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Haemothorax caused by spinal fracture following minor trauma in a patient with ankylosing spondylitis

Yi-Ting Lin[1]

Ta-Chung Chen[1]

Chou-Ming Yeh[2,3]

Author details can be found at the end of this article

Correspondence to:
Chou-Ming Yeh;
yehchouming@hotmail.com

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A 68-year-old male presented with paraplegia and back pain 5 days after falling onto the ground. Radiographic examination revealed a typical 'bamboo spine' with massive right-side pleural effusion. There was a high level of suspicion for ankylosing spondylitis. Computed tomography revealed a Chance fracture through the T9 vertebra (Figure 1) extending to the bilateral 9th ribs (Figure 2) and suspected right haemothorax (Figure 3). Bloody pleural effusion of approximately 1200 ml was drained out via a pigtail drain.

Patients with ankylosing spondylitis are susceptible to vertebral fractures, and the lifetime incidence ranges from 4% to 18% (Mundwiler et al, 2008). Most patients with ankylosing spondylitis who experience vertebral fractures have only minor trauma, and diagnosis is delayed in 15–41% (Rustagi et al, 2017). Massive haemothorax secondary to thoracic spinal fracture has rarely been reported; this may lead to unstable vital signs with a high mortality rate. Haemothorax resulting from vertebral fractures induced by low-energy mechanisms is even rarer and is often overlooked (Hirota et al, 2019).

Author details

[1]Department of Emergency Medicine, Taichung Hospital, Ministry of Health and Welfare, Taichung, Taiwan

[2]Division of Thoracic Surgery, Taichung Hospital, Ministry of Health and Welfare, Taichung, Taiwan

[3]Department of Healthcare Administration, Central Taiwan University of Science and Technology, Taichung, Taiwan

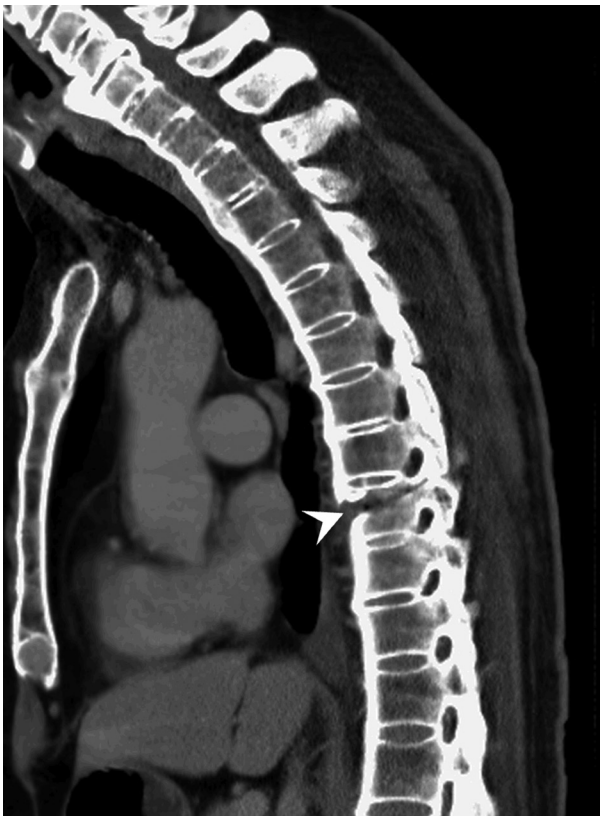

Figure 1. Computed tomography scan in the sagittal plane: transverse fracture through the T9 vertebral body showing laminar and spinous process fracture (arrow head).

Figure 2. Three-dimensional reconstructive computed tomography scan revealed a transverse fracture through the T9 vertebral body (arrow) that extended to the bilateral 9th ribs (arrow heads).

Figure 3. Contrast chest computed tomography in the transverse plane indicated T9 vertebral body fracture and massive right pleural collection with slight hyperdensity inside and partial collapse of the right lower lung, suspected to be haemothorax.

References

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