
Phase 1

Class of 2022

1-2020

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Recommended Citation

Vasudevan, Swapna and Bovenzi, MD, Cory, "Late Complications of Free Flaps in Head and Neck Microvascular Reconstruction" (2020). *Phase 1*. Paper 10.

https://jdc.jefferson.edu/si_ctr_2022_phase1/10

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Late Complications of Free Flaps in Head and Neck Microvascular Reconstruction

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Introduction: Late free flap complications (LFFC) in head and neck reconstructive surgery occur over 72 hours postoperatively and result in flap loss in 97% of cases. Due to the rarity of LFFC, there is minimal research regarding risk factors for their development. Identifying risk factors for LFFC will result in improved monitoring of patients to prevent flap loss. This study aims to identify risk factors for the development of LFFC.

Methods: The target population of this retrospective cohort study was 116 patients who had undergone an Orbital Exenteration at Thomas Jefferson University Hospital (TJUH) and had LFFC. Data was obtained from TJUH patient records. Logistic regression analysis was used to determine risk outcomes.

Results: There were three major categories of LFFC found, including flap failure, flap infection, and unknown etiology. 71% patients had flap failure which had an associated risk with smoking and pre-existing coagulopathy. 23% of patients had flap infection which had an associated risk with immunosuppression. Fistula formation following flap infection had no associated risks with immunosuppression. 6% of patients presented with flap loss with unknown etiology.

Discussion: Flap failure was the most common LFFC and was associated with smoking and coagulopathy. Further research can be conducted regarding the link between vascular disorders and the development of flap failure. The results advocate for the monitoring of high-risk patients for over 72 hours postoperatively to prevent LFFC.