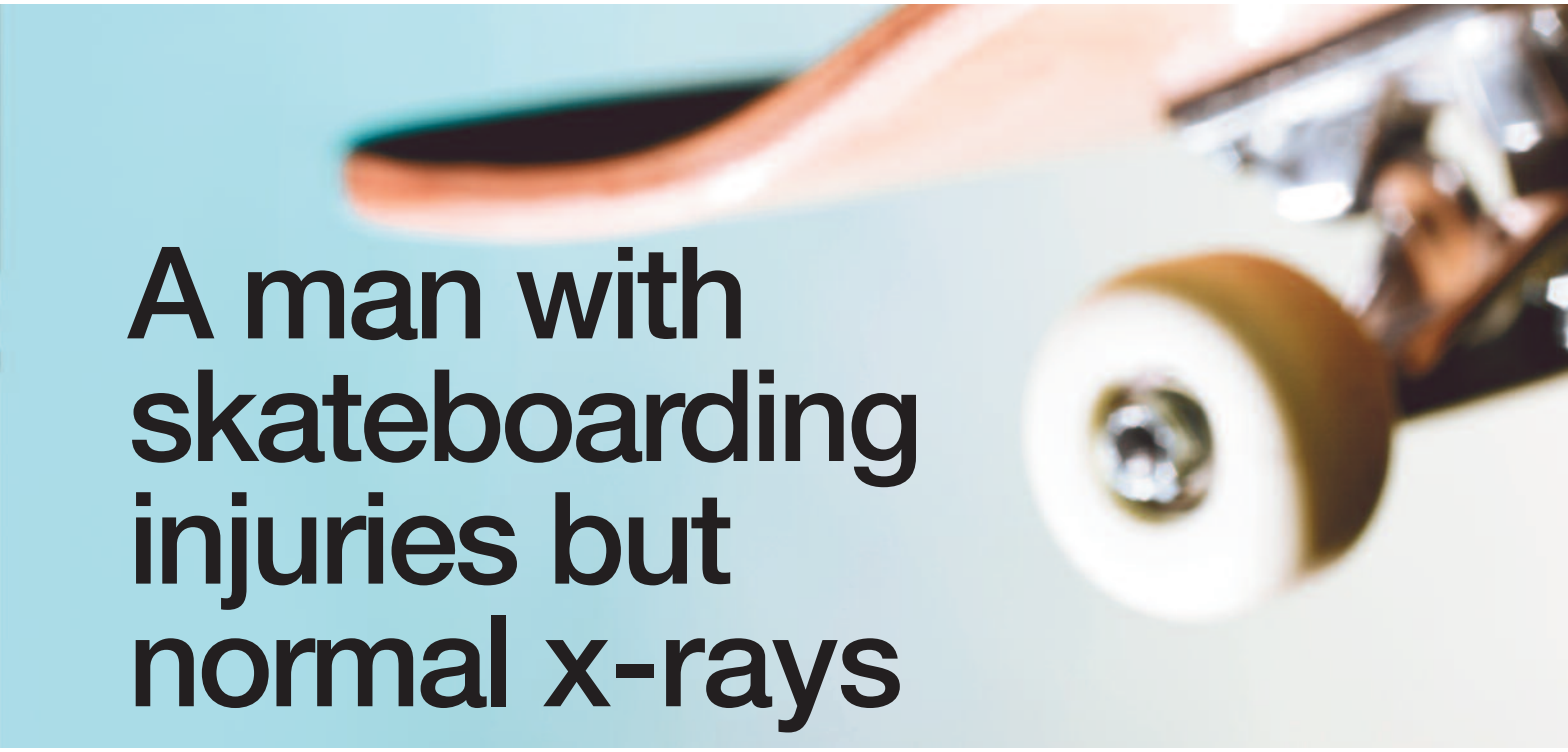

A man with skateboarding injuries but normal x-rays

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Routine imaging may miss injuries, as this emergency case illustrates.

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A 20-year-old man was skateboarding home while carrying some takeaway food when he fell off his skateboard. In an attempt to save his takeaway, he kept his right arm in the air, landing on his left shoulder. Two hours later, after having dinner at home, he presented to the emergency department reporting left shoulder and rib pain with decreased range of movement in his left shoulder. He had pain associated with inspiration.

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The man was a tradesman and had previously been well, was taking no medications and had no reported allergies.

OBSERVATIONS AND INVESTIGATIONS

On arrival at the emergency department, the patient was sent by the clinical initiatives nurse for a left shoulder and chest x-ray and was given analgesia.

His temperature was 36.8°C, blood pressure 126/69 mmHg, heart rate 59 beats/minute, respiratory rate 14 breaths/minute, saturated oxygen 94% on room air, Glasgow coma scale 15/15, pupils equal and reactive to light, and pain 8/10.

