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LIST OF ABBREVIATIONS

(GHL)	Glenohumeral ligament
(IGHL)	Inferior glenohumeral ligament
(MGHL)	Middle Glenohumeral Ligament
(SGHL)	Superior Glenohumeral Ligament
(CHL)	Coracohumeral ligament
(ABER)	Abduction external rotation
(MDI)	Multidirectional instability
(ALPSA)	Anterior labroligamentous periosteal sleeve avulsion
(GLAD)	Glenolabral articular disruption
(BHAGL)	Bony humeral avulsion of glenohumeral ligament
(AIGHL)	Avulsion of the inferior glenohumeral ligament
(HAGL)	*Humeral avulsion of anterior glenohumeral ligament*
(PIGHL)	posterior inferior glenohumeral ligament
(SLAP)	*Superior labrum anterior and posterior lesion*
(POLPSA)	Posterior labrocapsular periosteal sleeve avulsion

THE ROLE OF POSTOPERATIVE MRI IN EVALUATION OF RECURRENT SHOULDER INSTABILITY.

Essay

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INTRODUCTION.

Shoulder joint is the most mobile and most commonly dislocated joint of the body. Injuries to this joint leading to dislocation, subluxation and fracture are common, especially in young active individuals.

Glenohumeral instability can be classified differently based on the etiology (traumatic or atraumatic), direction of dislocation (anterior or posterior) or chronicity (acute or chronic).

(Jana and Gamanagatti ., 2011)

The postoperative shoulder may be evaluated with various imaging modalities, including radiography, ultrasonography (US), computed tomography (CT), and magnetic resonance (MR) imaging, each of which has advantages and disadvantages.

Radiography is adequate for the evaluation of prostheses, bone alignment, and surgical hardware, but it has very low sensitivity and specificity for the evaluation of soft tissue. US is adequate in evaluation of the soft tissues in the rotator cuff, but is operator dependent and has limitations in the evaluation of labral and bone abnormalities. CT provides high resolution depiction of osseous structures, as well as high-quality multiplanar imaging capabilities. MR imaging is the modality of choice for obtaining optimal soft-tissue visualization.

(Aurea et al .,2004)

INTRODUCTION

Shoulder instability is associated with abnormalities of the shoulder capsule, labrum, glenohumeral ligaments and/or surrounding musculature. Magnetic resonance (MR) imaging is an accurate means of evaluating potential causes of shoulder instability. Patients with shoulder instability may present with recurrent dislocations, pain and clicking and are at risk for recurrent labral injury and other shoulder abnormalities, such as rotator cuff tears**.**

(Wagner et al .,2002)

In general, shoulder surgery is considered only when conservative therapy fails. Surgery may be indicated when dislocation occurs repeatedly during light activity that involves overhead extension of the shoulder. Rotator cuff repair is considered when there is severe pain and loss of function in the shoulder **(Stoller et al .,2007)**.

Many different surgical procedures, open and arthroscopic, have been used to repair the capsulolabral complex and to strengthen the glenohumeral ligaments in patients with post traumatic glenohumeral joint instability (**Rand et al .,2000) .**

The effectiveness of arthroscopic surgery for glenohumeral instability may be more effective in young patients who have traumatic dislocations without systemic joint laxity and who do not participate in contact sports.

(Zlatkin .,2004)

Aim of work:

The purpose of this study is to assess the underlying cause of recurrent postoperative shoulder instability to correlate the findings with the operative details, identify the common complications of the postoperative shoulder.

Describing the advantages and disadvantages of various MRI techniques in examining patients with recurrent shoulder instability.

Anatomy of the Shoulder joint
(Normal anatomy and MRI anatomy)

Chapter I

Anatomy of the Shoulder joint (Normal anatomy and MRI anatomy)

The shoulder joint is a synovial joint of the ball-and socket joint in which an elegant freedom of movement is allowed at some expense to its strength and stability **(Cook et al., 2011).**

The bones entering in its formation are the hemispherical head of the humerus (ballinking to the shallow glenoid cavity of the scapula. Some protection of the joint against displacement is afforded by its ligaments and by the tendons and muscles that surround it **(Zlatkin .,2004)**.

Bones of the shoulder joint

1. The clavicle.

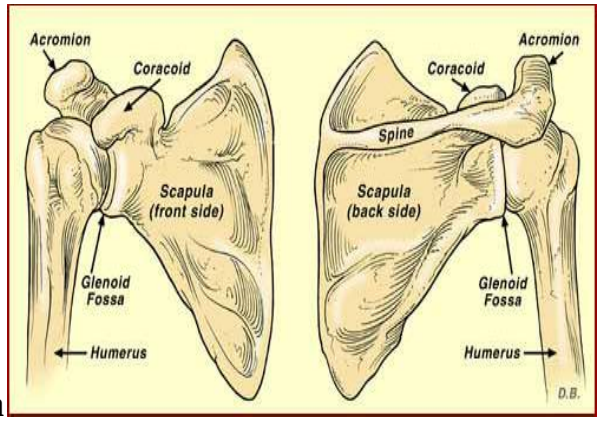
Connects the axial and appendicular skeletons of the upper extremity. Its sternal end is expanded and fits into the notch on the manubrium at the sternoclavicular joint. The lateral one-third is flat, and its sternal end is expanded as it curves back to meet the scapula at the acromioclavicular joint**.**

2. The scapula

Consists of the scapular body, the scapular spine, the scapular neck, the acromion, the glenoid fossa, and the coracoids process (fig1). It has costal (anterior) and posterior surfaces with its anterior surface in contact with the thoracic cage (the scapulothoracic interface). From the upper part of the posterior surface, the spine of the scapula projects laterally, terminating into the acromion, which forms the lateral most tip of the shoulder **(Zlatkin .,2004).**

The lateral angle of the scapula is thick and strong, with an expanded large, shallow glenoid fossa, facing slightly forward and upwards, ready to receive the head of the humerus. Just medial to the glenoid fossa is the coracoid process as it projects upwards from the neck of the scapula. The coracoid process serves as an attachment site for several important ligaments and muscles **(Zlatkin ., 2004).**

a



b

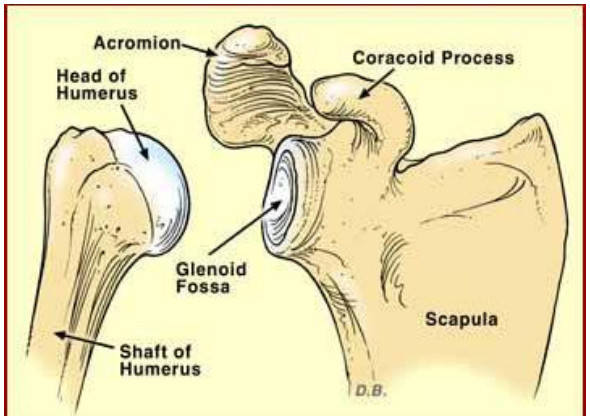


Fig 1. a&b: bones forming shoulder joint **(Quoted from Wagner et al.,2002)**