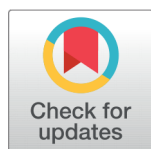


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Recurrent anterior shoulder dislocation treated by Latarjet procedure

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Abstract

AIM: Our aim is to study and evaluate the results of functional outcome of recurrent anterior shoulder dislocation treated by Latarjet procedure.

Introduction: Shoulder dislocations are common injuries, especially in young, active people. Latarjet surgery can be done to prevent repeated dislocation. Each time the shoulder dislocates, further damage can occur to the joint.

For this reason, people who have recurrent shoulder dislocations will usually have surgery in an effort to stabilize the joint and prevent future dislocations

Materials And Methods: This retrospective study conducted in GMKMCH, Salem during the period for 2 years. 10 adult patients with recurrent shoulder dislocation treated by Latarjet procedure were included in the study.

Results: All ten patients had solid bone union. 90% of the patients had excellent to good outcomes. One patient had transient axillary nerve weakness which recovered fully within 3 months period. During the first 10 months, there is significant loss of external rotation. But during 18 to 20 months period, there is significant improvement in the range of external rotation. None of the patient developed recurrent dislocation or positive apprehension. All patients have resorted back to routine work after 6 months period. **Conclusion:** Open Latarjet procedure offers a good surgical method of management of recurrent anterior shoulder dislocation with significant bone loss and our study showed good functional outcome as measured by WalchDuplay and VAS scores

Keywords: Glenohumeral instability; Latarjet procedure; Hill sach lesion

1 Introduction

Shoulder dislocation is the most common form of joint dislocation (31%). With subsequent episodes of dislocation, humeral head, the glenoid, capsule, ligaments and the labrum undergoes progressive alter-

ations.⁽¹⁻⁵⁾. Anatomical repairs aim at attaching the torn glenoid labrum to its original position thereby achieving the proper tension in the shoulder complex. With the extreme range of movements, the shoulder joint is prone for

dislocations. This could be due to traumatic or atraumatic, though the majority are atraumatic. With each subsequent episode of dislocation, humeral head, the glenoid, capsule, labrum and the ligaments undergoes progressive degeneration which further worsens the situation. Selecting an optimal and efficient surgical procedure for patients with anterior glenohumeral instability and associated glenoid bone loss is a complex problem. Among the coracoid transfer procedures, open laterjet procedure offers good clinical outcomes even with engaging Hill sach's along with glenoid bone loss.

2 Materials and methods

This retrospective study conducted in GMKMCH, Salem during the period of 2 years. 10 adult patients with recurrent anterior shoulder dislocation treated by Latarjet procedure were included in the study. Patients with recurrent shoulder dislocation, managed with Latarjet procedure as a definitive procedure were included in the study. Patients eligible for inclusion were between ages 18 and 65 years with anterior shoulder dislocation, patients were excluded if they had multidirectional instability, congenital ligament laxity. The clinical outcome was evaluated by Walch Duplay score and Rowe score. Ten patients had been managed Latarjet procedure with a mean age of 48 years (range 19-82 years). Patients with Recurrent anterior shoulder dislocation are selected in for clinical study as per above criteria. A detailed history regarding name, age, sex, date of first episode of dislocation, age at the time of first episode, mechanism of injury, number of dislocations, residential address, and occupational status was recorded. Patients are subjected to routine blood investigations like complete haemogram, renal function tests. X rays of shoulder True anteroposterior view and Stryker notch view taken to demonstrate Glenoid defect and Hill sach lesions. CT scan is the investigation of choice as it assesses the extent and the size of the bony lesions, which were under appreciated previously in x-rays. MRI is useful to evaluate labral tears, SLAP tears, HAGL & ALPSA lesions. Patients were selected after appropriate radiographs, CT and MRI scans and taken up for surgery. We used shoulder instability severity index and Glenoid bone loss percentage to assign our patients for surgery. All 10 cases were done under general anesthesia with patient in beach chair position. We used Deltopectoral approach for all cases. Expose the conjoint tendon. In Latarjet technique, the coracoid is sectioned along with the Coracoacromial ligament and osteotomized at its base. Insert the bone block along with the Coracoacromial ligament through the split subscapularis and place it flush to antero-inferior margin of glenoid, keeping the inferior surface of coracoid in contact, repair the Coracoacromial ligament with Capsule. Postoperatively patients were immobilized in a Shoulder immobilizer, with the arm against the body, drain removal on 2nd postoperative day, intravenous antibiotics for 5 days, from Day 1 Ice and Ball squeeze therapy, from Day 1 to 2

weeks immobilization in sling or shoulder immobilizer, 2 to 6 weeks start active assisted Forward flexion, Codman pendulum exercises, abduction range of motion exercises, 6 to 8 weeks start external rotation exercises, from 8 weeks start Isometric shoulder strengthening exercises, can return to activity after 12 weeks and can indulge Non-contact sports after 3 months. Periodic radiographs were requested to evaluate the union, screw position and arthritic changes. The functional outcome was measured using WalchDuplay score and Rowe score.

