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Displaced acromion fracture: A rare injury, case report



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ABSTRACT

INTRODUCTION: Acromion fractures are extremely rare. There are no common accepted treatment schemes and fixation methods. We aimed to present a case which may contribute to the diagnosis and treatment of acromion fracture in a patient with polytrauma.

PRESENTATION OF CASE: Acromion fracture associated with scapula and clavicle fractures was diagnosed in a 40-year-old patient and treated with open reduction and cannulated screw fixation. The fracture healing was completed without causing subacromial impingement.

DISCUSSION: In patients with polytrauma, diagnosis and treatment of acromion fractures can be delayed or overlooked. In improperly treated acromion fractures; pain, movement restriction, subacromial impingement, rotator cuff injury and symptomatic nonunion can occur.

CONCLUSION: We recommend early surgical treatment for displaced acromion fractures, reduction of subacromial space and disruption of the superior shoulder suspensory complex.

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1. Introduction

The acromion is a large bony projection on the superior end of the scapula. Acromion fractures are rare injuries. They constitute 8%–16% of scapula fractures [1,2]. Recently, they are seen at the rate of 5%–6.9% as the complication of reverse shoulder arthroplasty [3]. Acromion fractures may occur as a result of shoulder trauma and overuse injuries. Acromion fractures may occur with glenoid process, scapula or clavicle distal fractures and disruption of superior shoulder suspensory complex [4]. There are no widely accepted treatment algorithm and fixation method of acromion fractures [5]. We aim to present a case report that contributes to diagnosis and treatment of acromion fractures. This case includes a polytrauma that involves scapula, clavicle, ulna and radius fractures accompanying acromion fracture.

The following case report is compliant with SCARE guidelines [6].

2. Presentation of case

40-year-old male patient was evaluated in emergency room after motor vehicle accident. Patient was a motorcycle driver, an amateur swimmer, non-smoker, non-drug user. He had a normal psychosocial history. He and his family did not have a specific genetic history. He had ecchymosis, crepitation and deformity on his right arm, clavicle, scapula and forearm. He had no neurovas-

cular deficit. On radiographic examination of the patient, right scapula nondisplaced body fracture, right acromion fracture (Fig. 1), right clavicle fracture and right ulna and radius shaft fracture were detected. A long arm cast and an arm sling were applied to the patient. On the CT scan applied for shoulder area (Fig. 2), acromion fracture was classified as Type 1 according to Ogawa, Type 3 according to Kuhn and Type A1 according to AO. Patient was informed about surgery and he agreed with early intervention and osteosynthesis.

The patient was operated after he came to emergency service. Surgery was performed by an orthopaedic surgeon. Longitudinal incision was applied between clavicle shaft and anterosuperior edge of acromion. Reduction and fixation by anatomical clavicle plate was applied to clavicle comminuted fracture. Fixation was completed by placing anatomical clavicle plate. Acromion fracture was reached over by entering between trapezius and deltoid muscles. Fracture line was transverse (Fig. 3). There was a reduction of subacromial space. Subacromial space and rotator cuff were observed through the fracture line. Rotator cuff was intact. Fracture reduction was applied. Compression was applied to fracture line via two 3.00 mm cannulated screws (Fig. 3). Fixation was evaluated after fluoroscopy application (Fig. 3). It was observed that the fixation was stable. Forearm fractures of the patient were also operated by applying fixation with open reduction and plate screw on the same operation.

The patient was hospitalized for wound care for five days. Arm sling was used after surgery. On radiographic evaluations, reduction was observed to be successful on fracture line (Fig. 4). The post-operative period was uneventful. The patient tolerated surgery and physical therapy easily. The patient started passive

