

Risk Factors and Outcome of Free Tissue Transfer at a Tertiary Care Referral Center

Authors : Majid Khan

Abstract : Introduction: In this era of microsurgery, free flap holds a remarkable spot in reconstructive surgery. A free flap is well suited for composite defects as it provides sufficient and well-vascularized tissue for coverage. We report our experience with the use of the free flaps for the reconstruction of composite defects. Methods: This is a retrospective case series (chart review) of patients who underwent reconstruction of composite defects with a free flap at Aga Khan University Hospital, Karachi (Pakistan) from January 01, 2015, to December 31, 2019. Data were collected for patient demographics, size of the defect, size of flap, recipient vessels, postoperative complications, and outcome of the free flap. Results: Over this period, 532 free flaps are included in this study. The overall success rate is 95.5%. The mean age of the patient was 44.86 years. In 532 procedures, there were 448 defects from tumor ablation of head and neck cancer. The most frequent free flap was the anterolateral thigh flap in 232 procedures. In this study, the risk factor hypertension ($p=0.004$) was found significant for wound dehiscence, preop radiation/chemotherapy ($p=0.003$), and malnutrition ($p=0.005$) were found significant for fistula formation. Malnutrition ($p=0.02$) and use of vein grafts ($p=0.025$) were significant factors for flap failure. Conclusion: Free tissue transfer is a reliable option for the reconstruction of large and composite defects. Hypertension, malnutrition, and preoperative radiotherapy can cause significant morbidity.

Keywords : free flap, free flap failure, risk factors for flap failure, free flap outcome

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