

C2-C3 Injury

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History

7 year old male who fell about 8 feet from tree.

Diagnosis

C2-C3 Ligamentous Avulsion

Discussion

Pseudo-subluxation and pseudo-dislocation are terms applied to physiologic motion of the cervical spine in children less than 8 years of age. This occurs most often at C2-C3 and to a lesser extent at C3-C4. The motion is likely related to a combination of 1) "normal" ligamentous laxity of childhood, 2) shallow angle of inclination of the facets, and 3) increased mobility of C2-C3 since it is a transition zone between the cervicocranium and the cervical spine. In order to make this diagnosis, the posterior spinolaminar line and posterior arches must be intact. While the CT at C2-C3 is normal, ligamentous disruption and soft tissue edema are demonstrated on MRI.

Findings

CT-Axial and sagittal reformatted images demonstrate cortical avulsion from posterior aspect of dens and 3 mm of anterior subluxation of C2 relative to C3.

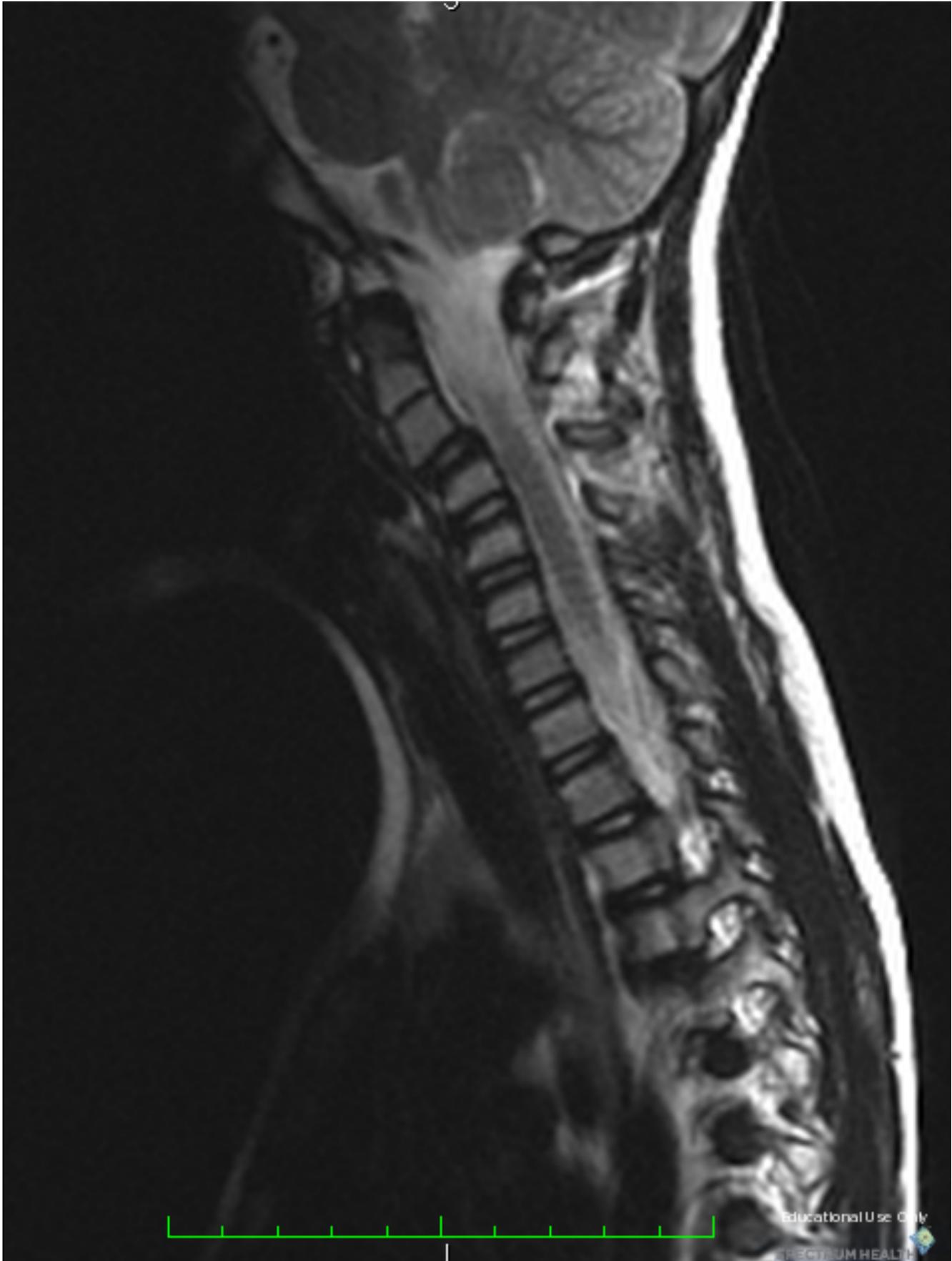
MR-Sagittal T1, T2 and IR images demonstrate disruption of ligamentum flavum and posterior longitudinal ligament at C2-C3, anterior subluxation of C2 relative to C3, and posterior interspinous edema.





