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Mastectomy skin necrosis after microsurgical breast reconstruction



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ABSTRACT

Background: Mastectomy skin necrosis represents a significant clinical morbidity after immediate breast reconstruction. In addition to aesthetic deformity, necrosis of the native mastectomy skin may require debridement, additional reconstruction, or prolonged wound care and potentially delay oncologic treatment. This study aims to evaluate patient and procedural characteristics to identify predictors of mastectomy skin necrosis after microsurgical breast reconstruction.

Methods: A retrospective review was performed of all immediate microsurgical breast reconstructions performed at a single academic center. Patient records were queried for age, diabetes, active smoking, previous breast surgery, preoperative radiation, preoperative chemotherapy, body mass index, mastectomy type, mastectomy weight, flap type, autologous flap type, and postoperative mastectomy skin flap necrosis.

Results: There were 746 immediate autologous microsurgical flaps performed by three plastic surgeons at our institution during the study period. The incidence of mastectomy skin flap necrosis was 13.4%. Univariate analysis revealed a significantly higher incidence of mastectomy skin necrosis in patients with higher mastectomy weight ($P < 0.001$), higher autologous flap weight ($P < 0.001$), higher body mass index (0.002), and diabetes ($P = 0.021$). No significant association was found for age, smoking, prior breast surgery, preoperative chemotherapy or radiation, or mastectomy type. Multivariate analysis demonstrated statistically significant associations between mastectomy skin necrosis and both increasing mastectomy weight (odds ratio 1.348 per quartile increase, $P = 0.009$) and diabetes (odds ratio 2.356, $P = 0.011$).

Conclusions: Increasing mastectomy weight and coexisting diabetes are significantly associated with postoperative mastectomy skin necrosis after microsurgical reconstruction. These characteristics should be considered during patient counseling, procedure selection, operative planning, and intraoperative tissue viability assessment.

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