

Clinical-Medical Image

Odontoideum Bone and Not a Fracture

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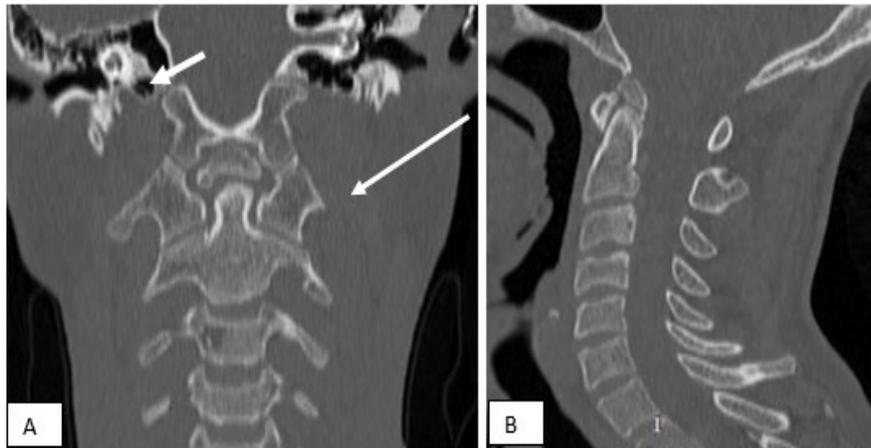


Figure 1: Cervical CT scan with 3D reconstruction (A: Coronal section; B: Sagittal section): The odontoideum bone consists of a free ossicle with smooth, sclerotic edges, usually half the size of a normal dens (white arrow). The ossicle is located in the position of the normal odontoid is typically referred as orthotopic.

Clinical Image

Odontoideum bone is a congenital or posttraumatic abnormality of the second cervical vertebrae in which the odontoid process is separated from the body of the axis by a transverse gap. The lesion is frequently asymptomatic, CT scans with reconstruction views and MRIs are helpful in making the diagnostics. The aetiology of odontoideum bone is highly debated, it is of embryonic origin, vascular or traumatic origin. The congenital theory is based on a presumed failure of fusion of the ossification centers of the odontoid to the body of C2, which supported by the association of odontoideum bone with other congenital ailments such as Klippel–Feil syndrome, trisomy 21 or multiple epiphyseal dysplasia. Cervical CT scan with multiplanar reconstruction is the key investigation shows that odontoideum bone is an independent ossicle of variable size with smooth circumferential margins separated from a foreshortened odontoid peg (Figure 1). The ossicle stands apart from the hypoplastic dens and can adopt two anatomic types: orthotopic and dystopic. An ossicle located in the position of the normal odontoid is referred to as orthotopic. The main complications are the atlo-axial instability and to the vital risk of bulbomedullary compression.

Keywords: Odontoideum bone; Cervical CT; Reconstruction

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