

THE MORPHOLOGICAL ASPECTS OF ACUTE  
APPENDICITIS IN CHILDREN

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**Annotation.** Appendicitis is a pathological condition in which inflammation of the appendix, located at the border of the large and small intestines, occurs. This pathology can occur at any age and can only be treated surgically. It is important to remember that without the help of a doctor, the condition leads to peritonitis and even death. According to the literature, acute appendicitis under the age of 1 year is extremely rare and ranges from 0.06 % to 0.2 %.

**Key words:** catarrhal appendicitis, pathogenesis, parasite infections, empyema, peritonitis.

**Relevance.** Causes and pathogenesis (mechanisms of development) of appendicitis in children: the vermiform appendix of the cecum (appendix) is located at the transition point of the small intestine to the large intestine. A small angle is formed here, where the entrance to the process is located. The structure of the appendage contains lymphoid tissue, which is involved in the formation of immunity. The reason for the development of inflammation is the blockage of the outflow of mucus from the appendix, which leads to impaired blood supply and the proliferation of bacteria. Blockage of the lumen of the process may occur against the background of:

- infection by parasites;
- formation of fecal stones (coprolites);
- torsion or bending of the process;
- excessive proliferation of lymphoid tissue caused by various diseases.

As the inflammatory process progresses, tissue swelling occurs, followed by the development of purulent inflammation and necrosis. At the same time, local irritation of the peritoneum (the inner lining of the abdominal cavity) occurs, which is manifested

by symptoms of peritonitis.

In the absence of therapeutic measures, the disease can become chronic and worsen periodically, or lead to rupture of the appendix with the release of pathological contents into the abdominal cavity.

Types of appendicitis in children:

Depending on the course of the disease, acute and chronic appendicitis are distinguished. In the first case, the disease is characterized by vivid symptoms, in the second - by a faded (latent) pattern of symptoms, an undulating course with periodic exacerbations.

• The type of inflammatory process allows us to distinguish three forms of the disease:

•• catarrhal appendicitis: the initial stage of inflammation, characterized by slight thickening of the walls and hyperemia;

•• destructive form: divided into phlegmonous (purulent) and gangrenous (characterized by tissue necrosis);

• empyema: accumulation of purulent exudate in the cavity of the appendix.

The destructive form of appendicitis and its empyema are the most dangerous, since they can be accompanied by tissue rupture with the release of pathological contents into the abdominal cavity and the development of extensive peritonitis.

Symptoms of appendicitis in children:

Appendicitis is a disease with many “masks”. It does not always occur with a characteristic clinical picture, since the severity of symptoms and their totality largely depend on the age of the child, the exact location of the appendix in the abdominal cavity, the form of inflammation and other factors.

Typical signs of appendicitis in children are:

•• abdominal pain; discomfort may appear first in the navel or solar plexus, but as it increases, it moves to the right and down; less often, sensations are located in the upper half of the abdomen on the right or in the lumbar region, masquerading as kidney diseases;

• nausea, vomiting 1-2 times (more often in children), single loose stools or delayed stools;

• gradual deterioration of general health, weakness;

• increase in body temperature.

If the peritoneum begins to become involved in the inflammatory process, the child usually lies on his right side with his legs pulled up to his stomach, since in this case the pain becomes less pronounced. Attempts to press on the abdominal wall in the lower abdomen on the right significantly increase the pain.

**Purpose of the study.** To increase the efficiency of diagnosis, differential diagnosis and treatment of acute appendicitis in children under 5 years of age.

**Material and research methods.** During the period from 2016 to 2023, 220 children diagnosed with AA were admitted to the department of the multidisciplinary specialized children's surgical center of Samarkand State Medical University for the period from 2016 to 2023.

**Research results.** Of the 220 children under 5 years of age, there were 70, which was 8%. Of these, 2 were newborns. Of the 20 sick, there were 45 boys and 28 girls. Due to the difficulty of contact with children under 3 years of age, it is advisable to examine them in a state of medicated sleep. For this purpose, sibazon 0.2-0.4 mg/kg was used. Additional research methods included ultrasound of the abdominal organs, while patients with destructive forms had effusion in the abdominal cavity. In the blood test, all sick children had an increased number of leukocytes, a shift in the formula to the left, and in 15 cases mild anemia.

Late hospitalization was noted in 63 of them, in 7 patients 5-6 days after the onset of the disease, as they were mistakenly admitted to the infectious diseases hospital.

All patients were operated on after preliminary preoperative preparation. Of these, 18 had acute phlegmonous appendicitis, 25 had acute gangrenous appendicitis, and 28 had gangrenous-perforated appendicitis. 10 had local purulent peritonitis, 53 had diffuse purulent peritonitis. In 4 patients with total abscessing peritonitis, programmed laparostomy was performed, followed by periodic sanitation of the abdominal cavity.

**Conclusions.** Thus, in children under 5 years of age, due to the predominance of general symptoms over local ones, destructive forms of appendicitis with peritonitis often occur. Based on the above, sick children at this age should be hospitalized immediately upon initial treatment, thereby speeding up diagnosis and improving treatment.

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