



## Coracoclavicular joint degeneration, an unusual cause of painful shoulder : A case report

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**A case of painful shoulder in a 42-year old right-hand dominant Caucasian female due to degeneration of the coracoclavicular joint is described. The pain was aggravated by weight lifting. The diagnosis was confirmed radiographically with simple plain films and clinically by the injection of local anaesthetic (xylocaine 2%) that lead to the exclusion of any other concomitant pathology of the acromioclavicular joint and the anterior subacromial space. The patient was treated successfully with an intra-articular steroid injection, and 30 months later she remains free of symptoms.**

**Keywords :** shoulder ; coracoclavicular joint.

### CASE REPORT

A 42-year old female right-hand dominant Caucasian housewife presented in our outpatient department with gradually increasing pain in her right shoulder area over the past two months. The pain was mainly aggravated by weight lifting (and less so by domestic work) that involved abduction of the upper arm, or swimming, while it subsided with rest. There was no previous history of an acute injury or of a chronic overuse syndrome. On first clinical examination, neither local tenderness upon directly exerted pressure, nor radiation of the pain

### INTRODUCTION

There are numerous pathological entities that may contribute to the development of a painful shoulder. In most of the cases, the typical signs and symptoms that are found together with the proper clinical and radiographic examination of the patient, contribute to relatively easy diagnosis. The existence of a coracoclavicular joint is very uncommon. A degenerated coracoclavicular joint is even rarer. Nevertheless, when examining the possible causes that may contribute to the development of a painful shoulder, the orthopaedic surgeon must have in mind the fact that osteoarthritic changes in this particular joint should be considered as one among the many possible causes.

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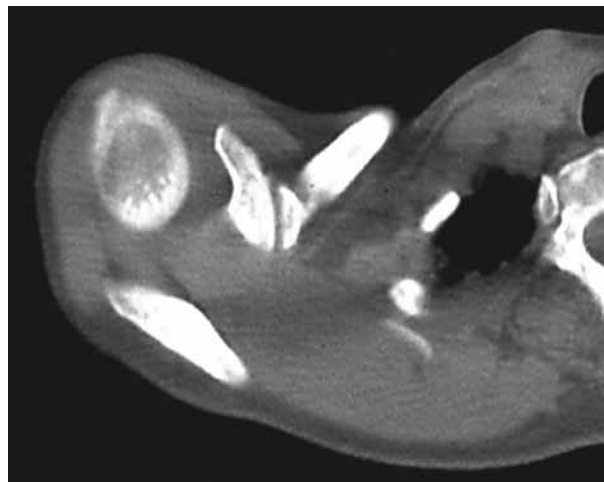
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**Fig. 1.** — Standard antero-posterior radiograph of the shoulder. The coracoclavicular joint, with lipping of the articular surfaces and osteophytes, especially at the medial part of the coracoid process, is noticed.

to the ipsilateral arm were noticed. She had a full range of active and passive motion of the shoulder. Only active abduction over  $110^\circ$  was eliciting pain. Only active abduction over  $110^\circ$  was eliciting pain. Active and passive mobilisation of the cervical spine were painless and within normal range, while the radial and ulnar arteries were both palpable at the wrist. The symptoms were initially attributed to chronic supraspinatus tendonitis, and after administration of Nimesulide (100 mg BID) for a period of one week, the patient reported gradual improvement. About one month later, she returned complaining of recurrence of her symptoms, which usually manifested whenever she was carrying shopping bags with the 'suffering' limb from the local grocery store back home. On clinical re-examination, all symptoms and clinical signs remained the same but the radiographic examination revealed the presence of a unilateral coracoclavicular joint with articular facets on the conoid tubercle of the clavicle and the superomedial surface of the coracoid process of the scapula with osteophytes and signs of articular degeneration (fig 1). No signs of glenoid, subacromial or acromioclavicular degeneration were noted. A CT scan (fig 2) confirmed the presence of a degenerative diarthrosis between the lateral end of the clavicle and the coracoid process. In order to differen-



**Fig. 2.** — CT scan at the level of the degenerative changes in the coracoclavicular joint that confirms the existence of degenerative changes in the articular surfaces.

tiate the origin of the pain, we proceeded to consecutive injections of 1 ml of Xylocaine 2% under image intensifier control into the acromioclavicular joint, the anterior subacromial space and finally the coracoclavicular joint. The patient was asked to describe the characteristics of the pain 5 minutes after each injection. The results of these tests confirmed that the origin of the pain derived from the coracoclavicular joint. Following this, she received an additional injection of 3 mg Betamethasone into the coracoclavicular joint, which resulted into relief of the patient's symptoms. Thirty months later, at her last follow-up visit, she remains symptom free, while her shoulder movements are completely normal.

## DISCUSSION

There are many causes that may lead to the development of a painful shoulder. Most of these pathological entities are usually accompanied by typical signs and symptoms that render diagnosis a relatively easy task (1, 2, 6). By reporting this case, we suggest that the (rare) pathological entity of a degenerated coracoclavicular joint should be considered as one among the many possible causes of painful shoulder. The existence of a coraco-

clavicular joint is a highly uncommon anatomical variant that is considered to be genetically determined (4). However two different large cadaveric studies (3, 7) showed absence of such a joint in foetuses, neonates and young children, thus indicating a non-congenital anomaly. Furthermore Cho and Kang (3) directly related the existence of such a joint to ageing. The coracoclavicular joint is believed to be a true synovial joint with articular cartilage and intracapsular synovial fluid that is usually unilateral (9). Nevertheless, there are several reports of bilaterally existing coracoclavicular joints (5, 10). Most reports of this rare anatomical entity usually come from central Asia, while there are some sporadic cases of patients of European or African origin (4). Its clinical significance remains more or less uncertain. Hama *et al* (8) reported a case of thoracic outlet syndrome that was caused by the existence of an irregular coracoclavicular joint. Gumina *et al* (7) believe that the presence of a coracoclavicular joint is a predisposing factor for the development of degenerative changes in all 'neighbouring' joints. To the best of our knowledge, there has been no other reported case of shoulder discomfort or pain that could be directly attributed to the existence of a coracoclavicular joint. As far as the osteoarthritis of the coracoclavicular joint is concerned, it can presumably be attributed to the existing instability which, after a long period of time, induces degeneration of the joint. Furthermore, even though the coracoclavicular joint belongs anatomically to the upper limb, weight lifting with the use of the ipsilateral arm exerts "weight bearing stress" on this particular joint. The following can almost be considered pathognomonic for the existence of a degenerated coracoclavicular joint in our patient :

1. Symptoms started without any previous history of an acute injury or of a chronic overuse syndrome.

2. The patient felt continuously increasing discomfort whenever she was trying to lift a weight.
3. All symptoms immediately regressed after the intracapsular injection of local anaesthetic (Xylocaine 2%).

In the case presented, plain radiographs were sufficient to diagnose the actual cause of the patient's symptoms. Furthermore, the local intracapsular steroid injection eased the patient's symptoms ; we therefore suggest that it may be considered as an adequate treatment to achieve long-term pain relief in patients with coracoclavicular joint degeneration.

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