

DERMATOLOGICAL SURGERY

## A RETROSPECTIVE ANALYSIS OF COMPLICATION RATES ASSOCIATED WITH AURICULAR RECONSTRUCTION AFTER TUMOR SURGERY: A MANAGEMENT ALGORITHM

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**Introduction:** External ear reconstruction after skin cancer resection aims to restore the auricular aesthetic appearance and function. For this, dermatosurgeons require comprehensive understanding of auricular anatomy and proper knowledge of operative techniques for primary reconstruction and postoperative wound care in cases with postoperative complications.

**Objective:** To assess incidence and nature of postoperative complications after external ear reconstructions following skin tumor resections in order to develop preventive measures for complication management.

**Methods:** We retrospectively reviewed 137 patients who underwent complex reconstruction procedures of the external auricle following skin cancer surgery. 86,13% of surgeries were performed in local anesthesia. Procedures included wedge excisions, grafts and local flaps. The data was retrieved from the patient file archives.

**Results:** Regarding early complications, postoperative pain was most common (31,38% of subjects) while bleeding/hematoma only occurred in 6 patients (4,37%). Venous flap congestion was documented in 7 subjects (5,1%), surgical site infection requiring intravenous antibiotics and partial flap/graft necrosis, requiring secondary surgery in 4 patients (2,91%).

Reconstruction of larger defects (>1 cm) was associated with a higher incidence of early postoperative complications, probably due to the complex reconstruction, longer surgery time and cartilage manipulation. Late surgical site complications (helical rim alteration etc) occurred in 7 subjects, all requiring surgical correction. A shortening of the auricle was identified in 11 subjects (8,02%) undergoing reconstruction of midhelix/helix defects; this



was, however not perceived as aesthetically impairing by patients.

**Conclusion:** The incidence of postoperative complications after surgical resection and reconstruction of the external ear is low. The use of perioperative prophylactic antibiotics for larger excisions or immunocompromised patients, the adequate use of analgesia, applying compressive dressings together with an appropriate operative technique significantly decrease the risk of postsurgical complications. Late postsurgical complications may require correction surgery, which is why following up patients 4-6 months after initial surgery is essential.