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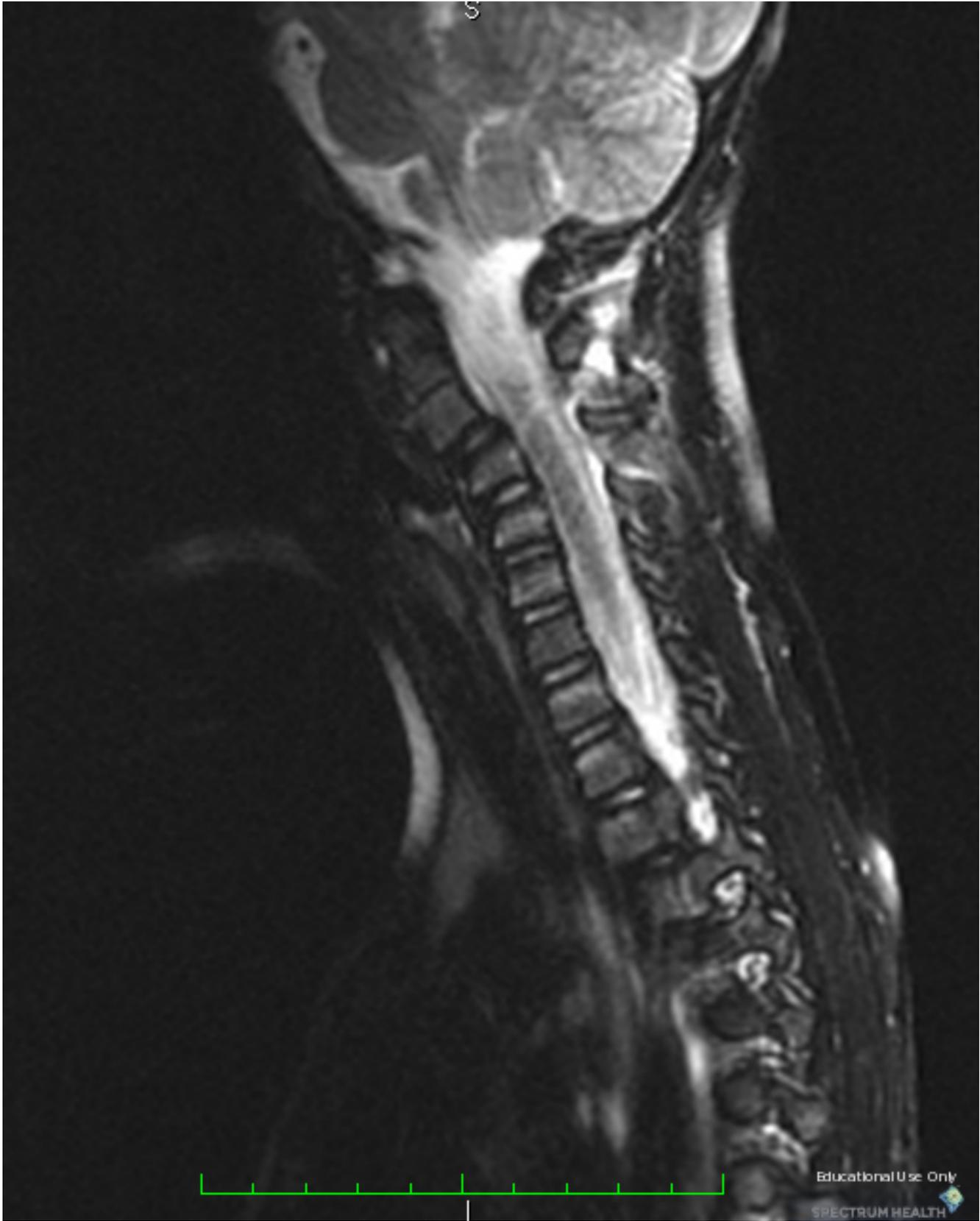
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