

## **The Role of Regional Lymphatic Antibiotic Therapy in Acute Abdominal Diseases in Children**

**Khayitov U.H.**

Samarkand State Medical University, Samarkand, Republic of Uzbekistan

**Abstract:** Timely diagnosis and treatment of acute surgical diseases of the abdominal organs in children remain a relevant problem in pediatric surgery. The targeted use of modern diagnostic technologies (ultrasound and laparoscopy) makes it possible to avoid most diagnostic errors.

The aim of the study was to investigate the effectiveness of regional lymphatic antibiotic therapy in children with abdominal organ pathology complicated by peritonitis (destructive appendicitis, peritonitis, and intestinal obstruction). Children under 18 years of age with suppurative processes of the abdominal organs in the postoperative period who were examined and treated over the past 10 years in the pediatric surgery department of the Samarkand Regional Multidisciplinary Children's Medical Center were included in the study. The studies conducted in children with suppurative diseases of the abdominal organs (main and control groups) demonstrated high effectiveness of regional lymphatic antibiotic therapy, which was manifested by stabilization of the patient's clinical condition, earlier normalization of clinical and laboratory parameters, and a significant reduction in the rate of postoperative complications.

**Keywords:** children, appendicitis, peritonitis, intestinal obstruction, regional lymphatic antibiotic therapy.

Relevance. Postoperative complications and mortality rates in diseases of the abdominal cavity complicated by peritonitis are still high. This is due not only to the appearance of antibiotic-resistant microorganisms, but also to the imperfect way of administering antibiotics for inflammatory diseases of the abdominal cavity in children.

The purpose of the study. The purpose of this work was to study the effectiveness of regional lymphatic antibiotic therapy in children with abdominal pathology complicated by peritonitis (destructive appendicitis, peritonitis and intestinal obstruction).

Materials and methods. To solve the tasks set, children under the age of 18 with suppurative processes of the abdominal organs in the postoperative period over the past 10 years have been examined and treated in the department of pediatric surgery at the regional children's multidisciplinary medical center in Samarkand. The main group consisted of 126 children who received regional lymphatic antibiotic therapy for complex treatment, i.e. antibiotics were administered lymphatically depending on the affected region. At the same time, for the administration of antibiotics, the microcatheter was left intraoperatively in the retroperitoneal space and in the mesentery of the small intestine. In the postoperative period, antibiotics were administered using these microcatheters, and they were also administered along the inner surface of the thigh 1-2 times a day, depending on the severity and depth of the lesion by the purulent process. In the control group, which consisted of 104 children, antibiotics were administered using the traditional method against the background of complex conservative therapy.

The results of the study and their discussion. An analysis of the results obtained from the use of regional lymphatic antibacterial therapy in children with suppurative diseases of the abdominal cavity organs has shown that the results of various methods of antibiotic administration against the background of complex treatment have their own specificity. To identify the effectiveness of the lymphatic therapy performed against the background of complex treatment of children with this pathology, the following indicators were used: the general condition of the patient, the temperature curve, the appearance and stabilization of intestinal motility, the course of the wound process - an operating wound, immunological and bacteriological parameters in the blood and pus cultures, as well as the number of bed days.

The results obtained in the treatment of children with suppurative diseases of the abdominal organs in a comparative aspect showed the following: in the main group of children in the postoperative period, stabilization of the general condition occurred much earlier than in the children in the control group. Body temperature, intestinal motility, and signs of peritoneal irritation had a significant tendency to normalize 3-4 days after surgery, compared with the control group.

Serum levels of T and B lymphocytes and immunoglobulins in the main group had a faster and more reliable tendency to normalization than in the control group of children receiving traditional antibacterial therapy.

Bacteriological examination of the purulent contents of the wound and the contents obtained from the abdominal cavity also had a positive trend, i.e. a faster disappearance of pathogenic microflora during therapy in children of the main group than in children of the control group.

But despite the therapy, complications were also observed in the main group, but in a smaller number than in children in the control group, which had the following character: infiltrates around the surgical wound from 14 to 6 cases, wound suppuration from 8 to 2 cases. There was one fatal outcome due to the patient's late admission to the hospital.

