Case Report

Acromioclavicular Joint Ganglion

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Abstract

The synovial cyst of ACJ is another new formation where a damage of the rotator cuff and degenerative changes of the acromioclavicular joint were found. Nevertheless, the ganglia and synovial cysts have been accepted as synonyms when describing a cystic tumour adjacent to the ACJ, or the ganglion in this area has been defined as 'authentic' to emphasize its differentiation from the synovial cyst. The case presented concerns a 67-year-old man with a ganglion in the region of the left acromioclavicular joint.

ABBREVIATIONS

ACJ: Acromioclavicular Joint

INTRODUCTION

Ganglia are spherical formations from 1 to 3 cm in diameter which have elastic consistency. Typically, they are located on the dorsum of the wrist, more rarely, they can be found on the volar surface of the wrist. Sometimes, they can be seen on the dorsum of the foot and the ankle area [1].

In 1984, Burns and Zvirbulis were the first to report a ganglion over the acromioclavicular joint (ACJ) [2]. Its occurrence is most typically associated with a damage of the rotator cuff and degenerative changes of ACJ [3-6] and, more rarely, with the absence of such changes [7], and among all such cases is the case reported by us.

CASE PRESENTATION

The case presented concerns a 67-year-old man who a month ago noted a formation in the region of the left acromioclavicular joint. The physical examination showed a tender round mass of 4 cm in diameter, painless on palpation, over the left acromioclavicular joint (Figure 1). Clinically, the patient had full range of motion in his left shoulder and normal muscle power.

A left plain radiograph revealed normal space of the acromioclavicular joint, with no narrowing of the subchondral sclerosis (Figure 2).

The ultrasound examination revealed a cystic mass 4 cm in diameter directly over the acromioclavicular joint (Figure 3). The additional ultrasound examination did not reveal a damage of the rotator cuff.

The patient was surgically treated; the ACJ was reached by a longitudinal incision. A ganglion cyst of 4 cm in diameter was dissected in depth, in anterosuperior aspect of ACJ. The cyst was fully rejected together with its base over the capsule of ACJ. No communication has been found between the ganglion cyst and acromioclavicular joint. The cyst contained mucoid fluid and the histological examination confirmed the diagnosis of a ganglion cyst (Figure 4). A year after surgery, the cyst had not recurred again.

DISCUSSION

The synovial cyst of ACJ is another new formation where a damage of the rotator cuff and degenerative changes of the acromioclavicular joint were found [3,8]. The described by Craig arthrographic Geyser sign, which is a contrast leakage from the glenohumeral joint into the acromioclavicular joint through the rotator cuff defect [9], is typical for synovial cysts. Nevertheless, the ganglia and synovial cysts have been accepted as synonyms when describing a cystic tumour adjacent to the ACJ [4], or the ganglion in this area has been defined as 'authentic' to emphasize its differentiation from the synovial cyst [5,7].

Detailed examination of the surface ultra-structure of a ganglion and a synovial cyst by means of electronic microscope

Figure 1 A cyst over the left acromioclavicular joint.
showed that it differs in both new formations. Psalia and Mansel have found that a ganglion, in contrast to a synovial cyst, does not have cellular lining, typical for the synovial cyst, and they have supposed that ganglia probably arise from the multifunctional cells which are found within their walls [10]. That’s what accounts for ganglia ability to spontaneously disappear and appear again at the same place because, most probably, the observed by Psalia and Mansel multifunctional mesenchymal cells, located in the ganglion wall, are responsible for the production of ganglion fluid.

The treatment of ganglia is both operative and non-operative. At non-operative treatment, aspiration of the cyst is applied and medications are injected - steroids, hyaluronidase or triamcinoloneacetonide – to reduce the ganglion size [11-13]. We did not find any information proving that similar non-operative treatment had been applied for ganglia adjacent to acromioclavicular joints. The surgery of a ganglion over ACJ is the same as at any other localisations – a cystic mass resection. A thorough excision of the ganglion, which fully removes the cyst, will reduce the risk of recidives.

REFERENCES