ISSN: 2581 – 3633
PubMed - National Library of Medicine - ID: 101745081

International Journal of Medical Science and Advanced Clinical Research (IJMACR)

Available Online at:www.ijmacr.com

Volume – 7, Issue – 6, December - 2024, Page No. : 40 – 42

Pictorial Spectrum of Glenoid Labrum and Its Tears Presenting To Our Department

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How to citation this article: Dr David Mathews, Dr Fida Ramesh, Dr Sahana S, "Pictorial Spectrum of Glenoid Labrum and Its Tears Presenting To Our Department", IJMACR- December - 2024, Volume – 7, Issue - 6, P. No. 40 – 42.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Introduction

The glenoid labrum is an oval fibrocartilagenous structure that follows the outline of the glenoid rim, deepening the glenoid fossa by 1/3rd, providing increased stability and enhancing rage of movements.

It is also a site of attachments of various ligaments, it lubricates and nourishes. The joint, also contributes to proprioception and pain sensations.

Labral pathologies, stemming from trauma (such as dislocations or direct blows), repetitive overuse, or shoulder instability, can lead to recurrent dislocations, bony injury, and arthritis.

Imaging plays a very important role in objective confirmation, classifying tears, preoperative planning and postoperative monitoring.

The antero and posterior tears are associated with clinical instability while superior lesions are clinically missed hence imaging is vital to diagnose it.

Aims and Objectives of the Study: -To accurately identify glenoid labrum tears and detect any anatomical variations, if present.

Materials and Methodology

Study Location: Department of Radiodiagnosis, AJ Institute of Medical Sciences, Mangalore. Study Duration: July1, 2023, to June 31, 2024

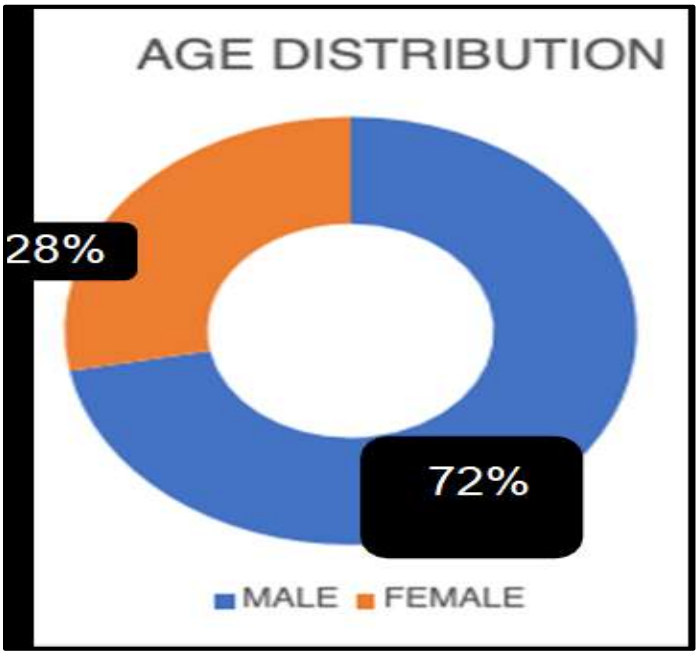
Sample Size: 40 patients.

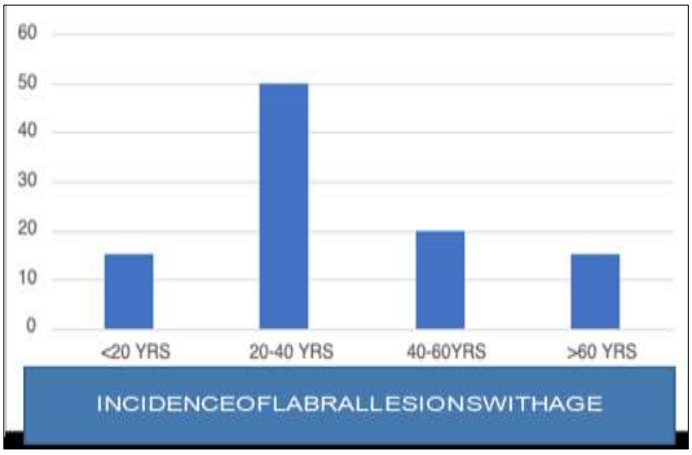
Inclusion Criteria: Patients with a history of trauma or chronic shoulder pain accompanied by joint instability.

