ORIGINAL RESEARCH PAPER

Volume-8 | Issue-7 | July - 2019 | PRINT ISSN No. 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A CASE REPORT: CHRONIC ANTERIOR SHOULDER INSTABILITY TREATED WITH THE LATARJET PROCEDURE

Orthopaedics

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ABSTRACT

Shoulder dislocations can cause both acute and chronic instabilities that need to be addressed in order to restore shoulder functioning. Volley ball is a game that requires frequent overhead movement of the arm, which tends to eventually lax the ligaments and lead to recurrent shoulder dislocations. The Latarjet procedure is one among other procedures done for recurrent shoulder dislocations, where the glenoid is augmented to help provide stability to the shoulder joint. We, hereby, report a case of chronic shoulder instability in a volley ball player treated surgically with Latarjet procedure.

KEYWORDS

INTRODUCTION:

Shoulder joints are highly mobile with a great range of motion. The greater range of motion leaves it susceptible to joint instabilities. Shoulder instabilitiesare commonly seen in sports injuries and traffic accidents. They are also caused by ligament laxity which may be normal anatomy or acquired. Dislocations are also associated with epilepsy and electrocution.Recurrent anterior shoulder instability presents a surgical test owing to both, bone and ligament defects of the glenoid labrum and the humerus head.

Surgically treatment of shoulder instability includes arthroscopic and open procedures like the Bankart Repair, Putti-Platt operation, Latarjet and Bristow procedure. In the Latarjet procedure, we surgically transfer the patient's coracoid process to stabilize his/her head of the humerus in the shoulder joint by restoring the glenoid and providing dynamic stabilization through the tension within the conjoined tendons [2,3].

CASE REPORT:

A 21-year-old male volley ball player, came with complaints pain over his right shoulder. He gives a history of about 80 events of shoulder dislocation spanning over a period of 8 months. Initially, he had dislocated his right shoulder while playing Volley ball 8 months ago which had spontaneously reduced. After the initial injury, repeated dislocations had happened with increased frequency over time. He was physically examined and apprehension test and augmentation tests were positive. An X-ray of the affected shoulder was taken and further investigated with an MRI scan and CT scan of the right shoulder after which he was diagnosed to have anterior shoulder instability with bony Bankart's lesion and Hill-Sachs lesion.

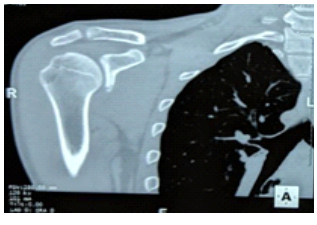
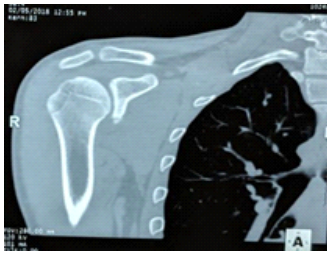


Fig 1.1



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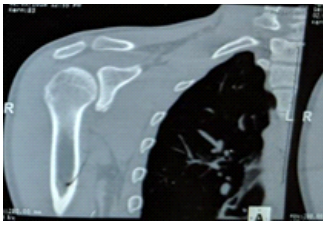

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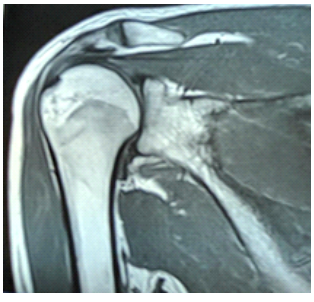

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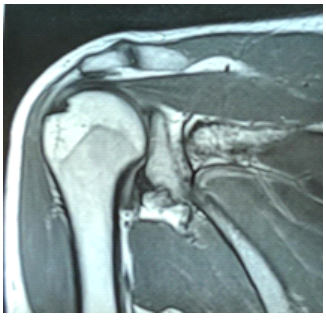


Fig 2.2

Treatment:

