

Refractory shoulder pain due to entrapment neuropathy of the suprascapular nerve: a case report

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Abstract

Refractory shoulder pain of four months duration in a middle aged male proved to be the result of compression of the suprascapular nerve by a large ganglion, demonstrated in the MRI. Surgical removal resulted in the complete relief of symptoms. We present the case report and review the literature.

Key words: Suprascapular nerve, compression, ganglion.

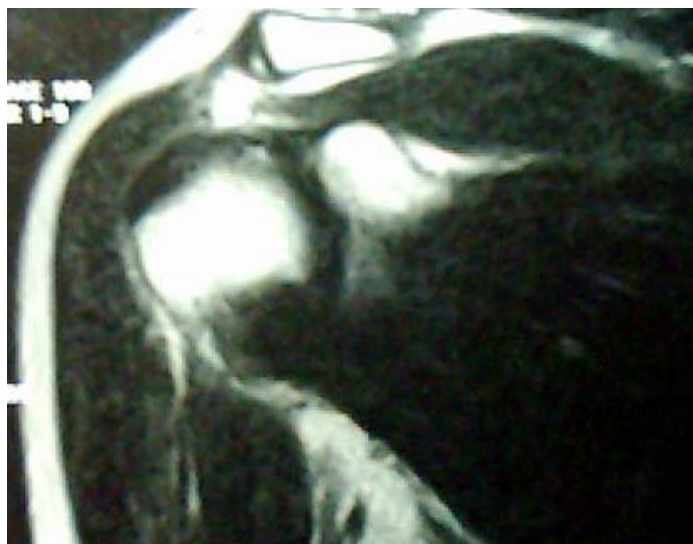
A fifty year old male was referred to our hospital for evaluation and management of right shoulder pain of four months duration. The pain was of a continuous and dull acting nature and posteriorly located. Use of the extremity aggravated the pain. Patient had exhausted a variety of treatments including analgesics, NSAIDs, physiotherapy (including ultrasound massage) and depo-medrol injection, without relief.

Examination revealed a healthy male with normal general systems. Local examination of the right

shoulder revealed minimal wasting of the infraspinatus muscle. Shoulder abduction was painful and limited to 70°. Examination of the cervical spine was normal. Routine blood counts, Urine analysis and plain X-Rays of the shoulder joint were all normal.

A MRI evaluation was then undertaken which revealed a 4 x 2 x 2 cm size cystic lesion encroaching upon the suprascapular notch compressing the suprascapular nerve (**Figure 1**).

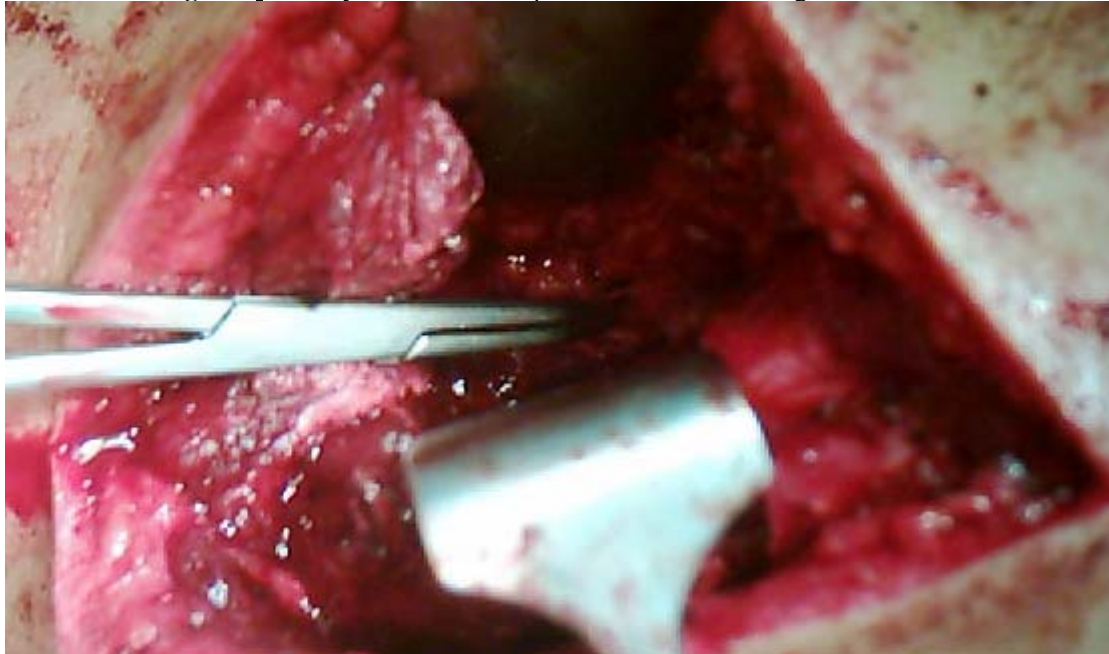
Figure 1- MRI of the shoulder showing hyperdense shadow at suprascapular region consistent with cystic mass. The mass is compressing the suprascapular nerve.



