Case 543

Eurorad

Blunt traumatic sternal and chondrosternal fractures

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ISSN: 1563-4086
Section: Chest imaging
Imaging Technique: CT
Case Type: Clinical Cases
Authors: M. Wintermark, P. Schnyder
Patient: 64 years, male

Clinical History:

Head-on car crash
Imaging Findings:

Belted 64-year-old male driver involved in a head-on car accident
Discussion:

Fractures of the sternum are encountered in up to 4% of blunt chest trauma patients, as part of steering-wheel or seatbelt syndromes. Most often tranverse, they may involve the sternal body (70%) or the manubrio-sternal joint (18%). Dislocation of rib cartilages from the sternum are sometimes met, especially in children. When sternal fractures are associated with costo-chondral dislocations or rib fractures, they may lead to an anterior or lateral flail chest.
Differential Diagnosis List: Blunt traumatic sternal and chondrosternal fractures as part of a seatbelt syndrome

Final Diagnosis: Blunt traumatic sternal and chondrosternal fractures as part of a seatbelt syndrome

References:

Brookes JG, Dunn RJ, Rogers IR.
Sternal fractures: a retrospective analysis of 272 cases.
J Trauma. 1993 Jul;35(1):46-54. (PMID: 8331712)
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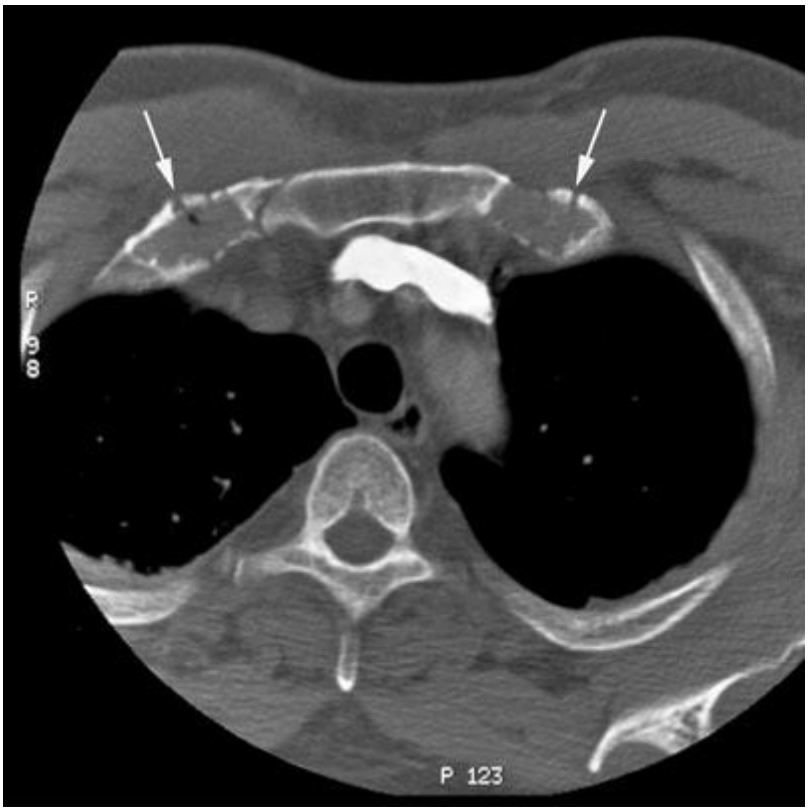
J Radiol. 1993 Aug-Sep;74(8-9):409-12. French. (PMID: 8410773)
Pate JW.
Chest wall injuries.
Surg Clin North Am. 1989 Feb;69(1):59-70. (PMID: 2643184)
Wintermark M, Schnyder P
Trauma of the chest wall. In Schnyder P, Wintermark M. Radiology of blunt trauma of the chest. Springer, Berlin Heidelberg New York, pp 9-27 (2000).

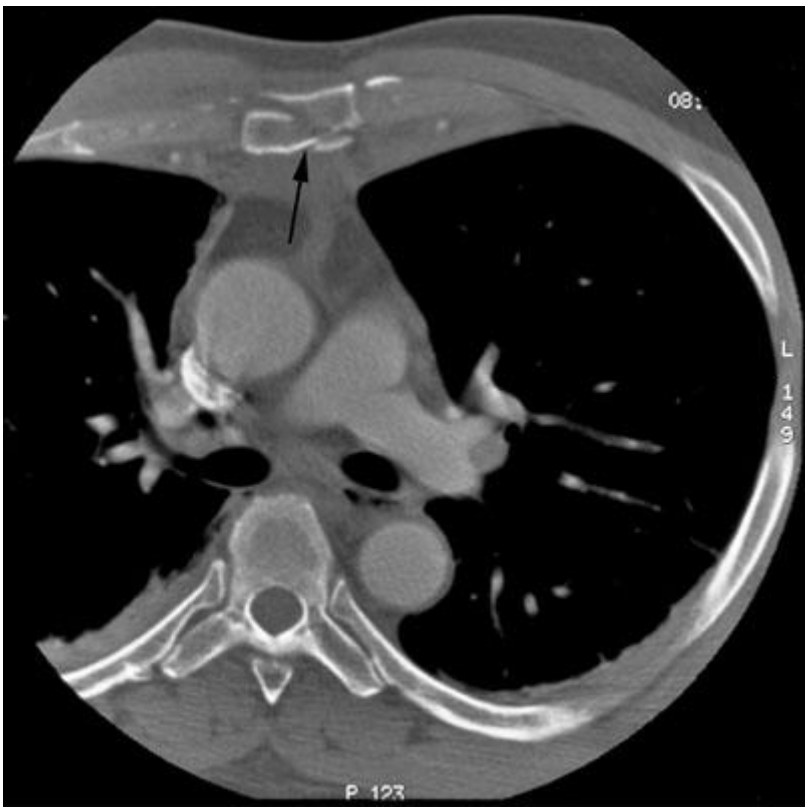
Figure 1

a



Description: Spiral CT section (3-mm) depicts fractures of the calcified first rib cartilages (white arrows) (From Wintermark M, Schnyder P (2000) Trauma of the chest wall. In Schnyder P, Wintermark M. Radiology of blunt trauma of the chest. Springer, Berlin Heidelberg New York, pp 9-27)**Origin:**

b



Description: Spiral CT section (3-mm) displays a comminutive fracture of the sternal body (black arrow), which is responsible for an anterior hemomediastinum (From Wintermark M, Schnyder P (2000) Trauma of the chest wall. In Schnyder P, Wintermark M. Radiology of blunt trauma of the chest. Springer, Berlin Heidelberg New York, pp 9-27) **Origin:**