Modified one-piece extended transbasal approach for resection of giant anterior skull base sinonasal teratocarcinosarcoma

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The transbasal approach is considered the workhorse for removing a variety of benign and malignant tumors of the anterior skull base. In some instances, removal of the supraorbital bar in addition to a standard bifrontal craniotomy (extended transbasal approach) allows for additional basal exposure, thereby minimizing brain retraction. In this operative video atlas report, the authors describe and demonstrate a modified one-piece extended transbasal craniotomy that incorporates the anterior wall of the frontal sinus. The inferior margin of the osteotomy is made as low as possible through the anterior wall of the frontal sinus, starting at the nasofrontal suture and extending laterally over both orbital rims by following the contour of the anterior skull base in the coronal orientation. This modification provides an excellent line of sight to the anterior skull base without any obstruction from bone overhang, which obviates the need for any supraorbital rim removal. Removal of a giant anterior skull base sinonasal teratocarcinosarcoma via the modified one-piece extended transbasal approach is demonstrated in this operative video atlas. The authors describe and illustrate the operative nuances and surgical pearls to safely and efficiently perform the approach, tumor resection, and multilayered reconstruction of the cranial base defect.

The video can be found here: http://youtu.be/x1lTtfqKIV0.

Key Words • transbasal approach • skull base • sinonasal teratocarcinosarcoma • video