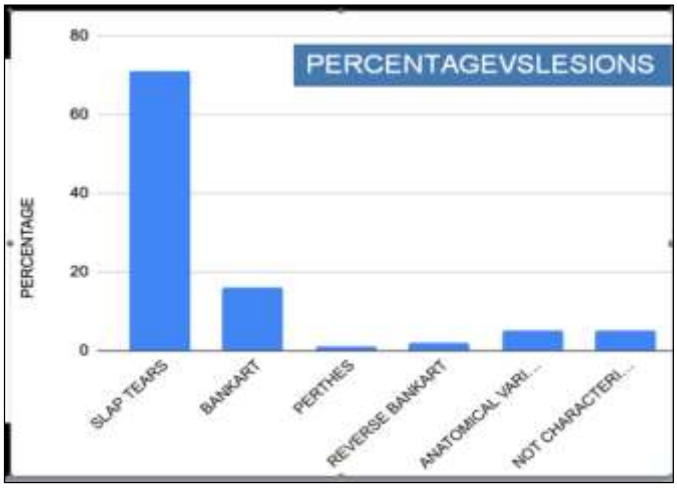
Exclusion Criteria: Patients with acute infections, a history of prior surgeries, pacemakers, metallic implants, claustrophobia, or other contraindications to MRI.

Imaging Protocols: The patient Will be subjected to MRI with multitude of sequences of T1 and T2 weighted, PD, PD-FS, FFE in axial, sagital and coronal planes in SIEMENS MAGNETOM 1.5 T Machine.

Report and analysis:

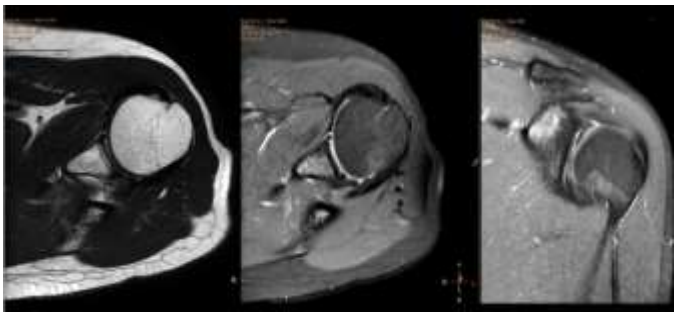




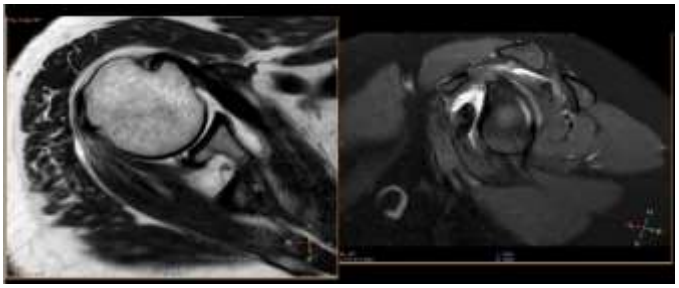


Discussion

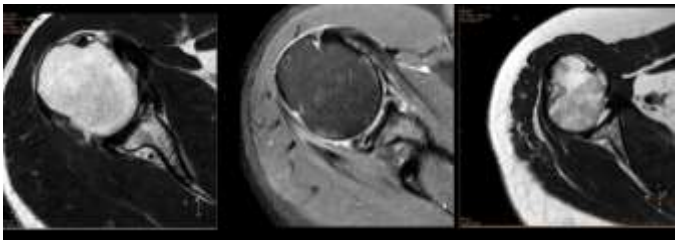
- Among the 40 patients examined, the majority were males with a history of prior trauma.
- SLAP tears emerged as the most common lesion in the study population, predominantly involving anterosuperior regions.
- Anteroinferior tears were most frequently represented by Bankart lesions.
- Additionally, a few normal anatomical variations were identified in patients with chronic shoulder pain.
- Glenoid lesions were classified into three categories:
    1. SLAP Tears: Types range from 1 to 10.
    2. Anteroinferior Lesions: Includes Bankart lesions, Perthes lesions, ALPSA, and GLAD lesions.
    3. Posteroinferior Lesions: Includes reverse Bankart, reverse Perthes, POLPSA, and posterior GLAD lesions.



The given images describe a Anterosuperior labral lesion from1-3‘oclock position

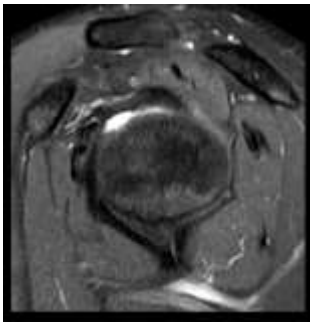


The images reveals A Postero- Superior Quadrant (9-12’ O Clock) Position Labral Lesion



Osseous Bankart Lesion and Hillsacks Lesion

Hagl Lesion



Sublaberal Foram

Buford Complex

Conclusion

The labrum is a complex structure with diverse anatomical variations and associated lesions, making the role of radiologists essential in preoperative diagnosis. Radiologists must identify and classify the three main types of labral injuries and provide precise imaging interpretations to prevent unnecessary surgical interventions.

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