

# Tactics of Postoperative Treatment of Children with Common Forms of Appendicitis Peritonitis

**Yusupov Shuhrat Abdurasulovich <sup>1</sup>, Belyalov Arsen Marlenovich <sup>2</sup>**

<sup>1</sup> Doctor of Medical Sciences, Professor, Head of Department of Pediatric Surgery No. 1 of Samarkand State Medical University

<sup>2</sup> 4-th year student of the Faculty of Medicine of the Samarkand State Medical University

## Abstract:

a summary of the postoperative management of children with common forms of appendicitis and peritonitis will probably summarize the main aspects of postoperative care, including monitoring for complications, nutritional support, pain management, and antibiotic therapy. . This may emphasize the importance of early mobilization, gradual resumption of oral intake, and follow-up evaluation to ensure recovery.

**Keywords:** postoperative care, appendicitis, peritonitis pediatric surgery, pain management, complications, nutritional support, antibiotic therapy.

Appendicitis - appendix (lat. appendix - tumor), that is, inflammation of a worm-like tumor located in the lower part of the cecum. Appendicitis is the most common surgical disease of the gastrointestinal system and one of the most dangerous, but quickly curable if treated on time. During life, a person has a very high probability of getting acute appendicitis. Appendicitis is an inflammation of the appendix, a worm-like tumor located in the lower part of the intestine. Appendicitis is caused by a blockage of the appendix. It can be caused by viral infection, parasites, gallstones and tumors, or by inflamed lymphoid tissue. This blockage leads to increased pressure in the appendix, decreased blood flow to its tissues, and an overgrowth of bacteria within the appendix that can cause inflammation. If this process is not treated, the appendix can rupture and bacteria can escape into the abdominal cavity, and this process leads to increased complications. The diagnosis of appendicitis is mainly based on clinical symptoms in patients. In addition, active observation of patients, conducting objective, laboratory and instrumental examinations also gives good results.

The most widely used instrumental examinations in appendicitis are ultrasound and computed tomography. Computed tomography has been proven to be more accurate than ultrasound in

detecting acute appendicitis. However, ultrasound is more commonly used in children and pregnant women. Because the radiation of computer tomography can have a negative effect on the organism of the mother and the child. The standard treatment for acute appendicitis is surgical removal of the inflamed appendix. This can be done through an open incision in the abdomen (laparotomy) or through several smaller incisions using laparoscopy.

Antibiotics may be effective in some cases of nonperforated appendicitis. In 2015, about 11.6 million cases of appendicitis were recorded, and about 50,100 patients died from this disease. In the United States, more than 300,000 patients with appendicitis undergo appendectomy every year. Acute appendicitis is caused by primary obstruction of the appendix. When this obstruction occurs, the appendix fills with mucus and becomes enlarged.

Continued production of mucus further increases the pressure within the walls of the appendix. An increase in pressure causes thrombosis and clogging of small vessels, as well as disruption of lymph flow. At this stage, the appendix rarely heals on its own. As a result of blockage of the blood vessels of the appendix, first ischemia, and then a necrotic process occurs. As bacteria begin to emerge from the walls of the necrotic appendix, the surrounding tissue begins to fester. The result is sepsis, peritonitis, and rarely, a ruptured appendix. As these processes develop, abdominal pain and other symptoms begin to appear. Appendicitis develops very quickly, so its symptoms are always bright. But this does not mean that the doctor can make a correct diagnosis without a preliminary examination. The initial symptoms of the disease are described by the term "acute abdomen". This means that the patient experiences severe pain.

Common symptoms of appendicitis in children and adults include: severe pain. At first, it can be "scattered" - the patient cannot clearly indicate which zone is the most painful, because almost the entire abdomen hurts. Sometimes discomfort appears near the navel, sometimes on the right / left side under the ribs. After a few hours, the pain is concentrated in the lower abdomen on the right side (iliac region). At first, there is a sharp pain, and then there is a constant pain.

