Spinous Process Avulsion Fracture
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History
10 year old female restrained passenger in a motor vehicle accident with Glasgow Coma Score of 15.

Diagnosis
Spinous Process Avulsion Fracture

Additional Clinical
Clinical and radiographic injuries include: seatbelt pattern contusion, right clavicle fracture, left pneumothorax and pulmonary contusions, and splenic laceration.

Discussion
Spinous process avulsion fractures occur as a result of forced flexion against the opposing action of the interspinous and supraspinous ligaments. This fracture has been also referred to as "clay shoveler's fracture", "coal miner's fracture", "shoveler's fracture", and "shoveler's disease". The injury occurs most frequently at C7, followed by C6 and then T1. The injury is limited to the spinous process; it is unusual for the fracture to extend to the lamina. The fracture line is oblique, perpendicular to the orientation of the interspinous ligament.

Findings
CT-Oblique coronal fracture through spinous process of C6 with minimal separation of fragments.
MR-Fracture associated with paraspinous muscular edema.

Reference
Harris JH and Mirvis SE. The Radiology of Acute Cervical Spine Trauma, 3rd Ed. 1996.
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