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**ANALYSIS OF ROUTINE METHODS OF PLASTIC SURGERY FOR
PRESSURE SORES IN THE SACRAL REGION**

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Abstract: An analysis of postoperative outcomes revealed that traditional methods of plastic closure of soft tissue defects in the sacral region resulted in a high rate of postoperative complications and unsatisfactory surgical outcomes in both groups.

Key words: bed sore, plastic surgery, soft tissue defects.

Relevance. Researchers have conducted scientific studies on the surgical treatment of purulent-inflammatory diseases of soft tissues. The clinical course of this pathology and its surgical correction were studied (1, 3). Modern approaches to the treatment of purulent-necrotic lesions of soft tissues were demonstrated (2, 4). The results of surgical treatment of purulent diseases of soft tissues were studied (3, 5). A number of scientific studies have been conducted in Uzbekistan on the surgical treatment of purulent-inflammatory diseases of soft tissues. The clinical course of this pathology and its surgical correction have been studied (1, 7, 9, 11). Modern approaches to the treatment of purulent-necrotic lesions of soft tissues have been demonstrated (2, 4, 6, 8, 10). The results of surgical treatment of purulent diseases of soft tissues have been studied (1, 11, 13). Certain methods of reconstructive interventions for purulent-inflammatory diseases of soft tissues have been developed (2, 12).

Individual methods of reconstructive interventions for purulent-inflammatory diseases of soft tissues were developed.

The purpose of the study is to analyze Results of traditional methods of plastic closure of soft tissue defects in patients with sacral pressure ulcers.

Material and methods. The results of surgical treatment of 53 patients with sacral pressure ulcers were analyzed.

Results and discussion. The presence of blind cavities with different directions of propagation was initially detected in 8 (27.6%) patients operated on according to Thiersch and in 19 (79.2%) patients in the Limberg group ($\chi^2 = 14.21$; $p < 0.001$). This fact reflects that in patients of the second group, a pronounced volumetric tissue deficiency developed, whereas in the first group, the wound defect was more often superficial in nature without significant deepening.

The wound microbial counts were similar, but clear differences in the microflora structure were identified. Under these conditions, the Limberg technique was chosen to cover the defect, taking into account its depth. This type of surgery was also chosen due to the impossibility of wound closure with a free skin flap, which did not allow for adequate tissue volume replacement.

Laboratory parameters of the systemic inflammatory response in patients in the control group showed differences. Hb levels among patients operated on using the Thiersch method were insignificantly higher. The indicator for the subgroup of patients operated on using the Limberg method does not reflect a significant difference between patients with different sacral wound depths. Although the nature of the granulation tissue varied, we observed in most cases patients with pale granulation tissue and low bleeding when treated with a surgical instrument.

The acute phase of inflammation parameters also showed significant differences, in particular the CRP level was 28.6 ± 6.4 mg/l in the subgroup of patients operated on using the Thiersch method and 36.2 ± 9.8 mg/l in the subgroup of patients who underwent sacral wound closure using the Limberg method ($p < 0.05$), which was combined with an increase in ESR ($p < 0.05$). Cytological characteristics of granulating wounds in patients of the control group, performed on the eve of sacral closure, demonstrated certain differences in the cellular composition depending on the macroscopic picture of the sacral defect and the closure method used. In the subgroup of patients operated on using the Thiersch method, the average proportion of neutrophils was $58.4 \pm 12.3\%$, whereas when using Limberg closure it was higher by $14.2 \pm 2.2\%$ with a statistically significant difference. At the same time, we also found an increase in the content of degenerative forms of neutrophils, which changed from $21.3 \pm 6.8\%$ to $34.5 \pm 9.2\%$, which could reflect more pronounced signs of destruction of the cellular element and the preservation of the activity of the local inflammatory process at the cellular level.

Of cytogram types confirmed the identified differences, especially when the inflammatory cytogram type was recorded 2.3 times more often among patients subsequently operated on using the Limberg method than among patients operated on using the Thiersch method ($\chi^2 = 8.74$; $p = 0.003$).

The conducted analysis of postoperative results showed that when using traditional methods of plastic closure of soft tissue defects of the sacral region, a high frequency of postoperative complications and unsatisfactory results of the operation was observed in both groups. Thus, complete engraftment of the flap was achieved only in 4 patients (13.8%) using the Thiersch method and in 1 patient (4.2%) with Limberg plastic surgery without statistically significant differences ($\chi^2 = 1.34$; $p = 0.247$). Partial

engraftment was noted in 2 (6.9%) and 5 (20.8%) patients, respectively ($\chi^2 = 2.21$; $p = 0.137$), which reflects the differences in the nature of the wound process.

Partial flap rejection was observed in 4 patients (13.8%) in the subgroup operated on using the Thiersch method and in 3 patients (12.5%) in the subgroup after Limberg plastic surgery ($\chi^2 = 0.02$; $p = 0.888$). Epidermal lysis was recorded in 37.9% and 29.2% of cases (in 11 and 7 patients), respectively ($\chi^2 = 0.46$; $p = 0.497$), whereas complete graft rejection was noted in 27.6% and 33.3% of patients ($\chi^2 = 0.21$; $p = 0.646$). The overall complication rate was 86.2% (25 patients) operated on using the Thiersch method and 79.2% (19 patients) after Limberg plastic surgery ($\chi^2 = 0.46$; $p = 0.497$).

When moving on to an integrated assessment of the results, it was found that the proportion of good outcomes remained low and amounted to 13.8% among patients (4 patients) operated on using the Thiersch method and 4.2% (1 patient), respectively, operated on using the Limberg method ($\chi^2 = 1.34$; $p = 0.247$).

Satisfactory results were achieved in 44.8% and 50.0% of patients in the respective subgroups ($\chi^2 = 0.14$; $p = 0.708$), with healing by secondary intention in a significant proportion of cases. Unsatisfactory outcomes were noted in 41.4% and 45.8% of patients (12 and 11 cases in the respective subgroups; $\chi^2 = 0.58$; $p = 0.750$). We observed a similar outcome in the postoperative period in a clinical case where a patient with a superficial pressure ulcer after Thiersch plastic surgery developed areas of epidermal lysis with preservation of the dermal layer on the 4th postoperative day, which required long-term and regular local treatment. Meanwhile, in another clinical case, a patient with a deep defect in the sacral region developed partial flap rejection with the formation of marginal necrosis after Limberg plastic surgery, despite the preserved blood flow in the central part of the transplant.

CONCLUSIONS.

1. The analysis of postoperative results showed that when using traditional methods of plastic closure of soft tissue defects in the sacral region, a high frequency of postoperative complications and unsatisfactory surgical results was observed in both groups.

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