

MODERN CONCEPTS AND CLINICAL EFFICACY OF LASER TECHNOLOGIES IN THE MANAGEMENT OF HEMORRHOIDAL DISEASE

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The aim of the study was to analyze current literature data on the use of laser technologies in the treatment of hemorrhoidal disease and to assess their clinical and pathogenetic significance in modern coloproctology.

Materials and methods. A comprehensive analysis of contemporary domestic and international literature was performed, including data on the pathogenesis of hemorrhoidal disease, evolution of surgical techniques, indications and contraindications for treatment, and comparative characteristics of traditional, minimally invasive, and laser-based interventions. Particular attention was paid to laser hemorrhoidoplasty as a modern minimally invasive technique.

Results. The analysis demonstrated that hemorrhoidal disease is a multifactorial pathology associated with venous stasis, increased intra-abdominal pressure, connective tissue degeneration, and inflammatory mechanisms. Traditional surgical methods, while effective, are associated with significant postoperative pain, prolonged recovery, and a higher risk of complications. Minimally invasive techniques have improved treatment outcomes; however, their effectiveness is limited in advanced stages of the disease. In

this context, laser hemorrhoidoplasty represents a pathogenetically justified approach that allows targeted coagulation of vascular structures with minimal damage to surrounding tissues. Clinical advantages of laser technologies include reduced postoperative pain intensity, minimal blood loss, shortened hospital stay, and accelerated patient recovery. The method is particularly effective in patients with grade II–III hemorrhoidal disease and demonstrates a favorable safety profile.

Conclusion. Laser technologies represent a promising and clinically effective direction in the treatment of hemorrhoidal disease. Their use allows optimization of surgical outcomes by reducing tissue trauma, minimizing postoperative complications, and accelerating rehabilitation. The integration of laser hemorrhoidoplasty into clinical practice contributes to improving the quality of life of patients and reflects the current trend toward minimally invasive and pathogenetically oriented treatment strategies.

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