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THE ROLE OF LAPAROSCOPY IN DIAGNOSING DUODENAL INJURIES DURING CLOSED ABDOMINAL TRAUMA

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Introduction. The most prevalent kind of clinical abdominal trauma is closed abdominal damage, which can easily lead to misdiagnosis. Closed abdominal injuries are relatively common in general surgery emergency rooms, and early diagnosis is challenging. Surgeons are frequently involved in ongoing observation and prompt surgery since many patients have unusual early symptoms without clear indications of hemorrhagic shock and peritonitis. In the past, conservative therapy and surveillance were carried out when there were no indications of hemorrhagic shock or peritonitis and the patient showed no overt signs of discomfort in the early stages. The treatment was strictly in line with surgical criteria. Despite more than a century of experience in treating duodenal injuries, this problem, due to its rarity and the development of severe, life-threatening complications, remains a serious challenge for emergency surgery. Duodenal trauma (DT) accounts for 0.93-10% of cases in open and closed abdominal injuries [2, 4, 5], while gastrointestinal injuries account for 0.43-6.5% - of which 76-80% are able-bodied men aged 20-40 [6, 7] Today, the frequency of duodenal injury in the structure of abdominal organ injuries is approximately 1.2-2% and does not exceed 10% in the structure of digestive organ injuries [1]. In recent years, the incidence of injuries to the GI tract has increased, which is associated with an increase in road injuries, falls from heights, and abdominal injuries from cold and firearms [3, 4].

To clarify the most optimal treatment and diagnostic program and ensure the continuity of specialized surgical care for patients with PID, we utilized the generally recognized classification of E. Moore et al. (1990):

Grade I lesions: small hematoma or incomplete rupture of the GI wall without mucosal damage.

Grade II injuries: large hematoma or a tear less than 50% of the perimeter of the GI wall.

Grade III lesions: a large transverse tear of 50-70% or 50-100% of the perimeter of the GI wall.

IV-degree of damage: very large - up to 75-100% rupture, rupture of the ampoule and distal part of the GI tract.

V-degree of damage: massive pancreato-duodenal wound with hepatic duodenal vascularization.

The procedure was carried out promptly when surgical indications emerged, but there was a chance that the illness would worsen while waiting. Traditional open surgery was used in the majority of earlier surgical explorations; this increases the risk of incision infection and lengthens the recovery period for patients. The incision is frequently far from the injured site, making it difficult to see the location of the injury, and it is necessary to extend the knife edge and expand the incision. In order to achieve integrated diagnosis and treatment, laparoscopy can perform hemostasis, suture, repair, anastomosis, resection, and other procedures in addition to diagnosing patients with abdominal injuries whose early diagnosis is ambiguous [6,7,8].

The main objective of the presented manuscript is The role of laparoscopy in diagnosing duodenal injuries during closed abdominal trauma based on the results of authoritative scientific works conducted.

Result and discussion.

Patient E.A., 17 years old, n/a. No. 18054/1100, was admitted to the Namangan branch of the RSCEMP with complaints of abdominal pain, nausea, and general weakness. From the medical history: the patient sustained an abdominal injury about 30 minutes before being admitted to the hospital while under the rubble of a collapsed wall. The patient's general condition upon admission is severe, conscious, passive, and pale. The patient enters into contact reluctantly. Breathing chest-type, 22 times per minute. Blood pressure 80/70 mmHg, pulse 100 beats per minute, weak filling and tension. The tongue is moist, the abdomen is oval in appearance, there are transverse abrasions on the skin in the meso- and epigastric regions, and the upper abdominal floor lags behind in breathing. On palpation: not sharply pronounced, widespread tenderness throughout the abdomen, with moderate tension. There are no peritoneal symptoms. Ultrasound examination immediately after the patient arrives at the admissions department: no free fluid was detected. During the examination, no signs of musculoskeletal injuries or craniocerebral trauma were found. After a short preoperative preparation (catheterization of the subclavian vein with anti-shock fluid connection, necessary biochemical analyses) with the preliminary diagnosis of "Closed abdominal trauma, closed abdominal organ injury, peritonitis?" diagnostic laparoscopy was performed, during which about 100 ml of dark brown liquid resembling bile was detected in the abdominal cavity under the liver and in the right lateral canal, emphysema of retroperitoneal tissues and their imbibition with dark fluid, and conversion was resolved. During laparotomy, emphysema of retroperitoneal area tissues and their imbibition with dark fluid are identified in the projection of the descending and lower-horizontal parts of the mediastinum. Mobilization of the GI tract was performed according to Kocher, and upon revision, a circular tear of the lower-horizontal part of the GI tract was detected, with only 1 cm of its posterior wall area remaining intact, which corresponded to grade III damage according to the classification of E. Moore et al.

The ruptured area of the perineum is sutured with double-row knotted sutures using non-traumatic polypropylene thread No. 3.0, and anterior gastro-enteroanastomosis and entero-enteroanastomosis according to Brown are applied. Two probes were installed, one of which for enteral nutrition was passed through an entero-entero anastomosis into the drainage compartment, and the other through the pyloric canal into the lower-horizontal part of the duodenum for subsequent decompression. The postoperative period was smooth.

In the early postoperative period, antibacterial, infusion-corrective treatment, transfusion of blood components, and parenteral nutrition preparations are prescribed. In addition to these, H2 blockers and protease inhibitors have been prescribed. Regular active decompression was performed using a "Gomco" apparatus through a duodenal probe. Starting from the 3rd day after surgery, enteral probe feeding was initiated. On the 7th day after surgery, a X-ray contrast (triombrast 76%-20.0) examination of the duodenum was performed: patency was not impaired, and no contrast extravasation was detected. After this, the decompression probe is removed. The last safety drainage was removed on the 9th day after an ultrasound examination of the abdominal cavity.

On the 11th day after surgery, the patient was discharged in a satisfactory condition for further outpatient treatment.

Conclusion:

When admitting patients with suspicious signs of abdominal organ damage, it is recommended to use diagnostic laparoscopy rather than limiting themselves to instrumental examination data.

If there is emphysema and hematoma in the retroperitoneal area, laparotomy should be performed for further more thorough revision and radical surgical care.

It is necessary to perform a nasogastric probe beyond the suture area on the GI to perform regular decompression.

In cases of duodenal injury, after applying a primary suture to the duodenal wound, an anterior gastro-enteroanastomosis and an entero-entero anastomosis according to Brown should be applied, and a probe should be inserted into the excretory part of the small intestine for early enteral nutrition, which, by preventing nutritional deficiency in the body, contributes to the early restoration of intestinal peristalsis.

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