



ARTHROSCOPIC BANKART'S REPAIR AND REMPLISSAGE SURGERY IN TREATMENT OF RECURRENT ANTERIOR SHOULDER DISLOCATIONS

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INTRODUCTION

The shoulder, a complex ball-and-socket joint, plays a pivotal role in facilitating a wide spectrum of upper limb movements. In a healthy shoulder joint, the intricate harmony between the rounded head (the "ball") and the shallow glenoid (the "socket") allows for this remarkable mobility. This stability is further reinforced by the glenoid labrum, a specialized ring of cartilage, and the surrounding intricate network of ligaments. However, this delicate equilibrium can be disrupted by various factors, including traumatic injuries or repetitive strain, leading to the often forceful and painful dislocation of the shoulder.^{7,8} One common consequence of such dislocations is the development of a specific type of lesion, primarily affecting the anterior part of the shoulder joint, known as the "Bankart's Lesion." A Bankart's Lesion³ is a tear in the glenoid labrum, which can result from these dislocations. This condition can compromise the shoulder's stability, impede its range of motion, and contribute to recurring instances of anterior shoulder dislocation. The treatment of Bankart's lesions is a critical endeavor aimed at restoring not only the structural integrity of the joint but also the overall function and quality of life for individuals who experience these distressing dislocations.^{1,2,3} When it comes to treating Bankart's lesions, clinicians and patients have the option of conservative measures, which involve non-surgical approaches, or operative methods. Among the surgical interventions, one procedure stands out as a frequently chosen and effective option: Arthroscopic Bankart repair combined with Remplissage surgery.¹

Arthroscopic Bankart's repair, a minimally invasive technique, is designed to repair the torn glenoid labrum and restore stability to the shoulder joint. This procedure involves using an arthroscope, a small camera, and specialized surgical instruments inserted through small incisions, minimizing tissue damage and speeding up recovery. Remplissage surgery complements the Bankart repair by addressing another critical aspect of shoulder stability – the engagement of the humeral head (the "ball") with the glenoid (the "socket").^{1,2} This procedure focuses on the infraspinatus tendon, which is utilized to "fill in" and create a stabilizing effect, reducing the risk of recurrent dislocations. Given the prevalence of Bankart's lesions and the substantial impact they have on an individual's daily life and physical activities, understanding the results of Arthroscopic Bankart's repair combined with

Remplissage surgery⁴ becomes paramount. This study aims to delve into the outcomes of this surgical approach, particularly in cases of recurrent anterior shoulder dislocations, shedding light on its effectiveness in improving shoulder stability, range of motion, and overall patient satisfaction

Keywords: Shoulder instability, bankart repair, remplissage, ASES score

MATERIALS AND METHODS -

To investigate the efficacy of Arthroscopic Bankart's repair combined with Remplissage surgery in the treatment of recurrent anterior shoulder dislocations, we conducted a prospective observational study. The study was conducted on patients presenting to the NRS Medical College and Hospital with history of recurrent shoulder dislocation from January 2025 to October 2025. Patients aged 15 to 50 years with a history of recurrent anterior shoulder dislocation were identified. A total of 15 patients were clinically suspected Bankart's lesions and made to undergo radiological investigation. All patients underwent a comprehensive diagnostic evaluation, including a thorough clinical assessment, imaging (MRI), and evaluation of previous treatment methods. Among the patients with confirmed Bankart's lesions, due to financial limitations only 8 patients underwent Arthroscopic Bankart's repair combined with Remplissage surgery. This surgical approach was chosen based on the nature of the lesion and the patients' preference for a more definitive treatment to address the recurrent dislocations. Following the surgery, patients were closely monitored during their postoperative period. A comprehensive rehabilitation program was implemented, including physiotherapy, to aid in the recovery process and optimize the outcomes of the surgical procedure.

