



IMAGES OF SPINE CARE

Bipartite atlas in a trauma patient

A 32-year-old female patient presented to the emergency department after a trauma. She fell on her neck and back and was suffering from neck pain. Cervical trauma was suspected and the patient was put in a stiff collar to immobilize the cervical spine. Suspicion of any other organ system injury and headache were absent. The patient was in a hemodynamically stable condition. Physical examination showed no neurologic abnormalities. Imaging was performed subsequently. Computed tomography imaging of the cervical spine was performed to rule out traumatic cervical spine injuries. Computed tomography scan did not reveal cervical spine fracture. A coincidental imaging finding was an incomplete fusion on both anterior and posterior arches of the C1 vertebra (Figure), which can mimic fracture. Adequate analgesia was applied for neck pain. After a follow-up period of 24 hours, the collar was taken off, and there was pain-free range of motion of the cervical spine on careful clinical examination. The patient was discharged after regression of her complaints was observed.

Bipartite atlas is defined as a congenital fusion anomaly of both anterior and posterior ossification centers of the C1 vertebra. An important diagnostic challenge is to differentiate between bipartite atlas and fracture in trauma patients. A feature that distinguishes a bipartite atlas from a fracture is

its location in the midline with smooth intact cortical margins [1,2]. Bipartite atlas is clinically insignificant in most cases and does not require any treatment. However, when there is associated atlantoaxial instability, a minor trauma can cause atlantoaxial dislocation, which can be a life-threatening condition [3].

References

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FDA device/drug status: Not applicable.

Author disclosures: **HC**: Nothing to disclose. **MS**: Nothing to disclose. **MK**: Nothing to disclose.

The authors declare that there is no conflict of interest.

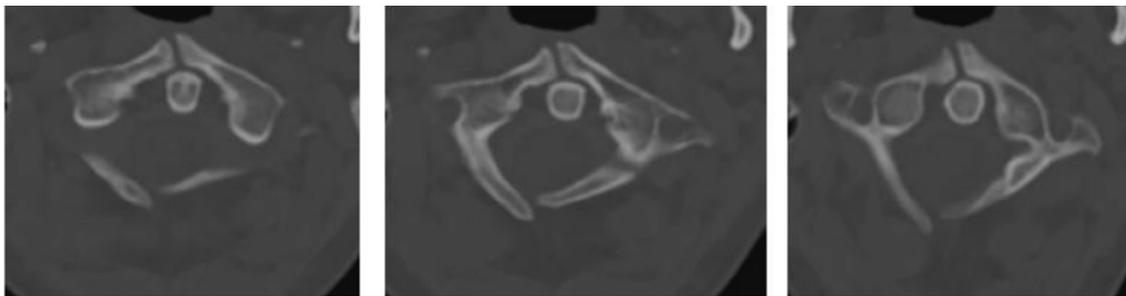


Figure. Computed tomography images of the C1 vertebra showing both anterior and posterior fusion defects, with smooth cortical margins.