Isolated clavicle fracture with secondary pneumothorax: a case report

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Clavicle fractures complicated by pneumothorax are rare. This case report describes a young man who developed pneumothorax secondary to an isolated clavicle fracture following blunt trauma to his right shoulder in an assault. The pneumothorax was diagnosed on a shoulder X-ray, and required the insertion of a chest drain. It may be prudent to specifically exclude a pneumothorax in clavicle fractures if the fractured segment is directed towards the lung. (Hong Kong j.emerg.med. 2006;13:113-115)

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Introduction

Fractures of the clavicle are common. In young adults, clavicle fractures are usually caused by traffic accidents, sports or direct blows to the shoulder. Complications are usually neurovascular or union problems. Pneumothorax as a complication is rare.1 We report a case of isolated clavicle fracture causing a pneumothorax, which required the insertion of a chest drain.

Case scenario

A 19-year-old Chinese male was kicked and punched during an assault. He sustained blunt trauma to his right shoulder, face and back. The patient presented to the Accident & Emergency Department complaining of pain in the right shoulder. He was haemodynamically stable. His right shoulder was held in adduction, resisting movement because of pain. There was mild tenderness over the clavicle but no obvious shoulder deformity, swelling or subcutaneous emphysema. There were no neurovascular deficits in the right upper limb. Lung breath sounds and percussion notes were normal bilaterally. There was no clinical evidence of tracheobronchial injury.

Plain X-rays of the right shoulder were ordered to evaluate his symptoms, and revealed a fracture of the middle third of the clavicle. Upon closer examination of the shoulder X-ray, a pneumothorax was seen (Figure 1). A subsequent chest X-ray confirmed the finding of a right-sided apical pneumothorax, approximately 20% in size (Figure 2). The patient was also reviewed by an orthopaedic surgeon who found no evidence of rib fractures or other injuries which might have caused the pneumothorax.

A chest drain was inserted under local anaesthesia in the Accident & Emergency Department. Meanwhile,