Anterior Pedicle Lateral Nasal Wall Flap: A Novel Technique for the Reconstruction of Anterior Skull Base Defects

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ABSTRACT

Objectives:
Expansion of the clinical indications for ablative endoscopic endonasal approaches has behooved us to search for new reconstruction alternatives. We present the anatomic foundations of a novel anterior pedicled lateral nasal wall flap (Hadad-Bassagaisteguy 2 or HB2 flap) for the vascularized reconstruction of anterior skull base defects.

Study Design:
Anatomical description. Feasibility study. Technical report

Methods:
Using a cadaveric model, we investigated the feasibility of harvesting an anteriorly based mucoperiosteal flap from the lateral nasal wall. We then applied the techniques developed in the anatomical laboratory to reconstruct two patients with defects resulting from the endoscopic endonasal resection of esthesioneuroblastomas and one patient with an extensive meningoencephalocele of the anterior cranial fossa.

Results:
HB2 flaps were harvested and transposed to reconstruct anterior skull base defects in cadaveric specimens; and, subsequently, in three patients. The HB2 flap provided adequate coverage in the cadaveric model, as well as clinically in our three patients. Their postoperative healing was uneventful.

Conclusions:
The HB2 flap is a feasible alternative for the reconstruction of anterior skull base defects in select patients.

REFERENCES: