

## ENDOSCOPIC ENDONASAL CRANIAL BASE RECONSTRUCTION

Martin Jurlina

ENT Department, University Hospital Center, Zagreb, Croatia

Reconstruction is a critical phase of every endonasal endoscopic surgical procedure which results in cranial base defect. Essential goal of every quality endoscopic reconstructive cranial base surgical procedure is to provide airtight, watertight and mechanically stable barrier between spaces of the nose and paranasal sinuses and cranial base structures in order to achieve optimal functional result. That being said, effective dural reconstruction represents critical part of every cranial base reconstruction. Reconstruction of dura following endoscopic resection of malignant cranial base tumours is especially demanding because ablative part of surgical procedure usually results in dural defects of considerable diameter. As the cranial base diameter increases, it is becoming more difficult to meet these goals. While it is relatively easy to reconstruct small cranial base defects using single layer reconstruction in an overlay manner, large cranial base defects demand multilayer reconstruction with the use of axial vascularized flaps. For the reconstruction of demanding post ablative cranial base defect in endoscopic endonasal surgery for malignant cranial base tumors we use multilayer technique. We insist on autologous tissue, employing two layers of avascular free fascial grafts in an underlay and overlay fashion following axial flap in an overlay fashion. Despite the fact that, in nowadays, free fascia lata avascular graft represents golden standard in endoscopic dural reconstruction following tumour resection, we have been regularly using free temporalis muscle fascia graft for endoscopic dural reconstruction after ablative part of surgical procedure for the last five years. After dural reconstruction with two temporalis muscle fascia free grafts applied in an underlay and overlay fashion, axial vascularised flap is applied in an overlay fashion. We are routinely using extra cranial pericranial flap or, occasionally, nasal septal flap. In this article we would like to expose essentials of surgical technique and to present free temporalis muscle fascia graft as material of at least equal quality in comparison to free fascia lata graft for reconstructive purpose.