Led Therapy In Complex Treatment of Acute Paraproctitis

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Received: Nov 10, 2023; Accepted: Des 10, 2023; Published: Jan 10, 2024;

Abstract: One of the most common diseases in emergency proctology is acute paraproctitis, the incidence of which, according to our data, occupies a leading position in the structure of proctological diseases. The number of these patients and the increasing resistance of microbes require the development of more effective treatments. A fundamentally new direction here is phototherapy. As part of studying the effect of phototherapy on the course of an acute purulent-inflammatory process and the dynamics of wound healing, a study was performed on 75 laboratory rats. It has been proven that photodynamic therapy has an antibacterial effect and accelerates reparative processes. The data obtained formed the basis for the clinical part of the study.

Keywords: Acute paraproctitis, diseases, effective treatments, photodynamic therapy.

INTRODUCTION

Purpose of the study. Improving the results of treatment of acute paraproctitis using phototherapy.

Material and methods. The work used a LED device "Romashka" and a photosensitizer "Photolon". The study was conducted on 28 patients with acute paraproctitis, who were divided into two groups of 14 people. The control group included patients treated in the traditional way, the main group included patients who received complex treatment, including phototherapy. When studying the structure of groups, it was found that the majority of sick people are people of working age from 25 to 55 years, mostly men. All patients underwent surgery. The resulting pus was collected for bacterial culture. In patients in the control group, the operation was completed by placing a gauze turunda with Levomekol ointment.

In patients of the main group, the wound cavity was tamponed for 5 minutes with a napkin moistened with a Photolon solution. Then photodynamic therapy was carried out for 5 minutes with an emitter with a wavelength of 630 nm, after which the wound was also drained. Photodynamic therapy was carried out in the first phase of the inflammatory process. Photoregulatory therapy was then administered daily and topical ointments were used. Patients in the control group were managed in the traditional way. The criteria for the effectiveness of treatment were the general condition of the patient, the intensity and duration of the pain syndrome, the presence of purulent discharge, the time of appearance of granulation and epithelization. Days 1, 4, 7, 10, 15 after surgery were selected for evaluation, when material was taken for cytological examination, and discharge from the wound was taken for bacterial culture.
**Results and discussion.** The dynamics of general and local manifestations in the groups were different. On the 1st day, patients in the main group had significantly less pain. By the 4th day, for many it disappeared, body temperature returned to normal, skin hyperemia and tissue infiltration in the wound area disappeared, granulations began to appear. By the 7th day, the purulent discharge almost completely stopped, good granulations appeared with active marginal epithelization of the wounds, the growth of colonies of microorganisms decreased, laboratory parameters did not differ from normal. In patients in the control group, the incidence of microbial colonies remained high, which indicated the continuation of purulent-inflammatory processes in the wound. In the cytological preparations of the control group, a large number of microbial flora, neutrophilic leukocytes were determined, and in the preparations of the main group - layers of epithelial cells and fibroblasts, microbial bodies and neutrophilic leukocytes were single. On the 10th day, the wounds significantly decreased in size, the purulent discharge completely stopped, which was not so pronounced in patients in the control group. By the 15th day, the wounds were almost completely healed, the scar tissue was well developed. Wounds in patients in the control group continued to heal by secondary intention. We did not detect any reactions during phototherapy.

**Conclusions.** The use of phototherapy allows faster relief of pain and inflammation, suppresses the growth of microbes, stimulates regeneration, which promotes faster cleansing and healing of wounds, and reduces treatment time. A new method for the treatment of acute paraproctitis has been developed, which does not cause adverse reactions and is easily tolerated by patients.

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