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THE SIGNIFICANCE OF HYDROJET SCALPEL IN THE SURGICAL TREATMENT OF INFILTRATIVE INFLAMMATORY AND ADHESIVE PROCESSES OF THE ABDOMINAL CAVITY

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Aim: To improve the results of surgical treatment by using a hydrojet scalpel in inflammatory and adhesive processes of the abdominal cavity.

Materials Required: In the surgery clinic, 72 adolescents aged 17-18 years were treated. Male patients had 41 (56.9%), female - 31 (43.1%). Infiltration of the abdominal cavity was established in 54 (75.0%) patients, and obstruction of the intestine of a commissural nature in 18 (25.0%). All patients had a full examination.

Result: It was established that the causes of the infiltrative inflammatory process were the inflammation of the appendicular process in 50 (69.4%) and Meckel's diverticulum in 4 (5.5%) patients, and the adhesion process: the transferred laparotomy due to appendectomy. According to the clinic, vomiting syndrome in 59 (81.9%), abdominal pain syndrome in 65 (90.3%) patients, asymptomatic anterior abdominal wall in 63 (87.5%), hyperthermia in 28 (38.8%). Radiographically - the bowl of Kloyberg in 32 (44.4%) patients. According to ultrasound, abdominal infiltrates in 54 (75.0%) patients, and free fluid in the abdominal cavity in 58 (80.5%), and signs of abscessing in 38 (52.7%) patients. Studies found that 22 (30.5%) patients had atypical clinical symptoms of the course of the disease. After preoperative preparation, all patients were operated using a hydrojet scalpel. For the first time in the clinical work, the domestic apparatus "Hydrojet scalpel" was used, which was developed at the Aerospace Institute of the National Aviation University of Ukraine. It is established that a jet of physiological solution separates living tissues, which have different density and different cellular structure. The essence of the anatomical method of separation of tissues by a hydrojet scalpel consists in the possibility of dosed pressure of a stream of physiological solution, which allows the separation of tissue layers of various elasticity and strength. Thus, due to the selectivity of the action, it is possible to conduct a gentle, precise anatomical dissection of tissues in their border zone, taking into account the specific anatomical and physical properties of the tissues. It is established that the water flow of the physiological solution forms an expansion space, a liquid medium that enters this space, spreads the tissue, that is, dissects it.

Treatment of infiltrative inflammatory processes of the abdominal cavity in 54 (75.0%), which prevented traumatization when separating the spike from the intestine and the peritoneum to approach the focus of inflammation with minimal loss of blood. It was established that the cause was the inflammation of the appendicular process in 50 (69.4%) and Meckel's diverticulum in 4 (5.5%) patients. The use of a hydrojet scalpel allowed to separate all the components of the infiltrative - inflammatory process, namely the large omentum and its resection: limited in 16 (22.2%), subtotal in 30 (41.6%), total in 8 (11.1%) patients. Treatment of adhesive obstruction of the abdominal cavity was carried out by all patients, and appendectomy and genologic diseases were transferred from the causes of development, of which 10 (13.8%) were male and 8 (11.1%) female. With laparotomy, the following adhesions were established: multiple planar joints in all 18 patients, of which, in the face of planar ones, cordlike ones also took place in 8 (11.1%), and in the form of chain mail with full coverage and turn in 4 (5.5%) patients. Adhesiolysis is the main stage of the operation in which a hydrojet scalpel was used. There were no complications during the separation of adhesions.

Thus, surgical treatment using a hydrojet scalpel for the separation of the inflammatory or adhesive process has a gentle, non-traumatic effect on the vessels, the intestinal wall and the peritoneum in the separation of the inflammatory process and adhesions, contributes to the reduction of edema, and as a consequence, early recovery of peristalsis, and further absence of abdominal discomfort manifestations of the disease. Intestinal resection performed in 6 (8.3%) patients, of which 4 (5.5%) due

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to Meckel diverticulum - segmental resection up to 15 cm, and two (2.7%) patients underwent resection to 35 cm with the application of an anastomosis end to end.

Conclusion: Using the method of dissection of infiltrated tissues and adhesions with a hydrojet scalpel allows precise separation of the organ structures of the intestine, the large omentum and parenchymal organs without damage anatomical structures. The flow of saline allows to clean the peritoneum both from the effects of inflammatory changes and the place of formation of the adhesion process.

Biography

Rybalchenko Vasily Fedorovich is the Professor of the Department of Pediatric Surgery of the National academy of postgraduate education which is named after P.L. Shupika MOZ, Ukraine.

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