

MINIMALLY INVASIVE STRATEGIES IN THE MANAGEMENT OF DUODENAL PERFORATIONS: CLINICAL EFFICACY OF ENDOSCOPIC VACUUM THERAPY AND OTSC SYSTEM**Shukhrat Tukhtaevich Urakov****Khamrobek Kadamboyevich Masharipov**

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The aim of the study was to evaluate the clinical effectiveness of modern minimally invasive approaches, including endoscopic vacuum therapy (EVT) and Over-the-Scope Clip (OTSC) systems, in the treatment of duodenal perforations and postoperative complications.

Materials and methods. The study included patients with duodenal injuries of various etiologies, including traumatic, iatrogenic, and postoperative defects. EVT and OTSC systems were applied depending on defect size, localization, and patient condition. Treatment outcomes were assessed based on healing type, complication rate, need for reoperation, duration of hospitalization, and mortality.

Results. The use of EVT demonstrated high clinical effectiveness in managing infected wounds, anastomotic leakage, and retroperitoneal complications. Negative pressure therapy ensured effective evacuation of aggressive fluids, reduced bacterial contamination, stimulated granulation tissue formation, and promoted primary wound healing. The OTSC system proved highly effective in closing small perforations, achieving 100% technical and clinical success without procedure-related complications. In selected cases, combined use of EVT and OTSC further improved outcomes. Minimally invasive approaches allowed avoidance of relaparotomy, reduced hospital stay (10–16 days), and eliminated mortality in the main group. These methods were particularly beneficial in high-risk patients with comorbid conditions.

Conclusion. EVT and OTSC systems represent highly effective and safe minimally invasive alternatives to traditional surgical treatment of duodenal perforations. Their use significantly reduces complication rates, accelerates recovery, and improves overall clinical outcomes, especially in complex and high-risk patient populations.