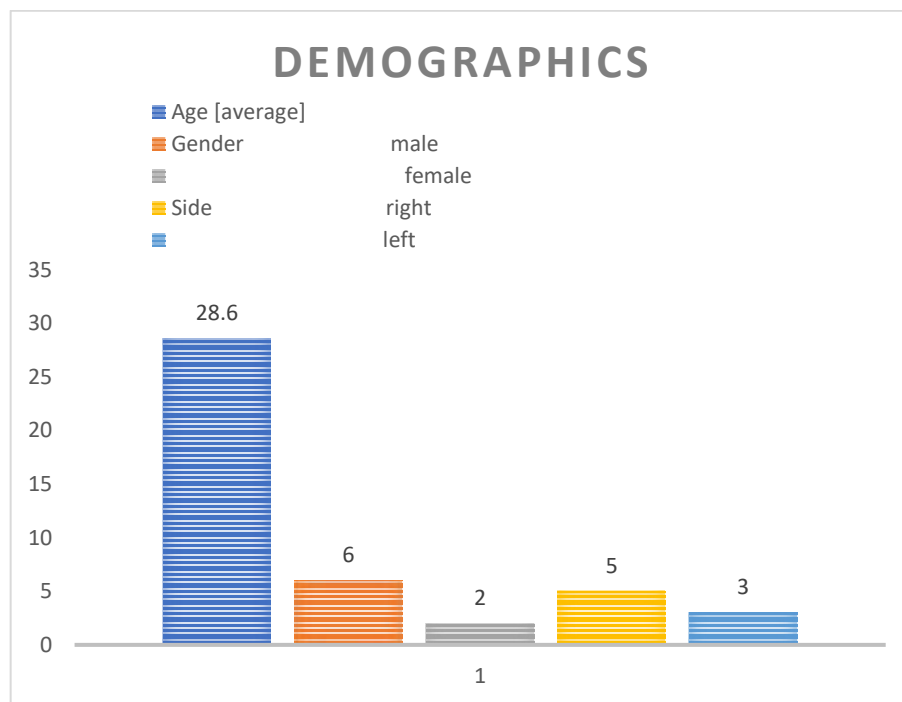
Patients were assessed at 3, 6, and 9 months post-surgery. The primary outcome measures included the American Shoulder and Elbow Surgeons (ASES) score which provided valuable insights into the functional outcomes, stability, and range of motion of the treated shoulders.

Positioning and landmarks



RESULT ANALYSIS

The 15 patients were clinically diagnosed and were confirmed by MRI of respective shoulder. Out of 15 patients only 7 patients were accepted for the surgery due to cost of the procedure. Avoiding the much differences in age, bone and muscle strength, same surgeon conducted the procedure for all the patients. And All 8 patients who accepted for the procedure had bone loss of less than 20 percent.



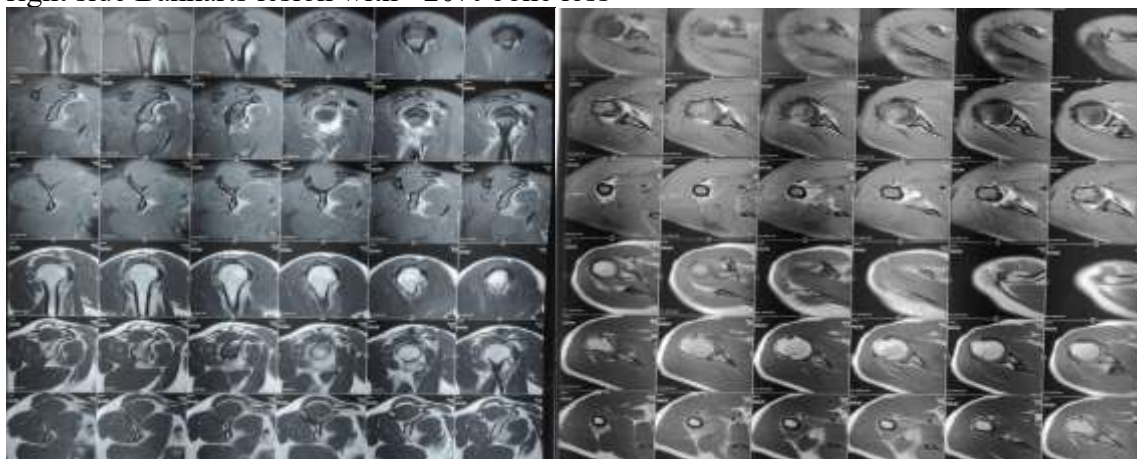
left side Bankarts lesion with <20% bone loss