The patient was surgically managed, with the open Latarjet procedure, for his right shoulder. He was operated, under general anaesthesia, under aseptic and sterile precautions, in the beach chair position. Through the delto-pectoral approach, the coracoid process was visualised and with the arm in external rotation and 90 degrees abduction the coracoacromial ligament was sectioned from the coracoid process. The arm wasadducted and then, internally rotated, to release the pectoralis minor from the coracoid. Using an osteotome the segment was osteotomized.The arm was then abducted and externally rotated and the coracohumeral ligament was released from the coracoid. The bone graft was then grasped and it was cleared from all

its attachments and lateral part was dissected to circumventpossi bleinjury to the musculocutaneous nerve. The end to be attached to the glenoid was freshened and the graft was pre drilled and kept.Further dissection was done to visualize the glenoid and the damaged portion was resected with the portions of the labrum. The prepared graft was then fixed on to the antero-inferior part of the labrum using 2 screws of 4mm. Post operatively his right arm was supported with a shoulder immobilizer for two weeks after which passive mobilisation was initiated for 6 weeks. We advised the patient to start active mobilisation in all directions after completion of 6 weeks.

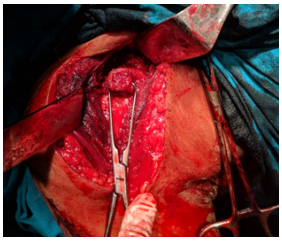
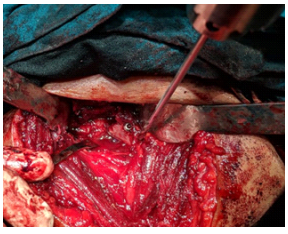


Fig 3.1



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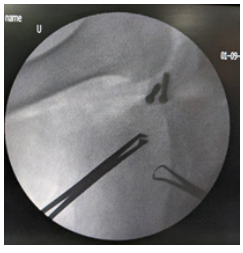

Fig 4.0

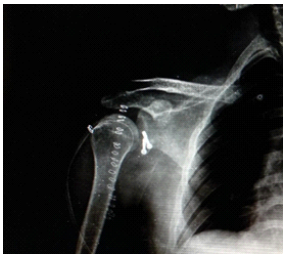

Fig 5.0

DISCUSSION:

Anterior glenohumeral dislocations is the most common type of shoulder dislocation andaccounts for 95% of all shoulder dislocation[10,11]. The initial trauma can later on cause chronic shoulder instability. Recurrent shoulder dislocations lead to an osseous defect of the glenoid labrum [4, 5, 6]. In patients with substantial bone loss, reconstruction of the bony lesions is advocated [7,8,9]. The patient used to play volley ball frequently even after his initial trauma 8 months ago.In patients with significant bone loss,the failure rate post arthroscopic Bankart repair dramatically increases from 4% to 67%[16]. Subsequently, much improved results were reported when the Latarjet procedure was performed in subjects with bone loss[17].The Latarjet procedure is aviable option for treating shoulder instabilities [1]. It provides stability to the joint by increasing the joint osseous surface and providing dynamic stabilization through the tension within the conjoined tendons [2,3].

Burkhart et al, quoted by An et al. [12], had reported excellent outcomes of the Latarjet procedure in 102 subjects, who either had an engaging Hill-Sachs lesion or greater than 25% of bony glenoid loss, with a recurrence rate of only 4.9% after a mean follow-up of 59 months [12]. It has been proposed that, measured against soft-tissue reconstruction, such as Bankart repair, an open Latarjet procedure is more effective to treat recurrent anterior shoulder dislocation with a substantialbony glenoid defect[1,3,4]. Hence, we prepared for an open Latarjet procedure.

Nerve injury is a common complication that may occur during transferring of the coracoid process.The more commonly injured nerve is the musculocutaneous nerve and axillary nerve, but it can involve any branch of the brachial plexus and usually recovers spontaneously [15]. Our patient had no neurovascular deficits post-surgery. He is currently mobilising well and is able to do his day to day activities. He has a limited restriction of his external rotation and overhead abduction terminally.

CONCLUSION:

Over time, several complications may arise from recurrent anterior shoulder dislocations. Factoring in the extent of the osseous defect of the glenoid rim, different surgeries are recommended. Open Latarjet procedure is an established procedure for a chronic anterior glenohumeral instability with a general complication rate within 15-30%. The rate of recurrent instability associated with the Latarjet procedure, is less than 5% with excellent functional outcomes.

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