

MRI - Geysler Sign. - Acromioclavicular Cyst due to Chronic Rotator Cuff Tear. USG/CT/MRI Imaging : A Case Report with Review of Literature.

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Abstract : We report a case of 65yr old male presenting with slowly enlarging painless acromioclavicular (AC) joint cyst type 2 with geysler sign in USG, CT & MRI imaging which was associated to a massive rotator cuff tear, proximal migration of the humeral head and osteoarthritis of the gleno-humeral joint, a rare complication of rotator cuff injury. The diagnosis of AC cyst is made based on clinical history & examination, absence of clinical signs of inflammation and with USG, CT, MRI findings of rotator cuff tear, fluid and cystic mass.

INTRODUCTION

An acromioclavicular AC joint cyst is an uncommonly reported condition, which seems to result from a massive rotator cuff tear and degenerative osteoarthritis of the AC joint and gleno-humeral joint¹. Invasive arthrogram is replaced by MRI and is the imaging modality of choice. The patients was referred to orthopedic department for further management.

CASE REPORT

A 65 year old male patient presented to radiology dept for X-ray right shoulder with complaints of slowly enlarging painless swelling of right shoulder and shoulder discomfort during daily activities. X-ray revealed a soft tissue swelling superior to AC joint. USG revealed a cystic lesion in the right shoulder superior to AC joint. NCCT of right shoulder was done which showed a well defined hypodense subcutaneous cystic lesion above the right AC joint and glenohumeral joint: there are a few hypodense areas in the intermuscular planes around shoulder joint likely to represent fluid collection. MRI was done for confirmation of findings and to r/o rotator cuff tear. MRI shows rotator cuff injury-grade 3 supraspinatus muscle tear, fluid around glenohumeral joint and AC joint and showed a communication b/w glenohumeral, AC joint to the AC cyst-Geysler sign.



x-ray rt shoulder jt showing soft tissue swelling superior to AC joint
USG rt shoulder jt showing a cystic lesion superior to AC joint



CT right shoulder jt showing hypodense cystic lesion above AC jt
MRI rt shoulder jt showing unilocular mass of fluid signal intensity

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DISCUSSION

Geysler radiologic sign was first described by Craig in 1984 as leakage of contrast dye from glenohumeral joint into subdeltoid region on arthrogram².

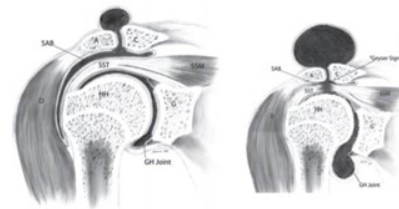


Fig a (type 1)

Fig b (type 2)

Courtesy: Andrew d Hiller

Two types of AC joint cysts are described based on aetiopathogenesis. Type 1 cyst refers to AC cyst with no communication with glenohumeral joint without rotator cuff tear often occurs due to trauma, infection, degeneration, metabolic & over use. Irritation is the cause for over production of fluid³. Type 2 AC cyst forms following rotator cuff tear i.e. cuff tear arthropathy cause mechanical instability of humerus thus upward displacement of humeral head thus eroding AC joint causing 'geysler sign'.

A total of 41 cases have been reported, out of which, 6 were with rotator cuff injury and 36 were without tear thus differentiation and characterisation are essential for classification and treatment.

Geysler sign with a large fluid filled mass at the AC joint in a patient with a full thickness rotator cuff tear was also reported in ultrasound by T.S.A. Geertsma, Ziekenhuis Gelderse Vallei, Ede, The Netherlands ultrasound cases⁴.

The present case report describes an AC joint cyst in an elderly patient affected by rotator cuff tear with negligible symptoms and a good function of the shoulder with classical geysler sign.

CONCLUSION

MRI is the imaging modality of choice for AC joint cysts and other cysts around shoulder joint including masses⁵.

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