

Hangman's Fracture, Effendi Type I

Joseph Junewick, MD FACR

08/29/2010

History

Teenager involved in a motor vehicle accident.

Diagnosis

Hangman's Fracture, Effendi Type I

Discussion

Hangman fractures were initially described as the result of judicial hangings with a submental location of the knot of the noose but now this fracture is almost exclusively seen related to motor vehicle accidents. Fractures can occur anywhere in the ring of C2 and are usually asymmetric. Classification is determined by the displacement of the body and inferior facets of the axis. Type I is characterized by nondisplacement. In Type II the body of the axis is tilted or displaced anteriorly with asymmetry of the C2-C3 disc space. Anterior tilting or displacement of the axis body and locking of the C2-C3 facets represents a Type III injury. Hangman fractures are associated with concussive brain injuries, facial injury, tracheal or laryngeal injury, chest trauma and vertebral artery dissection; cord injury is unusual since the fracture is intrinsically decompressive.

Findings

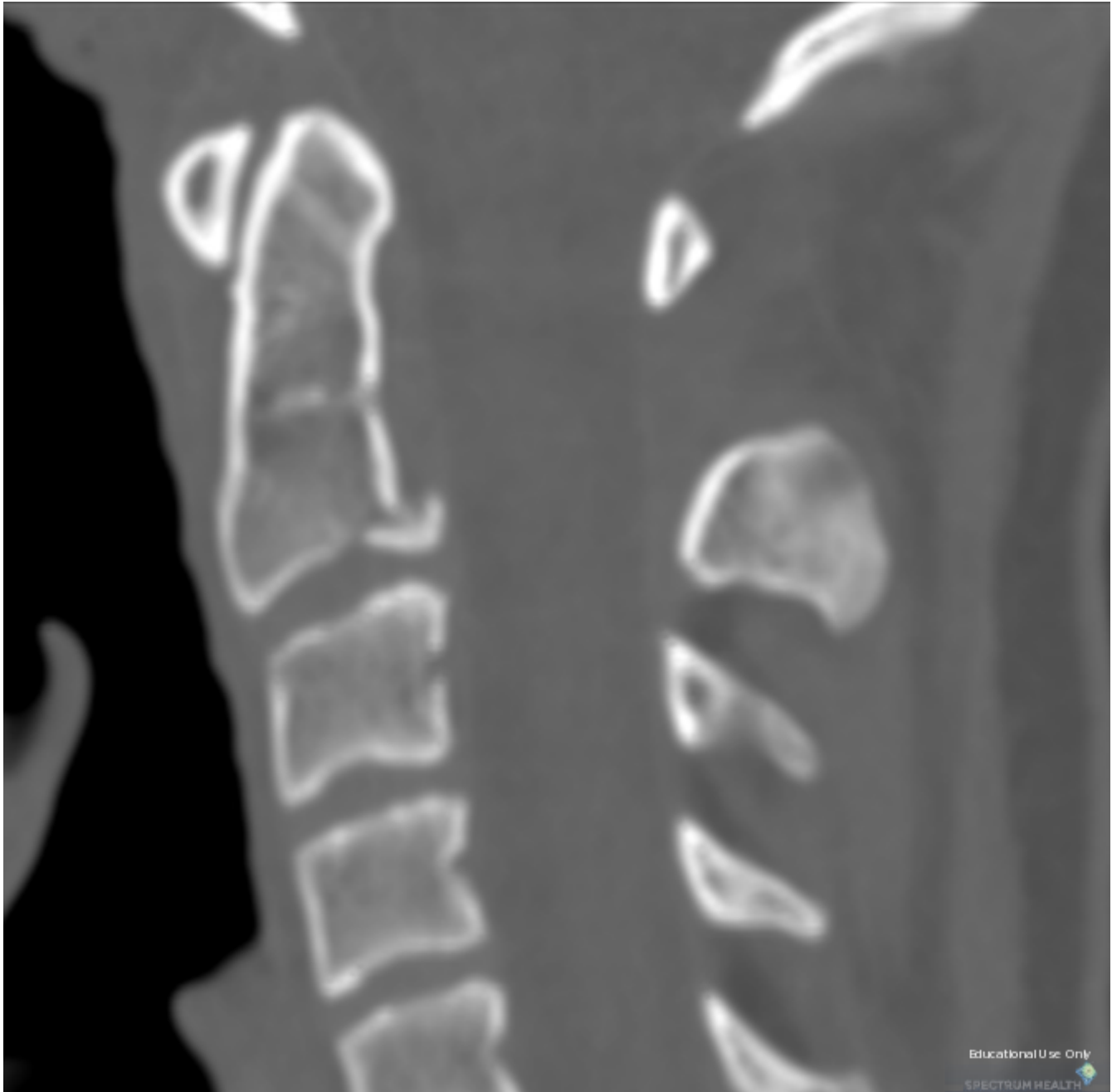
CT-Oblique fracture extending from the ring into the postero-inferior margin of the body of the axis. The body of the axis anterior to the fracture is not displaced and the C2-C3 disk space is normal. MR-Fracture is evident but no cord compromise.

Reference

Effendi B, Roy D, Dussault RG, Laurin CA. Fractures of the ring of the axis: A classification based on the analysis of 131 cases. JBJS (1981); 63B:319-327.



Educational Use Only
SPECTRUM HEALTH





Educational Use Only
SPECTRUM HEALTH












Educational Use Only

SPECTRUM HEALTH 

Sponsored By



Disclaimer

This teaching site is partially funded by an educational grant from GE Healthcare and Advanced Radiology Services, PC. The material on this site is independently controlled by Advanced Radiology Services, PC, and GE Healthcare and Spectrum Health have no influence over the content of this site
Content Download Agreement

The cases and images on this website are owned by Spectrum Health. Permission is granted (for nonprofit educational purposes) to download and print materials to distribute for the purpose of facilitating the education of health professionals. The authors retain all rights to the material and users are requested to acknowledge the source of the material.

Site Disclaimer

This site is developed to reach healthcare professionals and medical students. Nothing this site should be considered medical advice.

Only your own doctor can help you make decisions about your medical care. If you have a specific medical question or are seeking medical care, please contact your physician.

The information in this website is provided for general medical education purposes only and is not meant to substitute for the independent medical judgment of a physician relative to diagnostic and treatment options of a specific medical condition.

The viewpoints expressed in these cases are those of the authors. They do not represent an endorsement. In no event will Advanced Radiology Associates, PC, Spectrum Health Hospitals (Helen DeVos Children's Hospital) or GE Healthcare be liable for any decision made or action taken in reliance upon the information provided through this website.