The stronger the inflammation in the appendix, the more the patient suffers. If the tumor is filled with purulent content, a feeling of pulsation appears in the stomach. Then the person takes a mandatory position to at least alleviate his condition until the emergency medical team arrives - he pulls his legs to himself and lies down on the painful side. If the mucous membranes of the appendix begin to die, the pain will gradually decrease. This is due to the destruction of nerve nodes. But soon purulent masses penetrate into the abdominal cavity, and the pain appears with new force. Many people are interested in which side appendicitis affects. It should be noted that not everyone has a worm-like tumor on the right side of the abdomen.

Therefore, during the development of the disease, discomfort is not always on the right side. When the tumor is located incorrectly, the pain may be on the left side. This indicates the importance of distinguishing appendicitis from inflammation of the pancreas, fallopian tubes, gastric/duodenal ulcer, colic, gallstones, and other diseases; pain that worsens with changes in body position, jumping, running, sneezing/coughing, abdominal muscle tension; vomiting and nausea. They appear a few hours after the symptoms of "acute abdomen": loss of appetite; constipation (the intestine stops contracting, its work is disturbed). It should be noted that in patients with the wrong location of the tumor, there may be a connection of the inflamed walls with the small intestine. Then contraction increases significantly, diarrhea appears; abdominal pain during palpation. In this case, the doctor notes compression in the abdomen during the feeling, a clear tension of the muscles, paleness, discolored skin; rise in temperature. Treatment for appendicitis usually includes: Surgical removal of the appendix: the most common treatment is an appendectomy, which involves removing the inflamed appendix. This procedure can be performed using open surgery or laparoscopic methods, the latter being minimally invasive with smaller incisions.

Antibiotic therapy: to treat or prevent infection, especially if there is an abscess in the appendix or other complications. Supportive care: includes pain management and hydration measures typically provided in a hospital setting. Recovery after an appendectomy usually includes:

Hospital stay: Most patients stay in the hospital for a few days after surgery to monitor recovery and manage pain. Wound Care: Proper care of the surgical site to prevent infection and promote healing.

Gradual return to activity: Patients are usually advised to return to normal activities gradually and avoid strenuous exercise until full recovery.

Dietary adjustments: Initially, a bland diet may be recommended, gradually progressing to a normal diet as tolerated.

Appendicitis is a prevalent surgical condition in children, often leading to serious complications such as peritonitis if not addressed promptly. The management of postoperative care in these patients is crucial for recovery and minimizing complications. Regular monitoring of vital signs (heart rate, blood pressure, temperature) to detect early signs of infection or complications. Utilizing age-appropriate pain scales to assess and manage postoperative pain effectively. Initiating broad-spectrum intravenous antibiotics immediately post-surgery, tailored based on culture results if necessary. Proper care of the surgical site to prevent infection, including regular dressing changes and monitoring for signs of redness, swelling, or discharge. Administering intravenous fluids to maintain hydration and electrolyte balance initially. Gradual reintroduction of oral intake, starting with clear liquids and advancing to a regular diet as tolerated, typically within 24 hours postoperatively. Implementing a combination of analgesics (e.g., acetaminophen, NSAIDs) and opioids as needed to ensure adequate pain control while minimizing side effects. Incorporating methods such as distraction techniques, relaxation exercises, and heat therapy to enhance comfort.

- Encouraging movement: promoting early ambulation to reduce the risk of postoperative complications such as deep vein thrombosis and pulmonary embolism.
- Physical therapy: engaging physical therapists to assist with mobility and strengthening exercises as appropriate.
- Identifying complications: vigilantly watching for signs of complications such as abscess formation, bowel obstruction, or recurrent appendicitis.
- Imaging studies: utilizing ultrasound or CT scans if there are concerns about postoperative complications.

Discharge planning.

- Education: providing thorough education to caregivers regarding wound care, signs of infection, dietary recommendations, and activity restrictions.
- Follow-Up Appointments: scheduling follow-up visits to monitor recovery and address any concerns that may arise post-discharge.

The postoperative management of children with appendicitis and peritonitis requires a comprehensive approach that includes careful monitoring, effective pain management, nutritional support, and early mobilization. By implementing these tactics, healthcare providers can significantly improve recovery outcomes and reduce the risk of complications in pediatric patients undergoing appendectomy. Future studies should focus on refining these strategies and exploring innovative approaches to enhance postoperative care in this population.

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