A Rare Late Presentation of Os-Odontoideum with Severe Progressive Myelopathy

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Os odontoideum is a rare condition, first described in the 19th century. It is an independent ossicle of variable size separated from the hypoplastic dens. It is classified into two anatomic types, dystopic and orthotopic. The condition is commonly seen in males in their second and third decades, and may be found incidentally or manifests as cervical myelopathy. Descriptions of the causes, natural history, optimal management, and surgical interventions are limited and a subject of debate.

We report a fifty-seven-year-old female who presented with features of severe progressive cervical myelopathy and severe neck pain, dizziness, and gait imbalance. Imaging revealed os odontoideum with myelomalacia. She underwent C1-C2 closed reduction and posterior fusion using Goel and Harms technique. Symptomatic improvement in terms of pain and balance was observed postoperatively and during follow-up.

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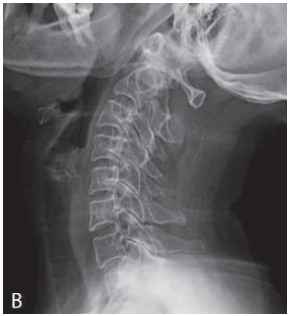
Plain radiographs of the cervical spine along with flexion and extension views revealed the presence of os odontoideum (dystopic type), see figure 1 (A-D). Further imaging revealed significant thinning of the spinal cord (2 mm) and high signal within the cord consistent with myelomalacia, see figure 2 (A-C).

1 (A)



1 (B)

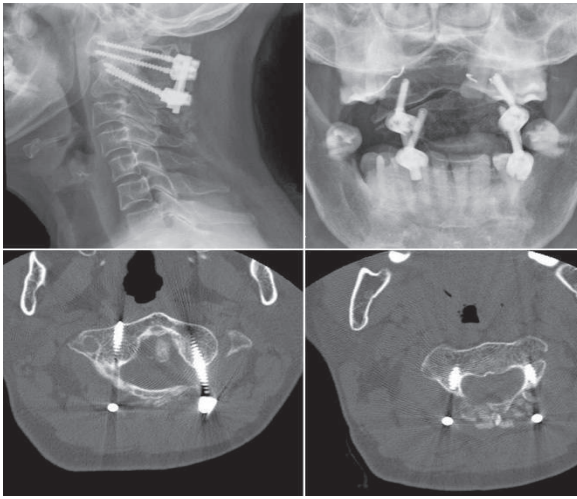


Figure 3: Postoperative Images Showing Poster Instrumented C1-C2 Fusion According to Goel and Har Technique

The postoperative period was uneventful. The patient was k

strategies: resecting the compressive pathology, or by releasing C1-C2 facet joints anteriorly or posteriorly. The decompression should be followed by stable internal fixation and fusion[12].

Current clinical and radiological outcomes of surgical treatment of os odontoideum indicate that Goel and Harms fusion, which was used in our case, is considered a sound option for posterior C1-C2 arthrodesis in adults and even pediatric cases of os odontoideum[13,14].

The range of cervical rotation decreases by approximately 40%–50% following atlantoaxial fusion. Older adults usually adapt well to this decrease. Nevertheless, avoiding serious complications of the neural and vascular compression weighs out such outcome[5].

As implemented in the reported case, the current advancements in contemporary segmental screw fixation methods improved surgical outcome regarding fusion rates and C1-C2 stability. These advancements also allowed us to avoid halo-vest immobilization which helped to improve postoperative rehabilitation[15].

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