POSTERIOR ACROMIOCLAVICULAR DISLOCATION

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Posterior dislocation of the acromioclavicular joint with the lateral end of the clavicle locked behind the acromion has only rarely been described. This paper presents such a case diagnosed two weeks after the shoulder was injured in an accident. The clavicle was locked behind the articular surface of the acromion, restricting the movement of the shoulder and causing considerable pain. Anteroposterior radiographs showed a high-riding clavicle but no gap in the joint, but the axial view showed the dislocation. At operation the coracoclavicular ligaments were found overstretched but not ruptured. As reduction of the acromioclavicular joint was not possible, the lateral end of the clavicle was resected. Although the result was perfect, we consider the correct treatment should be early closed or open reduction of the acromioclavicular joint.

Injuries of the acromioclavicular joint are usually classified into three categories of severity (Allman 1967; Rockwood and Green 1975). Type I is a sprain with intact ligaments, causing tenderness and swelling but no laxity in the joint; radiographs are normal. Type II is a subluxation with rupture of the acromioclavicular ligaments but with intact coracoclavicular ligaments; the lateral end of the clavicle can be moved, mainly in a forward and backward direction; stress radiographs show a gap in the joint, but the coracoclavicular distance is not increased compared to the normal shoulder. Type III is a total dislocation with rupture of both groups of ligaments and in severe cases the attachments of the deltoid and the trapezius muscle are torn (Kennedy 1968); the lateral end of the clavicle is freely mobile both horizontally and vertically; stress radiographs show a high-riding clavicle, and the coracoclavicular distance is increased. When the acromioclavicular joint is dislocated the lateral end of the clavicle is usually superior to the acromion; inferior dislocation is rare (Rockwood and Green 1975). Posterior dislocation, where the lateral end of the clavicle is caught by the trapezius muscle, is briefly described by Allman (1967) and Rockwood and Green (1975), and Urist (1946) mentions that when the clavicle lies posteriorly complete reduction is difficult. Posterior dislocation with intact coracoclavicular ligaments, where the lateral end of the clavicle is impacted behind the acromion, has only rarely been described (Bleuler 1950; Malcapri, Grassi and Oretti 1978).

ILLUSTRATIVE CASE REPORT

A 36-year-old man on a bicycle collided with a car, which came from the right side. He probably hit the edge of the windsreen with his right shoulder, thereby injuring the lateral end of the right clavicle. By the time he was examined in the casualty ward there was a distinct prominence on his shoulder (Fig. 1) and it appeared that the lateral end of the clavicle was displaced backward and upward (Fig. 2). The radiological diagnosis (made at a later date) was an acromioclavicular dislocation (Fig. 3). The signs were misinterpreted, and he was treated by a fixed sling for five days, whereafter exercises were started. At examination two weeks after the accident he complained of intense pain in the shoulder, and its mobility was found to be much reduced. It was now obvious that the clavicle was locked behind the acromion so that the scapula was in a fixed position. The range of movement in the shoulder was limited to movement in the glenohumeral joint. An axial radiograph confirmed the position of the clavicle behind the articular surface on the acromion (Fig. 4). It was impossible to perform a closed reduction and the patient was operated on. The coracoclavicular ligaments were found overstretched but not ruptured. Even at operation it was not possible to reduce the joint satisfactorily, possibly on account of the scar tissue that had built up in the two weeks since the accident. The lateral one and a half to two centimetres of the clavicle were therefore resected. The patient was provided with a fixed sling for a further three weeks, after which he started with regular shoulder exercises. Five weeks after the operation he was completely without pain, and was able to play badminton and dig his garden. The configuration of the shoulder was almost normal (Fig. 5) and he had a full range of movement.

DISCUSSION

This case of acromioclavicular dislocation does not fit the common classification given by Allman (1967) and Rockwood and Green (1975): it does not belong to Type III because the coracoclavicular ligaments are not torn, nor to Type II because the joint is totally dislocated. Radiologically the diagnosis could have been suspected on the anteroposterior view, which shows a high-riding clavicle but no gap in the joint (Fig. 3), and confirmed by the axial view which shows the dislocation (Fig. 4).

Acromioclavicular dislocations are commonly
treated conservatively, but in our opinion the posterior dislocation with locked clavicle demands specific treatment. Primary simple closed reduction should be tried; if that does not succeed we recommend operative reduction with debridement of the acromioclavicular joint. In the present case, resection of the lateral end of the clavicle was necessary but could probably have been avoided by correct primary treatment.

REFERENCES