

BILATERAL FRACTURED CLAVICLES — A PAIR OF CASES

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The authors present two cases of bilateral fractured clavicles, both resulting from direct trauma to both shoulders. In both cases, the fractures healed uneventfully with non-operative treatment.

Keywords : clavicle ; fracture ; bilateral injury.

Mots-clés : clavicule ; fracture ; bilatérale.

INTRODUCTION

While clavicle fractures are common, cases of bilateral fractured clavicles have been infrequently reported. We report two patients with bilateral fractured clavicles, demonstrating the importance of direct trauma in the causation of these fractures.

Case 1

An 18-year-old unemployed car enthusiast was working underneath his jacked-up car, lying on his left side. Another vehicle rolled forward and hit the car, knocking it from its supports. The car fell onto the patient's upturned shoulder resulting in a sudden compressive force to both shoulder girdles. On presentation the patient complained of pain in both shoulders, which he was unable to move, and presented widespread abrasions over his chest and shoulders. Radiographs taken in the Accident and Emergency department showed bilateral outer third clavicular fractures and a fractured right first rib (fig. 1). He was haemodynamically stable, and had no other injuries. His fractures were treated with two collar and cuff slings. After a night in hospital, he was discharged. On review at six weeks his fractures were clinically united, and he began mobili-

sation under physiotherapy guidance. One year after the injury, he had regained a full range of shoulder movement, and had returned to working on his car.

Case 2

A 71-year-old woman was travelling as an unrestrained back seat passenger in a car. On collision with another vehicle coming from the right, she was struck on the tip of the right shoulder and projected across the back seat, subsequently impacting on her left shoulder against the left door. She presented with marked pain in both shoulders and the right upper chest with breathing. Examination revealed tenderness and crepitus over both clavicles, with inability to move the shoulders.

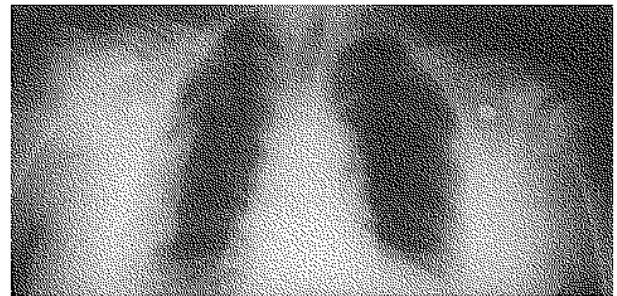


Fig. 1. — Radiograph of case 1 showing bilateral clavicle fractures.

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Radiographs confirmed the diagnosis of bilateral fractured clavicles with fractures of the third and fourth ribs on the right side. The patient was admitted to the trauma unit and treated with a figure of eight bandage. Two days later she was sufficiently painfree to be self-caring at home. Both fractures were united by eight weeks following the accident, and she was treated with a period of physiotherapy. At review 18 months after the injury, she was asymptomatic, with some minor reduction in range of movement. She was independent.

DISCUSSION

Clavicular fractures are common, but bilateral fractured clavicles have been reported in the English literature only infrequently (2, 3, 5, 6). The mechanisms of injury proposed have been trauma to the shoulder tip; bilateral direct blows to the shoulder tips (6), direct blow and indirect blow in a subsequent fall (2, 5) or a compressive force across both shoulder girdles (6, 5). All of these mechanisms cause direct forces that exceed the ultimate compressive strength of the clavicle. The traumatic events may be simultaneous, as in bilateral compression. Alternatively two similar injuries may occur sequentially as indirect trauma followed by a fall. The widely held view is that clavicular fractures occur most often as a result of falls to the outstretched hand, with transmission of forces through the shoulder girdle leading to failure of the clavicle (1). Stanley *et al.* (4) studying patients with fractured clavicle, coupled with a biomechanical analysis, however, showed that direct trauma is the most common cause of this injury. This is consistent with the mode of injury of both of our patients and in the other cases of bilateral fractures. This finding reinforces the importance of direct trauma to the shoulder girdle in the causation of clavicular fractures. In both cases, conservative treatment was sufficient for uneventful return to normal function.

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SAMENVATTING

A. G. SUTHERLAND, D. J. KNIGHT. *Bilaterale fractuur van de clavicula.*

De auteurs beschrijven 2 gevallen met bilaterale claviculafractuur, beide door een direct trauma, van beide schouders. In beide gevallen heelde de fractuur zonder problemen en zonder operatieve behandeling.

RÉSUMÉ

A. G. SUTHERLAND, D. J. KNIGHT. *Fracture bilatérale de la clavicule : présentation de deux cas.*

Les auteurs présentent deux cas de fractures simultanées des deux clavicules, qui résultaient d'un choc direct sur les deux épaules. Les fractures ont guéri sans difficulté par traitement conservateur.