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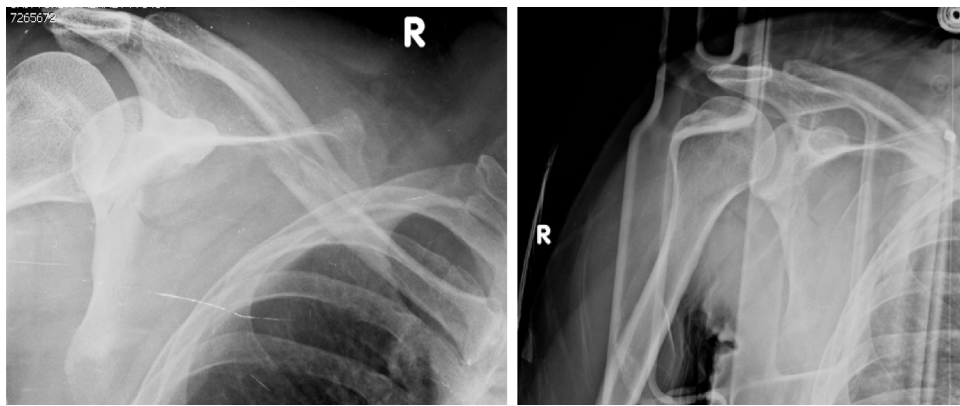


Fig. 1. Preoperative shoulder x-ray.

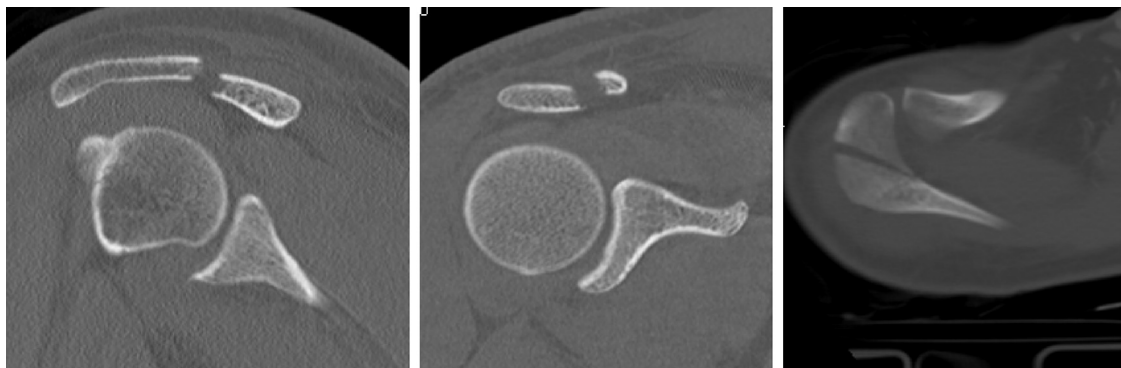


Fig. 2. Preoperative CT scan.



Fig. 3. Akromion fracture, fixation with cannulated screw and fluoroscopic view.

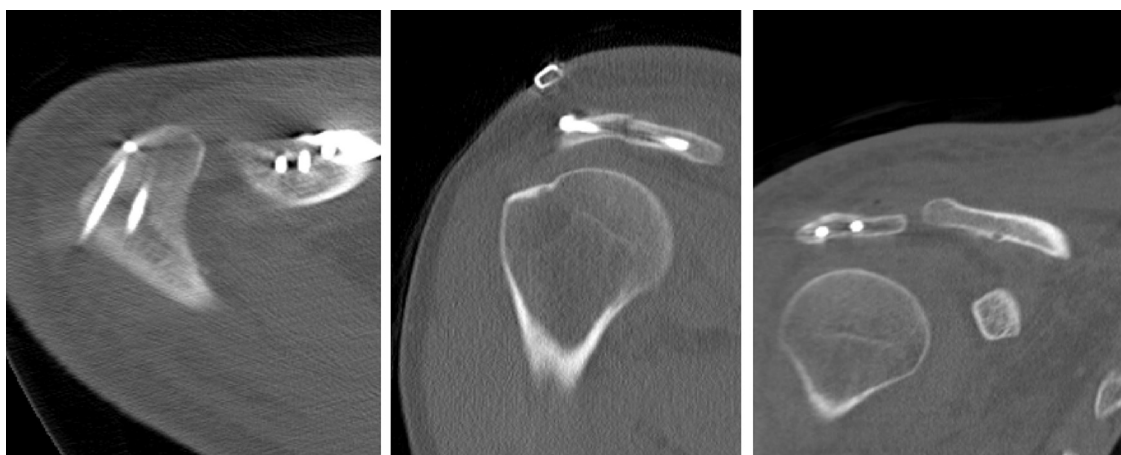


Fig. 4. Postoperative CT scan.

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