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MODERN SURGICAL APPROACHES TO REDUCING ANASTOMOTIC COMPLICATIONS AFTER RIGHT HEMICOLECTOMY

Abdurakhmonov Shokhjakhon Ikromjon ugli
Third-year Master's student in Surgery, Andijan State Medical Institute

Scientific Supervisor:
Egamov Sarvarbek Shavkatbekovich
Associate Professor, Department of Surgical Diseases, Andijan State Medical Institute, PhD
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Right hemicolectomy is one of the most frequently performed procedures in colorectal surgery, particularly in patients with tumors and other pathological conditions of the cecum, ascending colon, and hepatic flexure. Despite improvements in surgical techniques and perioperative care, complications related to ileocolic and ileotransverse anastomoses remain an important clinical problem. Anastomotic leakage, postoperative ileus, intra-abdominal infection, bleeding, and delayed restoration of intestinal function can significantly increase morbidity, length of hospital stay, and the need for repeated surgical intervention.

The aim of this study was to analyze modern surgical approaches aimed at reducing anastomotic complications after right hemicolectomy and improving postoperative outcomes. Contemporary scientific literature concerning intracorporeal and extracorporeal anastomosis, stapled and hand-sewn techniques, intestinal perfusion assessment, minimally invasive surgery, and enhanced recovery protocols was reviewed.

The analysis showed that preservation of adequate blood supply to the anastomotic area is one of the most important factors determining successful healing. Excessive tension, tissue ischemia, bowel rotation, and traumatic manipulation may negatively influence anastomotic integrity. The use of minimally invasive surgical techniques may reduce tissue trauma and accelerate postoperative recovery. Intracorporeal anastomosis allows reconstruction of intestinal continuity without extensive exteriorization of the bowel and may reduce mesenteric traction and abdominal wall trauma.

Modern intraoperative perfusion assessment, including indocyanine green fluorescence angiography, may help identify poorly perfused bowel segments before final anastomosis formation. Careful control of staple lines, maintenance of an adequate anastomotic lumen, prevention of contamination, and correct orientation of intestinal segments are also essential technical principles.

Postoperative management plays an equally important role. Early enteral feeding, early mobilization, optimal fluid therapy, and multimodal analgesia within enhanced recovery protocols can promote intestinal motility and reduce the incidence of prolonged postoperative ileus.

In conclusion, prevention of anastomotic complications after right hemicolectomy requires a combination of accurate surgical technique, adequate tissue perfusion, tension-free reconstruction, minimally invasive approaches, and standardized postoperative care. Individual selection of anastomotic technique according to patient anatomy and intraoperative conditions may contribute to safer surgery and improved clinical outcomes.

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