Excision of the cystic lesion was carried out under general, endotracheal anaesthesia, with the patient in the semi-prone position. An incision was made 2 cm proximal and parallel to the spine of the scapula. The supraspinatus muscle was identified under the trapezius, and at this point the acromion process was

osteotomized to facilitate exposure around the scapular notch. Lesion (ganglion) compressing the suprascapular nerve at the spinoglenoid notch (**Figure 2**) was found to have deeper extension than was obvious on in the MRI.

Figure 2 – The cystic mass was exposed after osteotomising the acromion.



The branch of the suprascapular nerve to the infraspinatus was carefully projected. After excision of the ganglion, the wound was closed in layers. Post operative recovery was uneventful and he was completely relieved of the shoulder pain.

Discussion

The unique path followed by the suprascapular nerve to its innervations predisposes it to compression and entrapment. Due to the absence of exact diagnosis, this clinical problem was not frequently reported in the world literature. The scenario is now changing. Shoulder joint pain can be the result of a large number of problems and pain resulting from a suprascapular neuropathy can mimic pain from a rotator cuff tear, very common shoulder pathology. After a thorough clinical examination and an exhaustion of the standard conservation treatment options, in the patient with unrelieved shoulder pain, further more elaborate investigations are warranted. Ogino et al ⁽¹⁾ were successful in preoperatively diagnosing entrapment of the suprascapular never by a ganglion in three cases by ultrasonography. This is an investigation which is readily available in most

centres in Nepal but its applications in musculoskeletal diagnosis are limited. This expertise needs to be developed. The availability of MRI has made it possible to recognise more frequently ganglion cysts causing suprascapular neuropathy.⁽²⁾ The location of the ganglion can be variable. A ganglion in the spinoglenoid notch can compress the suprascapular nerve and adequate surgical exposure is necessary to preserve the nerve to the infraspinatus and to allow complete removal of the ganglion⁽³⁾. Hazrati et al have reported suprascapular nerve entrapment secondary to a lipoma⁽⁴⁾. Other reported causes of suprascapular nerve entrapment are a small spinoglenoid notch, a tight transverse ligament and bony spurs or bridges across the notch^(5,6). Bony bridges in the suprascapular notch may be associated with an increased predilection to traction – type injury of the suprascapular nerve.⁽⁷⁾ Reports of suprascapular entrapment neuropathy are being recognised preoperatively with greater frequency and accuracy since it was first described by Kopell and Thompson⁽⁸⁾. We have been able to recognise this for the first time in our own patient population with the use of MRI. The more frequent use of

ultrasonography in refractory shoulder pain may lead us to develop a more practical and cheaper alternative diagnostic tool for the recognition of a unique clinical problem.

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