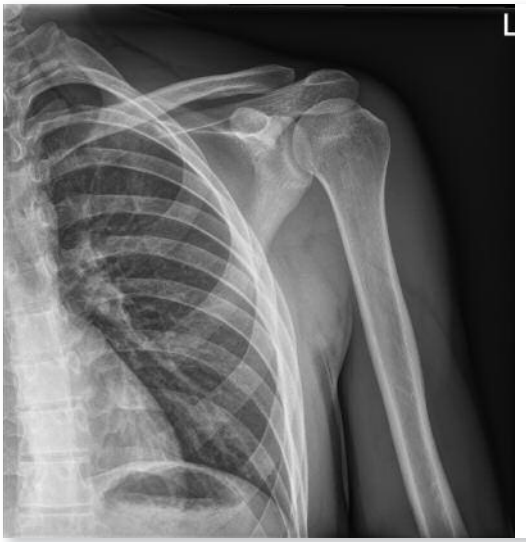
On examination by the emergency registrar, the patient had no evidence of head injury, and his cervical spine was intact, as was his left arm and shoulder (clavicle [laterally], acromioclavicular joint, coracoid process and humerus).

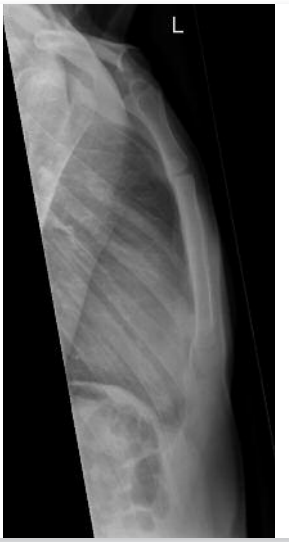
His chest findings were sternoclavicular joint tenderness, crepitus near the medial border of the right scapula and second and third ribs, and bilateral equal air entry.

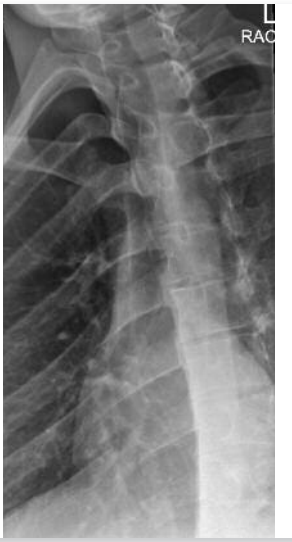
The x-ray reports were normal (Figures 1a to c and Figure 2).

The impression was that the patient had disruption of the left sternoclavicular joint and the right sternochondral/costochondral joints. A posterior sternoclavicular 'dislocation' needs to be checked carefully, as these dislocations, and fractures, can cause respiratory embarrassment (by pressure on the trachea) or venous obstruction, sometimes requiring urgent intervention. Accordingly, an urgent noncontrast chest CT scan was ordered (Figure 3).

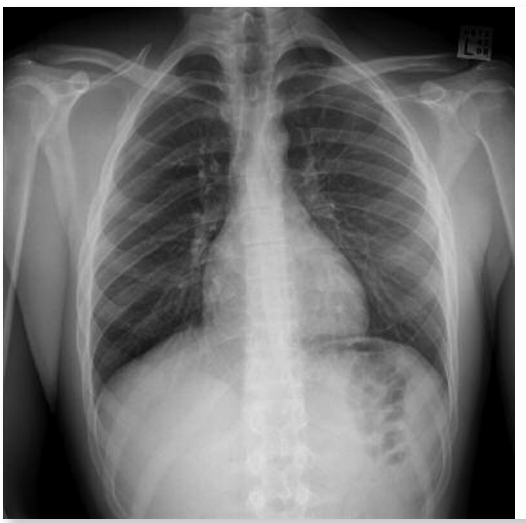
The findings on CT were fractures of the very distal aspect







Figures 1a to c. Initial x-rays taken on arrival at the emergency department. a (left). Left shoulder. b (middle) and c (right). Sternal views. No injuries were seen on these x-rays.



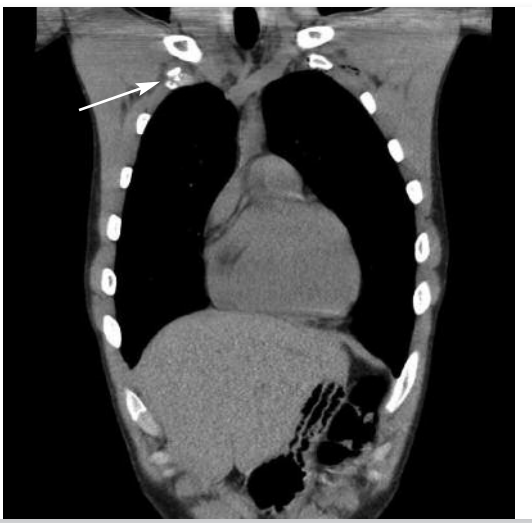


Figure 2 (left). Chest x-ray taken on arrival at the emergency department.

Figure 3 (right). Chest and abdominal CT scan showing fractures of the very distal aspect of the right second rib at the costochondral junction and a 2 mm displacement (arrow).

of the right second rib at the costochondral junction and a 2 mm displacement (Figure 3; arrow), disruption of the left costochondral junction, an associated small pleural haematoma and a small pneumothorax. Subcutaneous air tracking up the left anterior scalene muscle was also noted.

OUTCOME

The patient was admitted for three days under cardiothoracic care and required significant analgesia.

KEY POINT

A good physical examination is essential, as injuries may not be detected on routine imaging. MT

COMPETING INTERESTS: Professor Fulde: None. Ms Kooyman: None.

Ask an expert

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