

Open Fracture Of Acromion; Management With Open Reduction And Tension Band Wiring: A Case Report

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INTRODUCTION:

Fractures of the acromion are uncommon with the majority being managed non-operatively with success¹. Acromial fractures constitute 8% of fractures of the scapula, which amounts to 3–5% of shoulder girdle injuries². Significant shoulder disability has been found in patients with displaced acromion fracture³.

CASE REPORT:

We report a case of a 31 year old male, who was allegedly assaulted with a machete over his right scapula. On examination there is an open wound with the size measuring 5x2 cm with the acromion exposed. Neurological and vascular examinations of the upper limb were normal. Radiograph of the right shoulder revealed a displaced fracture of the right acromion and clavicle. Pre-operatively, he was given a dose of cefuroxime intravenously. Under general anaesthesia, the open wound was first debrided and irrigated with 6 litres of normal saline. A superior approach was adopted for fixation through the existing wound. The acromion was fixed with tension band wire. The clavicle was fixed with two size 1.6mm Kirschner wires. There was no evidence of rotator cuff tears. Wound was closed primarily with the wires embedded. Post-operatively, the right shoulder was immobilized with arm sling for 4 weeks. Patient was seen at clinic 1 month post surgery. Wound was well healed with no signs of infection and right shoulder displayed full range of motion. Radiograph shows stable fracture fixation with good alignment.

DISCUSSIONS:

Scapular fractures are infrequent with acromial fractures being an even rarer injury⁴. Acromial fractures account for 8% of scapular fractures². Kuhn et al² reviewed 27 fractures of the acromion during a 15-year period and defined 5 distinctive types that were classified into 3 groups.

Type IA fractures are avulsion fractures. Type IB fractures are caused by direct trauma, and

are minimally displaced. Type II fractures are displaced superiorly, anteriorly or laterally, and has no reduction in subacromial space. Most are well healed without surgery within 6 weeks. Type III fractures are displaced inferiorly and reduce subacromial space. These fractures, if treated conservatively, develop significant shoulder motion limitation. Thus, suggesting early surgical intervention is indicated. Our patient had a Type III fracture. Isolated acromion fractures have been reported, with the causes of stress and repetitive submaximal load to the shoulder⁵, and avulsion by violent muscle contraction of deltoid or subscapularis tendon⁶. For fixation of acromion fractures, different techniques including osteosynthesis with screws and plates, tension band wiring and kirschner wires have been advocated^{4,6}.

CONCLUSION:

In our case, with significant fracture displacement, open reduction and tension band wiring of the acromion showed positive results.

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