Anchor fixation(followed technique)



right side Bankarts lesion with <20% bone loss



Post op xray



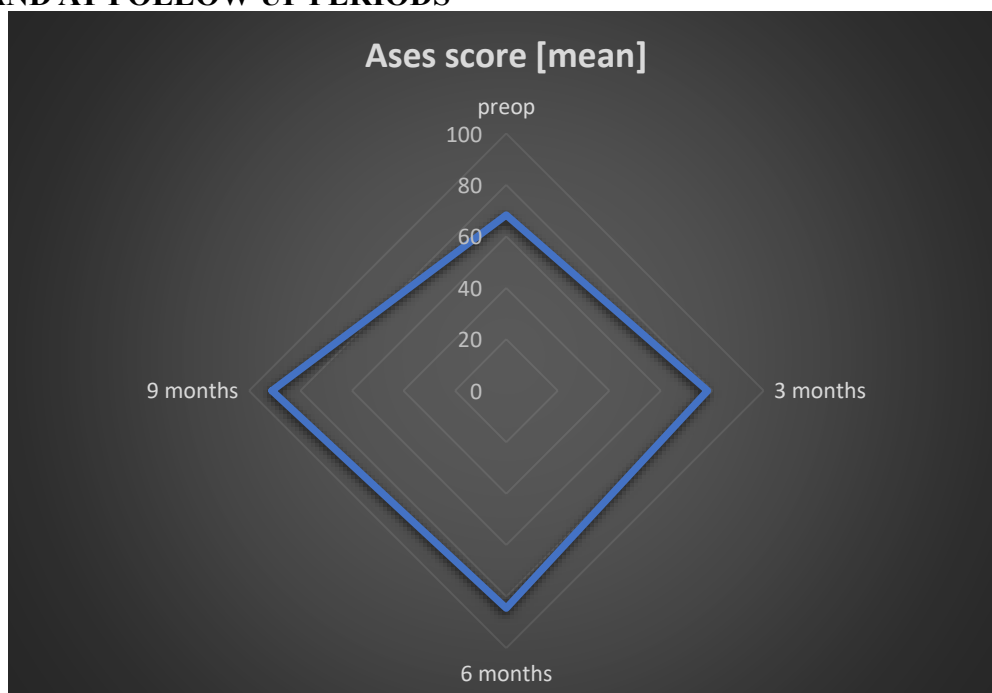
COMPLICATIONS

No patients had surgical site infection. Post operatively all patients had pain and some complained the pain upto 6 to 8 weeks which got reduced later with regular physiotherapy and rehabilitation. And few patients on later dates of follow ups had terminal external rotation restriction. And in this short term follow up of this study no patient had post procedure dislocation.

STATISTICAL DATA

The patients were followed up at 3,6, 9 months and were calculated for American society elbow and shoulder scores of all the patients at regular follow ups . And mean values of all the patients pre operatively and post operatively mentioned in the table below.

PRE OP AND AT FOLLOW UP PERIODS



Discussion

The study's upfront acknowledgment of its limitations, namely the small patient cohort and short follow-up duration, demonstrates transparency and scientific integrity. Despite the limitations mentioned, the evidence collected during the study provides robust support for the effectiveness of the combined Arthroscopic Bankart's repair and Remplissage surgery. This implies that even within the limitations, the positive outcomes observed are strong and consistent enough to indicate a potential breakthrough in the treatment of Bankart's lesions linked to recurrent anterior shoulder dislocations. Emphasizing the comprehensive nature of the treatment strategy highlights that it encompasses more than just surgery. It says that treatment's success is attributed to the integration of surgical intervention and a tailored rehabilitation program.^{1,8} This holistic approach acknowledges that achieving positive outcomes involves both skilled medical procedures and attentive postoperative care. Patients experienced reduced instability, which can significantly impact their quality of life, and gained greater mobility in their shoulder joint, enhancing their ability to engage in various activities. The satisfaction of patients is now presented as a reflection of the treatment's success.^{1,4,8} This implies that patients not only had objectively improved outcomes but also subjectively experienced a higher quality of life and a greater sense of well-being after the treatment.

Conclusion

While the study acknowledges the limitations of its small patient cohort and short follow-up duration, the evidence gathered strongly supports the combined Arthroscopic Bankart's repair and Remplissage surgery as an effective approach for managing Bankart's lesions associated with recurrent anterior shoulder dislocations in patients aged 15 to 50 years with minimal limitation in terminal external rotation difficulty. The comprehensive nature of the treatment strategy, encompassing both surgical intervention and postoperative rehabilitation, contributes to improved shoulder stability, range of motion, and overall patient satisfaction. These positive outcomes suggest that this treatment approach holds promise for addressing a challenging clinical issue and improving the well-being of affected patients.

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