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CASE REPORT

MRI Imaging ofParsonage turner syndrome: A rare cause of shoulder pain

Dr. Bheru Dan Charan D.M[1], Dr. Ashish Gangwal MD[2], Dr. Anu Bhandari MD[3] and Dr. Savyasachi Jain MD[4]

1. All India Institute of Medical Sciences, New Delhi.
2. All India Institute of Medical Sciences, New Delhi.
3. SMS medical College, Jaipur.
4. All India Institute of Medical Sciences, New Delhi.

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Abstract

Parsonage-Turner syndrome is acute idiopathic self-limiting brachial plexitis that presents as shoulder pain. Here we present a case of personage Turner syndrome in a 30-year-old male who has acute onset shoulder pain after a few days of covid vaccination. MRI imaging feature of this disease is important because radiologists may be the first to suggest the diagnosis.

Case Presentation:
A 30 -year old male presented with acute right shoulder pain and weakness in the right arm for 2 days. On examination power in the right shoulder was 3/5. The patient has a history of covid vaccination 7 days back. MRI shoulder joint PDFS sequences revealed increased signal intensity in the supraspinatus and infraspinatus muscles related to neurogenic edema due to acute/subacute denervation. There is no evidence of any compression of the suprascapular nerve as there was no evidence of ganglion cyst or soft tissue mass at the spinoglenoid and suprascapular notch. Given clinical and radiological findings, a diagnosis of parsonage Turner syndrome was made. The patient improved after 5 days with conservative management only.

Discussion:-

Parsonage-Turner syndrome also known as acute idiopathic brachial neuritis, neuralgic amyotrophy, or idiopathic brachial plexitis, is a benign self-limiting disorder that usually affects long thoracic, suprascapular, and axillary nerves [1]. The exact etiology is still unknown but a viral or autoimmune cause is suspected [2]. In our case, the patient received Covid vaccine 7 days before the event. MRI is the imaging technique of choice that demonstrates neurogenic edema in muscles supplied by the involved nerve and rules out other causes of shoulder joint pathology causing shoulder pain [3]. Previous literature describes the most common EMG abnormalities of Parsonage-Turnersyndromeoccur in the distribution of the suprascapular nerve [4]. Richard et all [5] described in their research that the supraspinatus andinfraspinatus muscles, both of which are innervatedbythesuprascapularnerve, were most commonly involved. Our case has similar MRI findings.

Corresponding Author:- Dr. Ashish Gangwal
Address:- All India Institute of Medical Sciences, New Delhi-110029.

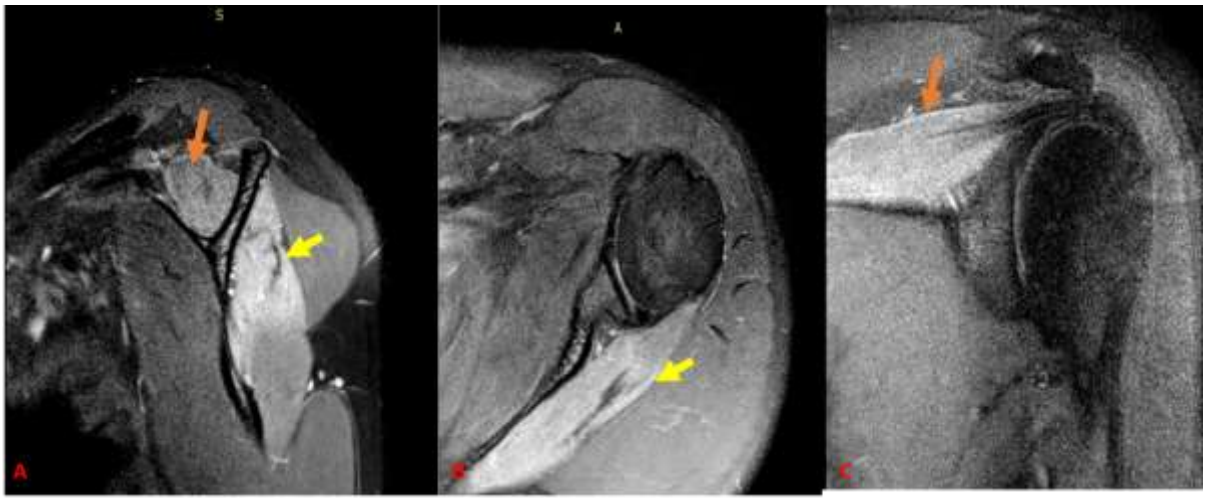

Figure 1:- The 30 years old male presentedwith acute right shoulder pain and weakness in the right arm for 2 days. MRI (3T) right shoulder was performed with PDFS sagittal [A], axial[B], and coronal [C] sequences which showed increased signal intensity in the supraspinatus (orange arrow) and infraspinatus (yellow arrow)muscles.

Conclusion:-

Most commonMRI imaging findings in patients with Parsonage-Turner syndromeinclude intramuscular denervation changes in the supraspinatus and infraspinatus muscles. MRI is sensitive in the early detection of signal abnormalities in the muscles of the shoulder girdle of patients with Parsonage-Turner syndrome.

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