

included 37 males and 4 females with an average age of 23 years old. All shoulders were evaluated by three-dimensionally reconstructed computed tomography (3DCT) preoperatively, which confirmed a bony fragment at the anteroinferior portion of the glenoid. The average bone loss against the lower part of the circular glenoid portion was 7.3% (range, 2.1-20.9) as measured by our original calculation method using 3DCT. In all shoulders, a displaced bony fragment, firmly attached to the labroligamentous complex, was separated from the glenoid neck before a reduction and fixation to the optimal position was achieved utilizing suture anchors. All patients were assessed using the Rowe scoring system at a minimum 24 months postoperatively. Results: The Rowe score improved postoperatively in all shoulders ($P < .01$). The average Rowe score at the time of mean follow-up of 31 months (range, 24-47) was 94.3 (range, 40-100) with 40 out of 41 shoulders graded as excellent or good (97.6%). One noncompliant patient experienced a redislocation 3 months postoperatively during soccer play before receiving permission to return to full sports activity. Thirty-eight out of 39 active sports participants returned to their preinjury sports. Conclusions: Arthroscopic bony Bankart repair utilizing suture anchors yields a successful outcome in shoulders with chronic recurrent traumatic anterior glenohumeral instability. This study demonstrates that the bony reconstruction together with the attached labroligamentous complex can bring a favorable outcome even in athletes and also suggests that this technique might obviate the necessity of open bone-grafting in patients with "inverted pear" type glenoid.

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The Capsular Split-Shift Procedure for Anterior-Inferior Shoulder Instability: Long-term Follow-up (SS-31)

The capsular split-shift procedure for anterior-inferior shoulder instability has been performed using suture anchors since 1995. Presented here is the long-term evaluation of 43 patients who had suture anchor repairs with a minimum of 6 year follow-up. Two of these patients could not be located for final follow-up. Of the remaining 41 patients 33 were re-examined and 8 had telephone interviews. All of these patients had a Bankart lesion. The average age was 24. Thirty five patients had suffered full dislocations, 6 patients had feelings of chronic subluxation without a documented dislocation. Three of the dislocators also had posterior instability, i.e.

they had MDI. Repairs were done acutely in 8 patients and delayed 2 months to 13 years in the chronic group. The same technique was used in every case: After complete mobilization of the capsule off of the underlying subscapularis, an inferior split (usually 1 cm) was made from the inferior pole of the glenoid into the axillary pouch. Then No. 1 PDS was inserted into the capsule, threaded through a G2 Mitek anchor and the anchor inserted into the glenoid rim. The sutures and anchors are placed so that they superiorly advance the capsule, opening the split to oppose the glenoid neck. Usually three suture-anchor pairs were employed. Only in the three MDI cases, posterior suture plication was also done. There were no interval closures in this group. There were no recurrences in the acute repair group. In the chronic group there were 3 recurrent dislocations (7.2%) and 2 patients with persistent symptoms of subluxation but without a frank recurrent dislocation (4.8%) yielding a total failure rate of 12%. This is higher than what was found in my previous study with shorter term follow-up (6.9%). One cause of failure in one patient in the dislocation group and in one patient in the subluxation group was a large Hill Sachs lesion. Given what is now known about bone loss and recurrence, if these patients were operated on today, they would have had a bone augmentation procedure in addition to their repair. Eliminating these two patients, the overall failure rate is reduced to 7.3% at minimum 5 year follow-up. All of the patients without a recurrence were satisfied. 90% of athletes with no recurrence returned to their sport but only 74% felt that they had returned to pre-injury levels. 58% of patients recovered full ROM. 32% lost 5°-10° of ER, 10% lost 10°-15° of external rotation. In order to further reduce the recurrence rate, treatment of an interval lesion is now performed in selected cases. The decision to close the interval is based on whether the patient has a positive sulcus sign that does not reduce with external rotation and/or arthroscopic finding of a patulous rotator interval. There have been no short-term recurrences using selected interval closure and elimination of patients with excessive bone loss.

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Hill-Sachs "Remplissage": An Arthroscopic Solution for the Engaging Hill-Sachs Lesion (SS-32)

The purpose of this paper is to present a new arthroscopic approach to a subset of instability patients that present with a combination of bony lesions. These lesions of the glenoid (bony Bankart, fractures, erosion), and humerus (Hill-Sachs) have long been established as significant contributing pathology in recurrent shoulder instability.