3 Results

We operated on 10 adult patients. Mean follow up period was 24 months (range: 12-20 months). All ten patients had solid bone union. 90% of the patients had excellent to good outcomes. One patient had transient axillary nerve weakness which recovered fully within 3 months period. During the first 10 months, there is significant loss of external rotation. But during 18 to 20 months period, there is significant improvement in the range of external rotation. None of the patient developed recurrent dislocation or positive apprehension. All patients have resorted back to routine work after 6 months period.

4 Discussion

The outcome following Latarjet surgery for recurrent anterior shoulder dislocation depends on the pre evaluation, number of previous dislocations, age, sex, associated injuries and finally the experience of the operating surgeon [6]. Mean age of patients was 28.37 years in our study with majority (70%) belonging to the age group of 20 - 35 years. Mean number of episodes of recurrent dislocation prior to surgery were 15.5 times (range 15 -60). Mean duration of illness 2.3 years. And the most common mechanism of violence was due to Recreational/sports injury [9] (56.6%), followed by motor vehicle accident (23.3%) and unspecified falls (20%). Hill sach lesion is seen in majority (70%) of case. Patients in our series had no recurrence, which was far better when compared to other similar studies. Outcome in our series is based on the Walch Duplay score and is found to be excellent in 40%, Good outcome is seen in 46.7%, Fair outcome of 13.3%. Bristow and Latarjet techniques found no difference in joint stiffness in 0% glenoid bone loss however greater joint stiffness with Latarjet procedure for 15 to 30% glenoid bone loss. Latarjet restored the joint stiffness that was measured in intact state in 91% cases. They had dislocation rate 0 % dislocations with Latarjet. In patients with engaging Hill sach lesions, Latarjet gives better results than Modified Bristow. Once the follow up is more than a year, the functional outcome significantly improves showing similar results with both the techniques. Post operatively Modified Bristow cases continued to have positive apprehension test which is significantly higher

than Latarjet (0%). Ten patients had mean walchduplay score of (55.3) preop, 3 month post op, (84.0) 6 month post op and (90.8) 21 month post op . In our study the following three factors were taken into account to obtain good results post-operatively; 1. Screw should be placed ideally below the equator anteroinferior aspect of glenoid and it should be within 5 – 10 mm from the rim (joint space) of glenoid after freshening the ends. 2. Adequate postoperative immobilization — period of 2 weeks to promote healing. 3. 4mm cannulated cancellous screws of sizes 35 to 40mm were used in our study to get Bicortical purchase.

5 Conclusion

Our study results provide evidence that Latarjet procedure effectively restore joint stability in anterior Glenohumeral instability patients with Glenoid deficiency. Selection of the patients with proper history, physical examination, radiographs, computed tomograms and MRI is mandatory, with significant importance to the size and site of the bone defect. Surgeons should be aware that these procedures are technically demanding and we recommend experienced orthopaedic surgeons familiar with normal and abnormal anatomy of shoulder. Therefore, in terms of efficacy, Latarjet will be a preferable procedure in coracoid transfer surgeries for Anterior Glenohumeral instability with significant Glenoid bone loss.



Fig 3. Intra-operative images



Fig 1. Case 1 illustration



Fig 2. Immediate post OP X ray



Fig 4. Range of movement



Fig 5. Case 2 illustrations

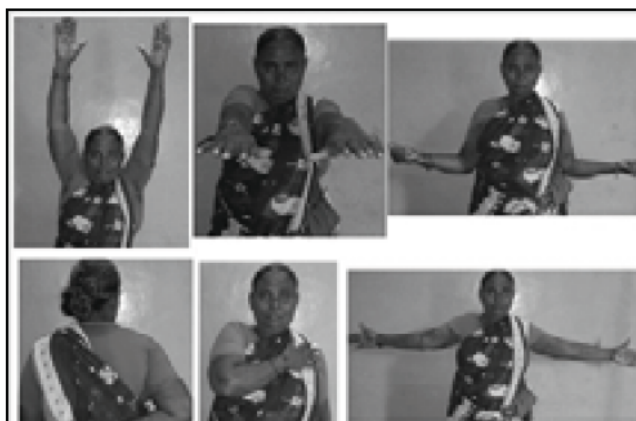


Fig 6. Range of movement

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