Increasing indications for endoscopic endonasal approaches have led neurosurgeons to develop new reconstruction techniques for larger skull base defects. Vascularized grafts have been a great adjunction to reduce the rate of cerebrospinal fluid leak and can also be used to cover exposed critical structures such as the internal carotid artery. The nasoseptal flap and the inferior or middle turbinate flap are thus widely used in endoscopic skull base surgery, but may be insufficient for very large defects.

Boetto et al. presented a new mucosal flap used to cover large skull base defects in which the mucosa of the inferior turbinate, inferior meatus, nasal floor, and nasal septum is harvested in 1 piece keeping both vascular pedicles intact (inferior turbinate and septal arteries).

They described the surgical technique to harvest a combined inferior turbinate-nasoseptal flap.

Technical pearls and surgical pitfalls are described through 2 clinical cases in which the nasoseptal mucosa was partially damaged during a previous surgery, rendering the nasoseptal flap insufficient by itself. The flap is harvested thanks to 2 mucosal cuts: a first circular cut around the choanal arch and the junction between the hard and the soft palate, and a second one combining classical cuts of the nasoseptal flap and the inferior turbinate flap.

The inferior turbinate-nasoseptal flap can be a useful alternative in patients whose septal mucosa was partially damaged and/or with very large postoperative skull base defects [1].

1)
Boetto J, Labidi M, Watanabe K, et al. Combined Nasoseptal and Inferior Turbinate Flap for Reconstruction of Large Skull Base Defect After Expanded Endonasal Approach: Operative Technique. Oper Neurosurg (Hagerstown). 2019;16(1):45-52. doi:10.1093/ons/opy046