



## The Potential of Videolaparoscopy for Closed Liver Injuries: 20 Years' Experience of the Jizzakh Branch of the Republican Research Centre of Emergency Medicine (Rrcem)

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**Abstract:** In This Article We Consider The Potential Of Videolaparoscopy For Closed Liver Damages: 20 Years Of Experience And Share It Of The Jizzakh Branch Of The Republican Escientifical-Research Central Research

**Keywords:** Ultrasound and abdominal X-rays, Diagnostic and therapeutic, Conversion, Significant

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### INTRODUCTION

Since 2001, 255 patients with liver ruptures have been hospitalized in the Jizzakh Branch of the RRCEM. Isolated liver rupture was diagnosed in 127 (49.8%) injured patients, and combined injuries with other abdominal cavity organs in 128 (50.2%). There were 195 men (76.5%), and 60 women (23.5%). The average age of the patients was  $39,7 \pm 3,3$  years. There were 142 (55.7%) victims who were under the influence of alcohol.

Ultrasound and abdominal X-rays are mandatory for the initial examination of patients.

According to ultrasound findings, subcapsular (in 10 patients) and intrahepatic (5 cases) haematomas of the liver without bleeding or injury to other abdominal organs were detected in 15 (5.9%) patients. Subsequent conservative treatment and dynamic ultrasound observation allowed to avoid surgical interventions in 11 cases. In the remaining 4 cases, ultrasound-guided percutaneous drainage of festered subhepatic and subdiaphragmatic haematomas was performed.

Diagnostic and therapeutic videolaparoscopy was performed in 63 (24.7%) patients with stable haemodynamics, in whom ultrasound evidence of hemoperitoneum of not more than 400 ml and no radiological signs of abdominal hollow organ injury were found. In 37 (58.7%) cases, surface liver ruptures of grade 1-2 according to Moore classification (1986) were diagnosed, the bleeding from which was successfully stopped by electrocoagulation. In addition, videolaparoscopic hemostasis was used in these patients to stop bleeding from a ruptured small intestine mesentery (7 cases), laparoscopic resection of the greater omentum with a bleeding hematoma (3), dissection of a retroperitoneal hematoma (3) and cholecystectomy for gall bladder injury (1). In all cases the

operation ended with sanitation and drainage of the abdominal cavity. In patients with liver ruptures operated on laparoscopically without subsequent conversion to wide laparotomy (n=37), programmed relaparoscopy was performed in 3 (8.1%) cases in the early postoperative period through the laparoports set during the first operation (methodology of Prof. A.M. Khadjibayev and U.R. Riskiyev, 2018). There were no indications for relaparotomy in this group of patients.

Conversion to wide laparotomy was performed in 26 (41,3%) cases out of 63 because of the necessity to suture deep liver lacerations (17), to suture deep liver ruptures, to suture liver defect and cholecystectomy (2), to drain common bile duct according to Vishnevsky (1), the presence of combined extensive damage to the right kidney (4), small intestine (1) and duodenum rupture (1). In the latter case the duodenum was ruptured by more than half; therefore, after suturing the liver wound and external unloading drainage of the choledochus, a gastroenteroanastomosis forming with duodenal disconnection and nasoduodenal drainage was performed.

Significant postoperative complications in the conversion group to wide laparotomy were noted in 5 (19.2%) patients. Signs of profuse hemobilia diagnosed by duodenoscopy occurred in 1 patient - relaparotomy, hemihepatectomy was performed. In 1 patient the postoperative period was complicated by suppuration of intrahepatic haematoma, which was drained under ultrasound guidance. In 2 cases a subdiaphragmatic abscess was formed on the right side, which was successfully treated by drainage of the abscess under ultrasound guidance. One patient died (3.8%) with combined liver and duodenum rupture due to purulent-septic complications.

### Conclusion.

The indications for videolaparoscopic technique in patients with closed liver injuries are ultrasound signs of hemoperitoneum with the volume not exceeding 400 ml and absence of radiological signs of the abdominal cavity hollow organ injury under the condition of stable hemodynamics of the patient. Application of the videolaparoscopic technique in diagnostics and treatment of the closed liver injuries in 58,7% of cases enables to eliminate reliably in a mini-invasive way intra-abdominal trauma complications. Early detection of postoperative complications and reduction of relaparotomy frequency is facilitated by the use of programmed videolaparoscopy through previously set laparoports according to the method of Prof. A.M. Khadjibayev and U.R. Riskiev (2018).

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