In the statistical analysis, patients in the main group who received regional lymphatic antibacterial therapy in complex treatment were discharged from the hospital 3.4 days earlier than patients in the control group.

Conclusion. Thus, the studies conducted in children with suppurative diseases of the abdominal cavity (the main and control groups) showed the high effectiveness of regional lymphatic antibiotic therapy, which consisted in stabilizing the patient's clinical condition, normalizing clinical and laboratory parameters significantly earlier, and the percentage of postoperative complications decreases sharply.

The use of this method in the complex treatment of children with suppurative diseases of the abdominal organs also has a great economic effect, which consists in reducing the frequency of administration of antibiotics and reducing bed days.

## **R E F E R E N C E S**

1. Adamyan L.V. D'yakonova E.Y., Sibirskaya E.V. and others. Surgical tactics for torsion of the appendages of the uterus in children. Reproduktivnoe zdorovie i podroskov. 4: 35-41.(in Russian)
2. Vyrenkov Yu.E. Clinical Lymphology Results and development prospects // Vestnik limfologii. 2012;4:4– 10. (in Russ.). [https://lymphology-journal.com/catalog/detail.Php. SECTION\\_ID=788&ID=17955](https://lymphology-journal.com/catalog/detail.Php. SECTION_ID=788&ID=17955).
3. Gariaeva N.A., Zavgorodnii I.G., Garyaev K.P. [et. al.] Lymlym Study To Investigate Efficacy And Safety Of Lymphotropic Treatment (Indirect Endolymphatic Injections) Of Secondary And Primary Lymphedema // XVIII Congress of Lymphology. Lymphology (54) (2021) suppl. – Athens, 2021. – P. 102.

4. Klimov D.E., Sazhin V.P., Sazhin I.V. and others. Postoperative complications of laparoscopic appendectomy. *Endoskopicheskaya khirurgiya* 2014; 1: 184-5.(in Russian)
5. Kohreidze H.A., Kutusheva G.F., Krasnogorskiy I.N. Features of the course of purulent inflammatory processes of the uterine appendages complicated by secondary appendicitis in girls. *Detskaya khirurgiya*. 2012; 1: 31-4. (in Russian)
6. Kokolina V.F., Chundokova M.A. Syndrome of an acute abdomen in girls. *Voprosy prakticheskoy pediatrii*. 2009; 4 (4): 65-9. (in Russian)
7. Lokhvitsky S.V., Tseshkovsky M.V., Ivanchenko A.N. Endovideolaparoscopic surgery for diagnostic difficulties in emergency abdominal surgery. *Almanakh Instituta khirurgii imeni A.V. Vishnevskogo*. 2012; 7(1): 278. (in Russian)
8. Razumovsky A.Y., Dronov A.F., Smirnov A.N. Endoscopic surgery in pediatrics.Guidelines for doctors [Endoskopicheskaya khirurgiya v pediatrii. Rukovodstvo dljaa vrachey]. Moscow, 2016; 598 p. (in Russian)
9. Sokolov Y.Y., Korovin S.A., Dzyadchik A.V. Laparoscopy in children with acute ischemia of the abdominal cavity. Scientific notes of Orel State University [Uchenye zapiski Orlovskogo gosudarstvennogo universiteta]. 2014; 63 (7). Part II: 110-1.
10. Poddubny I.V., Fitkina O.A., Glybina T.M. Appendicular - genital syndrome in girls. *Detskaya khirurgiya*.2013; 2: 45-9.(in Russian)
11. Phillips S., Walton J.M., Chin I. F. Ten-year experience with pediatric laparoscopic appendectomy-are we getting better? *J. Pediatr. Surg.* 2005; 5(40): 842
12. Stanfill A.B., Matilsky D.K., Kalvakuri K. et al. Transumbilical laparoscopically assisted appendectomy: an alternative minimally invasive technique in pediatric patients. *J. Laparoendosc Adv Surg Tech.* 2010; 10(20): 873-6.
13. Hernández-Ruiz V., Forestier E., Gavazzi G. [et. al.] Subcutaneous Antibiotic Therapy: The Why, How, Which Drugs and When. *Journal of the American Medical Directors Association*, 22(1), Michael Foldi. Foldi' s textbook of Lymphology. 3 rd ed. – 658 p.