combination with metronidazole +/- aminoglycoside. When «late» in peritonitis, when in most cases, children receive these or other antibacterial drugs, the drug of choice are cephalosporins 3-4 gen + metronidazole, cefoperazone/sulbactam. When the refractory peritonitis, complicated course were appointed carbapenem, cefepime+metronidazole. The allocation metitillinrezistentnykh staphylococci the drug of choice was linezolid, glycopeptide, which was confirmed by the scale of sensitivity of the microbial agent. Prevention of intra-abdominal candidiasis was conducted in parallel with fluconazole.

CONCLUSION

Thus, the rational use of perioperative antibiotic prophylaxis reduces the incidence of iohw in our Department, from 7.5% to 0.44% of cases with acute appendicitis. Etiotropic antibacterial treatment of appendicular peritonitis in children, decreased the frequency of intra-abdominal complications from 3.25% to three times.

There were no lethal outcomes over the past 10 years.

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