

## Atraumatic Comminuted C2 Cervical Lateral Mass Fracture – A Case Report Gan, Han; Kidd, Chiu

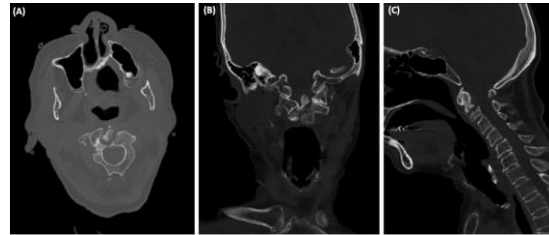
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### INTRODUCTION:

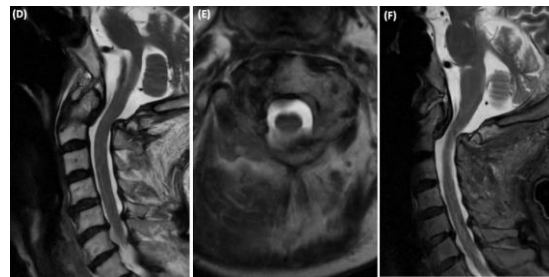
Atraumatic fractures of the cervical spine are rare and present diagnostic challenges due to their non-traumatic nature. Such fractures are typically associated with trauma, making atraumatic occurrences particularly uncommon. C2 cervical lateral mass comminuted fractures can lead to instability and potential neurological issues. Diagnosis relies on a thorough evaluation, including patient history, physical examination, and advanced imaging techniques. Treatment options vary based on fracture severity, neurological deficits, and stability. Conservative management, involving immobilization, pain management, and close monitoring, is often chosen for stable fractures, while surgical intervention may be considered for unstable fractures or those with neurological compromise.

### REPORT:

This case involves a 77-year-old female with multiple co-morbidities, admitted for cardiac issues. An incidental CT scan performed to rule out a stroke revealed a comminuted C2 cervical lateral mass fracture. Despite no trauma, the patient's age and likely osteoporosis were considered contributing factors. The patient denied neck pain or neurological symptoms, and conservative management was chosen due to her high surgical risk. Regular follow-ups confirmed no neurological deficit, supporting the efficacy of the conservative approach. Factors such as patient compliance, fracture severity, associated injuries, and general patient condition influence the outcome of conservative treatment.



**Figure 1:** CT scan of cervical spine : (A) Axial view depicting a right comminuted lateral mass fracture. (B) Extension into base of dens. (C) Sagittal view



**Figure 2:** MRI of cervical spine: (D) T2-weighted sagittal view - no cord compression. (E) Coronal view. (F) Sagittal view STIR sequence - no acute injury, neoplasm or inflammation

### CONCLUSION:

Atraumatic comminuted C2 cervical lateral mass fractures are rare, and their diagnosis and management require a comprehensive approach. Conservative management, although typically reserved for stable fractures, proved successful in this case, emphasizing the importance of a holistic approach to patient care.

### REFERENCES:

1. Wagner, S. C., Schroeder, G. D., Kepler, C. K., Schupper, A. J., Kandziora, F., Vialle, E. N., ... & Vaccaro, A. R. (2017). Controversies in the management of geriatric odontoid fractures. *Journal of orthopaedic trauma*, 31, S44-S48.