

An unusual type sternal fracture

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✓ A 60 year old woman was admitted to our emergency service because of a house accident. Lateral plain x-ray roentgenogram showed two different vertical parts at the all sternal body located anterior and posterior. CT examination of the chest supported the plain roentgenogram that at different sections on which it was clear to see the sternal body fractures. We couldn't find another case which has similar anatomic appearance in the English language.

Key words: Sternum, thoracic trauma, injury, fracture.

Traumatic sternal fracture generally occurs during blunt trauma to the chest, especially observed in road traffic accidents (1,4,5,6). The location of the fracture most commonly is on the manubriosternal joint (2,3). Here the mechanism of injury is thought to be hyperflexion of the spine (2).

CASE REPORT

A 60 year old woman was admitted to our emergency service with pain complaint on her precordium especially around sternal area. The cause of injury was explained that when she was in house the roof of the house had been fallen on her chest. On physical examination there was no abnormality except pain on her sternal area which increases with palpation. Lateral x-ray roentgenogram showed two different vertical parts of sternum just on the sternal body which didn't involve the manubrium sterni. The anatomic location of the fractures were very interesting which were side by side, not on the left and right anterior and posterior. The unexpected fracture occurrence was clearly showing on the CT examination at the different levels of the sternal body sections (Fig 1a-c).

DISCUSSION

The majority of sternal fractures occur in the thoracic trauma that generally are observed in road traffic accidents (1,4,5,6). The mechanism of fracture is depended on the force's dose and coming direction to the sternum. The possible associated lesions with sternal fracture are generally cardiac or mediastinal (1,6). In a case with fracture of the sternum it was reported that the ECG showed a complete right bundle branch block; in addition to these, an elevated CK-MB fraction were thought to be indicative for the diagnosis of myocardial contusion (4).

Radiologic examinations especially CT has an important value for diagnosis even though it was advised that sonography has at least the same worth and in addition, speedily safe results are possible by this method (7). If the sternal fracture is complicated with flail chest which demolishes the patient's respiratory function, external fixator apply may be necessary (3).

Our case's originality is its occurrence way and the more attention that should be focused on, as described previously, morphologic appearance.



Figure 1a-c: The unexpected fracture occurrence was clearly showing on the CT examination at the different levels of the sternal body sections.

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