

A Rare Case Report of Bilateral Clavicle Fracture at Two Different Locations without Associated Chest Injuries

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Abstract: *Bilateral clavicle fractures are a rare injury and rarely reported in the literatures. Bilateral clavicle fractures account for only 0.5% of all the clavicle fractures. In total it represents only 0.011 to 0.017 of all fractures. It is usually caused by a high velocity injury which is often accompanied by chest injuries. It is caused by direct trauma to one clavicle followed by the other or by a compression injury across both shoulder girdles. The mechanism of injury is different in both cases. Combination of mid shaft fracture on one side and lateral end on another side is very rare. A 36 - year - old male met with a road traffic accident and was brought to emergency department. He was having swelling and tenderness in bilateral clavicle and chest compression was negative. The shoulder range of movements was restricted on both sides. X ray of the chest with bilateral clavicles were done. It showed comminuted midshaft clavicle fracture on the right side and displaced lateral end fracture of clavicle on the left side without obvious rib fractures. All the routine investigations needed for anesthetic fitness were done and planned for open reduction and internal fixation with plating. Mid shaft fracture on right side fixed with clavicle locking plate and a lag screw. The lateral end fracture fixed with clavicle plate in same sitting under general anesthesia. The surgical fixation using low profile anatomical locking plates helped in the early mobilization of the affected limb compared to conservative treatment which requires prolonged immobilization. The upper limbs were immobilized for 2 weeks post operatively and all movements except abduction and overhead movements were started. He gained full range of movements at 6 weeks post operatively. Bilateral clavicle fractures as such are not an indication for surgery but suggested that it is surgically fixed to minimize the duration of functional disability. Surgical option for bilateral clavicle fractures gives excellent outcome in terms of early rehabilitation.*

Keywords: bilateral clavicle fractures, clavicle locking plate

1. Introduction

Bilateral clavicle fractures are very rare injury and rarely reported in the literatures. Bilateral clavicle fractures account for only 0.5% of all the clavicle fractures. In total it represents only 0.011 to 0.017 of all fractures. It is usually caused by a high velocity injury which is often accompanied by chest injuries. It is caused by direct trauma to one clavicle followed by the other or by a compression injury across both shoulder girdles. The mechanism of injury is different in both cases. There are some cases reported in literature with bilateral mid shaft clavicular fractures but combination of mid shaft fracture on one side and lateral end fracture of clavicle on another side is very rare.

2. Case Report

A 36 - year - old male met with a road traffic accident and was brought to our emergency department. He was having swelling and tenderness in bilateral clavicle and chest compression was negative. The shoulder range of movements were restricted on both sides.

3. Investigations

X ray of the chest with bilateral clavicles were done. It showed comminuted mid shaft clavicle fracture on the right side and displaced lateral end fracture of clavicle on the left side without obvious rib fractures.

All the routine investigations needed for anesthetic fitness were done and planned for open reduction and internal fixation with plating.



Figure 1: Xray of chest showing bilateral clavicle fractures with no obvious rib fractures.



Figure 2: Xray of right clavicle showing comminuted and displaced mid shaft clavicle fracture.

Post Operative Xray



Figure 3: Xray of left clavicle showing displaced lateral end of clavicle fracture

Treatment

The mid shaft fracture on the right side was fixed with precontoured clavicle locking plate and a lag screw.



Figure 4: Post operative x-ray of right clavicle.

The lateral end fracture of the left clavicle was fixed with a lateral end clavicle plate in same sitting under general anesthesia.



Figure 5: Post operative x-ray of left clavicle



Figure 6: Clinical pic of the patient after he was operated

4. Results

The surgical fixation using low profile anatomical locking plates helped in the early mobilization of the affected limb compared to conservative treatment which requires prolonged immobilization. The upper limbs were immobilized for 2 weeks post operatively and all movements except abduction and overhead movements were started. Full load bearing was allowed after 6 weeks. He gained full range of movements and was pain free at 6 weeks post operatively.

5. Discussion

Simultaneously occurring bilateral clavicle fractures, as such, is not an absolute indication for surgery, but suggested that it is surgically fixed to minimize the duration of functional disability. The surgical option for bilateral clavicle fractures gives excellent outcome in terms of early rehabilitation and return in function and cuts down the period of morbidity.

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