

Subdental Sychondrosis Fracture

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History

15 month old male in motor vehicle accident.

Diagnosis

Subdental Sychondrosis Fracture

Discussion

The right and left dental ossification centers are separated from the body of the axis by the subdental sychondrosis. The subdental sychondrosis usually fuses by adolescence but may variably persist into adulthood. The subdental sychondrosis is a potential weak spot and prone to hyperflexion injury. Since the sagittal fulcrum of the cervical spine is in the upper cervical region in children compared to the lower cervical region in adults, this vulnerability is potentiated. Remnants of the sychondrosis persist in upto 87% of adults and may account for the high incidence of type 2 dens fractures and poor healing (pseudoarthrosis).

Findings

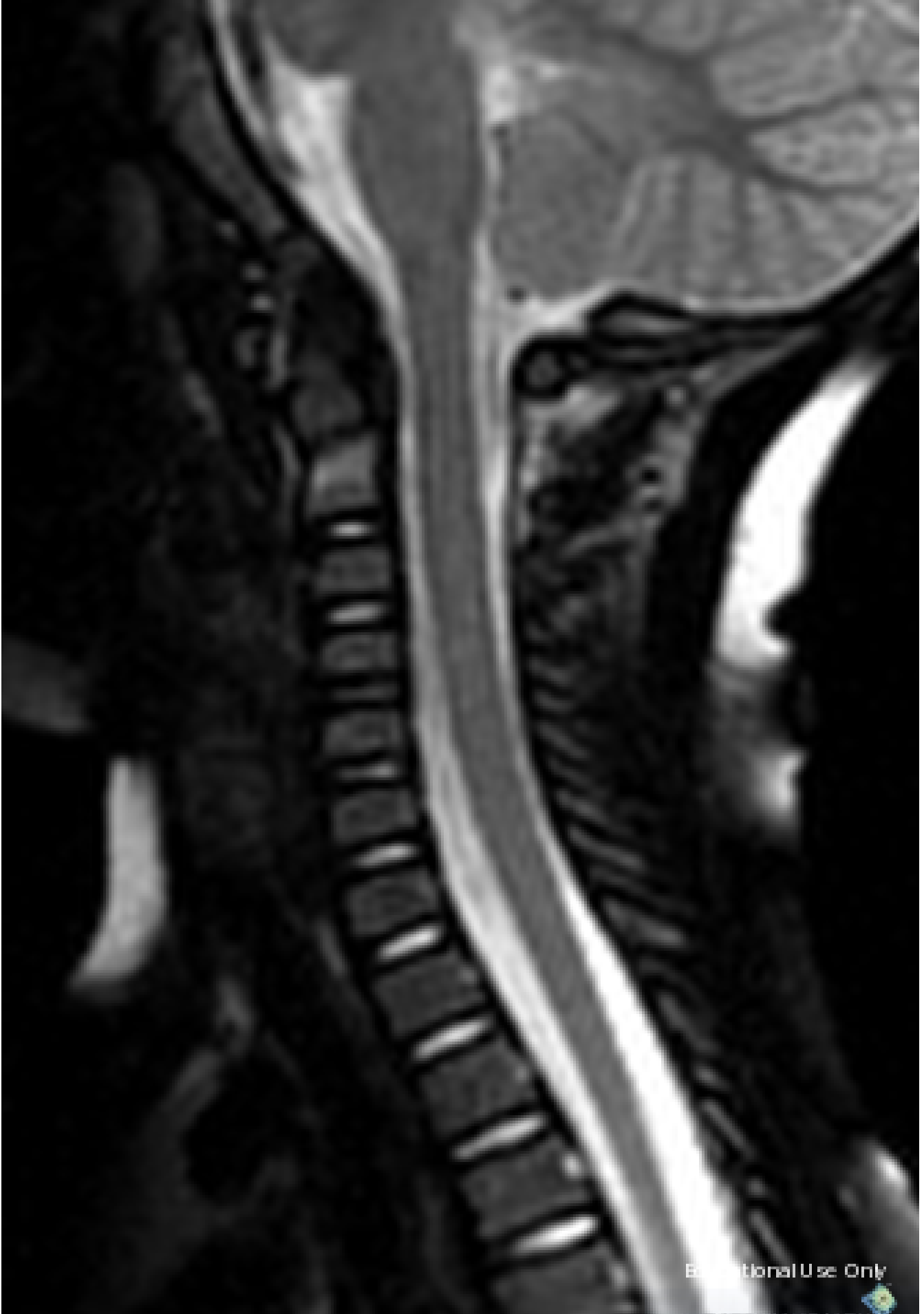
CT-Nondisplaced transverse fracture through the dental sychondrosis.

MR-Type 2 odontoid fracture; edema in body of the axis subjacent to the sychondrosis.

Reference

Gebauer M, Lohse C, Barvencik F, et al. Subdental sychondrosis and anatomy of the axis in aging: A histomorphometric study in 30 autopsy cases. *Eur Spine J* (2006); 15:292-298.





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