

## **Endoscopic Endonasal Approach To The Craniovertebral Junction: Anatomical And Cases Review**

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### **Introduction:**

The craniovertebral junction (CVJ) has complex and unique anatomical structures of the skull base. Several disorders that compromises the ventral portion of this region, including rheumatoid arthritis, basilar invagination, Chiari type II, and traumatic fracture dislocation, should determinate in an irreducible atlantoaxial dislocation with the subsequent brain stem and/or spine cord compression.

For decades the transoral approach with its different extended modifications has been the gold standard procedure. Since the advent of the endoscopic endonasal approach (EEA) for transsphenoidal procedures, that has been successfully expanded to treat other skull base diseases, including CVJ abnormalities.

### **Report:**

The aim of this report is to introduce a brief endoscopic endonasal anatomical review with cadaveric specimens and to present two illustrative cases of fully endoscopic odontoidectomy, one case of a patient with rheumatoid arthritis with progressive cervicomedullary compression even though previous posterior fusion and a second case of a patient with irreducible basilar invagination with hindbrain herniation and syringomyelia. In both cases, complete resection of the odontoid was achieved with no significant morbidity and good neurological recovery.

### **Conclusion:**

The endoscopic endonasal odontoidectomy is a feasible approach for anterior decompression for pathologies at the cervicomedullary junction. It provides an adequate surgical corridor with less morbidity and good neurological outcome.