# ISOLATED FRACTURE OF THE CORACOID PROCESS OF THE SCAPULA

J. GUIRAL[1], J. L. REAL[1], J. M. CURTO[2]

**We present a case of an isolated fracture of the coracoid process in a 49-year-old woman. Healing after conservative treatment was entirely satisfactory, with radiographic union and painless normal range of movement.**

**Keywords** : fracture ; scapula ; coracoid process.
**Mots-clés** : fracture ; omoplate ; apophyse coracoïde.

## CASE REPORT

A 49-year-old woman fell while walking and landed in a sitting position. On admission to the hospital she complained of pain on the anterior aspect of her right shoulder, and limitation of motion. Physical examination revealed pain-induced restriction of the range of motion and localized tenderness and edema over the coracoid process. There were no signs of an acromioclavicular separation. No abnormality was found on the anteroposterior radiograph of the right shoulder (fig. 1), but the oblique and axillary radiographs showed a non-displaced transverse fracture of the coracoid process (fig. 2). No radiological coracoid abnormalities were found in the left shoulder. The patient was treated with analgesics and ice packs for 48 hours, and with a Velpeau sling for 10 days. Progressive movements of the shoulder were then encouraged. Eight weeks later, the patient had full and painless range of motion of the right shoulder, and the radiographs showed bony union. She has been followed for 2 years and has remained symptom-free during this period.

*Fig. 1.* — An anteroposterior radiograph of the right shoulder failed to show the fracture.

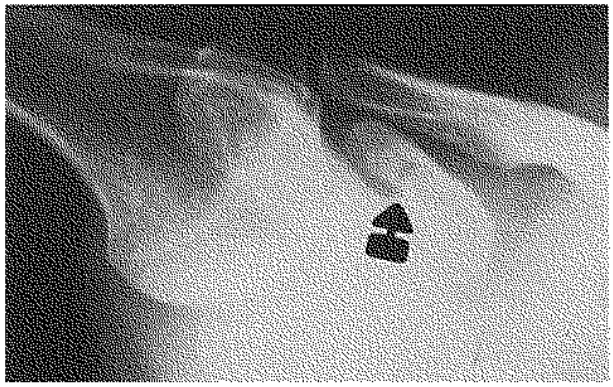

*Fig. 2.* — An oblique view showed a fracture of the coracoid process.

## DISCUSSION

Few cases of isolated fractures of the coracoid process have been reported. They usually occurred

[1] Department of Orthopedics, Segovia General Hospital, E-40002 Segovia, Spain.
[2] Department of Orthopedics, University Hospital, E-37007 Salamanca, Spain.
Correspondence and reprints : J. Guiral.

in the third or fourth decades of life. The etiologies were sports (1, 2), motor vehicle accidents (5) or accidental falls (3). In some cases these fractures were probably the consequence of repeated direct trauma (2) or avulsion induced by a sudden and violent contraction of the short head of the biceps, coracobrachialis, and pectoralis minor muscles (1, 3). Fractures were related to traffic accidents in the remaining reported cases (5), and their mechanism was not well documented. In cases of a combined injury, the fracture of the coracoid process is associated with dislocation of the acromioclavicular joint (5) or with anterior dislocation of the shoulder (4). Standard radiographs of the shoulder may not offer adequate views of the coracoid process and, the fracture often being subtle, it is easily confused with an unfused epiphysis, adjacent bone anomalies, or secondary ossification centers (1). The examination of the contralateral shoulder, and the oblique or axillary radiographs may be necessary to distinguish between anatomical variations and a fracture. Fractures of the coracoid process are generally localized at the base. The displacement is usually minimal because of the stabilization provided by the coracoclavicular ligaments and the tendons of the biceps, coracobrachialis and pectoralis minor. Most reported cases of isolated fracture of the coracoid process have been managed conservatively with good clinical results (2, 5). In the young patient, acutely displaced injuries or symptomatic nonunions can be treated with open reduction and screw fixation or by excision of the distal fragment and reattachment of the adjacent tendon. In two reported cases that were operated, different techniques were applied. Internal fixation led to an excellent result in the case in which the fracture was five weeks old (3). Nevertheless, excision of the fragment with reinsertion of the adjacent tendon left some residual weakness of abduction and vague discomfort in a patient with a 4-year-old fracture (1).

The satisfactory results reported suggest that most isolated fractures of the coracoid process should be conservatively managed.

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## SAMENVATTING

*J. GUIRAL, J. L. REAL, J. M. CURTO. Geïsoleerde fraktuur van de processus coracoïdeus van de scapula.*

De auteurs rapporteren een geval van geïsoleerde fraktuur van de processus coracoïdeus van de scapula bij een 49-jarige vrouw. De evolutie na conservatieve behandeling was vrij bevredigend zowel röntgenologisch als functioneel.

## RÉSUMÉ

*J. GUIRAL, J. L. REAL, J. M. CURTO. Fracture isolée de l'apophyse coracoïde de l'omoplate.*

Les auteurs présentent un cas de fracture isolée de l'apophyse coracoïde chez une femme de 49 ans. L'évolution après traitement orthopédique fut tout à fait satisfaisante, tant au plan radiologique qu'au plan fonctionnel.