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EVALUATION OF SHOULDER PATHOLOGIES BY ULTRASOUND AND MAGNETIC RESONANCE IMAGING

Radiology

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ABSTRACT

The shoulder joint is an incongruous ball and socket joint without any fixed axis of rotation, which has a wide range of motion in multiple planes; hence stability is compromised for mobility. MRI is the modality of choice in evaluation of rotator cuff tear, especially supraspinatus tendon. MRI shows few advantages over USG with better anatomic information, better bony evaluation and confirmatory diagnosis. 40 patients with suspected shoulder pathologies were evaluated with either USG or MRI in Radiodiagnosis department of Dhiraj hospital, waghodia, Vadodara. The commonest pathology involving shoulder joint is rotator cuff pathologies like full and partial thickness tears and the next most common pathology is labral pathology. Supraspinatus tendon is most commonly involved tendon in rotator cuff tear. High resolution ultrasound & MRI, both are the modalities used in evaluation of shoulder joint, but MRI has become the "gold standard" for detecting shoulder pathologies.

KEYWORDS

Shoulder joint; Rotator cuff tear; MRI evaluation; USG Shoulder; Labral imaging.

INTRODUCTION:-

The shoulder joint is an incongruous ball and socket joint without any fixed axis of rotation, which has a wide range of motion in multiple planes; hence stability is compromised for mobility. To compensate for the unstable bony anatomy the shoulder is protected anteriorly, posteriorly and superiorly by a capsule and the tendons that form the rotator cuff. [1] USG & MRI are the modalities to evaluate various shoulder pathologies. USG is quick, cost effective, real time easily available & repeatable technique for evaluation of various shoulder pathologies. [2] MRI shows few advantages over USG with better anatomic information, better bony evaluation and confirmatory diagnosis. [3] This study is an attempt to evaluate various pathologies of shoulder joint by USG or MRI in patients coming to the Radiodiagnosis department of dhiraj hospital, piparia,waghodia Vadodara.

AIMS AND OBJECTIVE:-

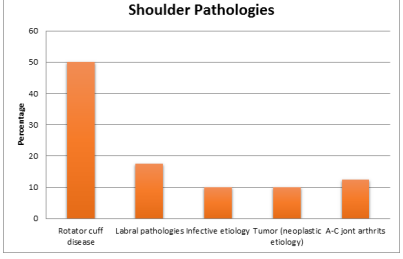
The aim is to evaluate various shoulder pathologies by Ultrasound or MR imaging of shoulder joint.

MATERIAL AND METHODS:-

This study used data of patients presented in radiology department in Dhiraj hospital piparia, waghodia, Vadodara from January 2018 to August 2019. 40 patients with suspected shoulder pathologies were evaluated with either USG or MRI. The study was carried out on PHILLIPS 1.5 T MRI machine & GE LOGIQ P9 sonography machines & using prospective and observational (non interventional) type of study.

DISCUSSION:-

Pathologies	Number	Percentage
Rotator cuff disease	20	50%
Labral pathologies	7	17.5%
Infective etiology	4	10%
Tumor (neoplastic etiology)	4	10%
Acromio-clavicular joint Arthritis	5	12.5%



In this study it was found that rotator cuff disease is most commonly occurring pathology of shoulder joint with approx. 50% cases. (n=20) The second most common pathology of shoulder is labral pathologies including Bankart, Hill sach and others. It is followed by acromio-clavicular joint arthritis which is seen in 5 patients (12.5%). It was found that Infection and Tumors are also seen in shoulder pathologies with approx. 10% cases (n=4).

Angela cadogon et al. Studied prevalence of imaged pathology in patients of shoulder pain & found that rotator cuff disease was the most common disease using both the modalities USG & MR imaging. [4]

CONCLUSION:-

High resolution ultrasound & MRI, both are the modalities used in evaluation of shoulder joint, but due to better anatomical visualization & multiplanner reconstruction, MRI results increased the referring doctor's confidence in the diagnosis. The commonest pathology involving shoulder joint is rotator cuff pathologies and the next most common pathology is labral pathology. Acromio-clavicular joint arthritis, Infection & tumors are also seen involving shoulder joint. Ultrasonography is non-invasive, real time, non-ionizing, low cost and widely available technique. MRI has become the "gold standard" for detecting shoulder pathologies.

REFERENCES:-

1. Cooper DE, Arnoczky SP, O'Briem SJ, et al: Anatomy, histology, and vascularity of the glenoid labrum. J Bone Joint Surg Am 74:46-52, 1992.
2. Naredo E, Aguado P, De Miguel E, Uson J, et al. Painful shoulder: comparison of physical examination and ultrasonographic findings. Ann Rheum Dis 2002; 61:132–136.
3. Willick SE, Sanders RK. Radiologic evaluation of the shoulder girdle. Phys Med Rehabil Clin N Am. 2004; 15:373-406.
4. Angela Cadogan, Mark Laslett, Wayne A Hing, Peter J McNair, Mark H Coates. A prospective study of shoulder pain in primary care: Prevalence of imaged pathology and response to guided diagnostic blocks. BMC Musculoskelet Disord. 2011; 12: 119.