



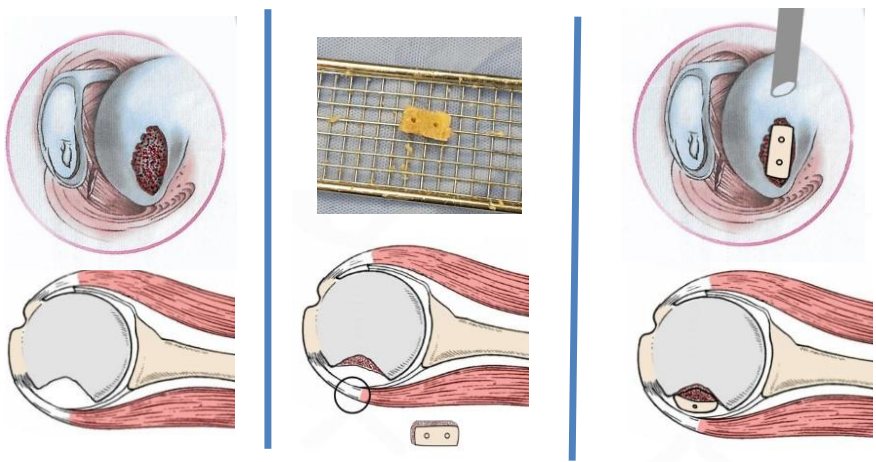
Arthroscopic Bone Grafting of the Humeral Head for Treatment of a large Hill-Sachs Lesion, a new technique using transosseous suture fixation
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Aim

Recurrent anterior shoulder dislocation often leads to the presence of a Hill-Sachs lesion. A large Hill-Sachs lesion compromises shoulder stability. This study will report the technical challenge and the outcome of a new technique of arthroscopic bone grafting and transosseous suture fixation of a large Hill-Sachs Lesion developed by the last Author. A variety of open or arthroscopic techniques have been introduced to treat Hill-Sachs lesions, including humero-plasty or disimpaction with the risk of nonunion and malunion. Arthroscopic remplissage may not be suitable for throwing athletes and is more applicable for shallow defects. Humeral head augmentation to restore native anatomy using osteochondral bone is more suitable for deep defect.

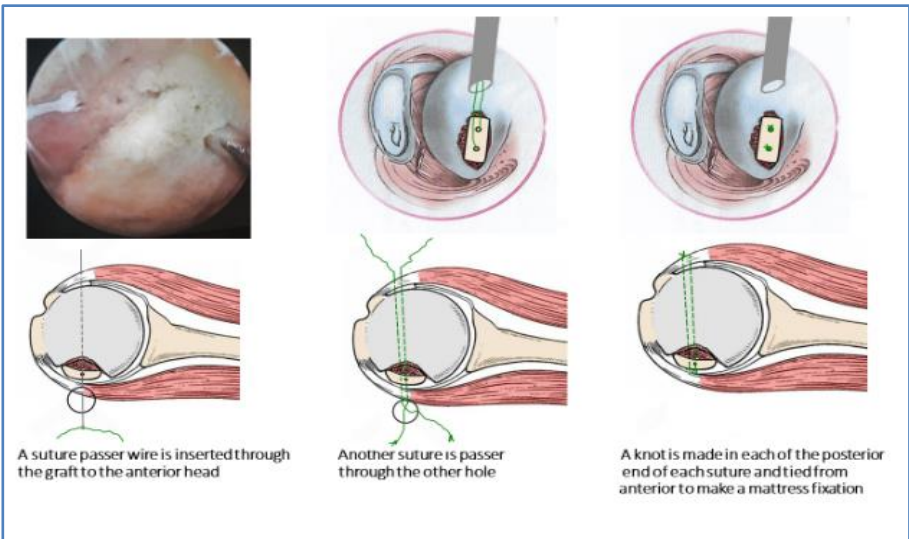
Methods

The procedure include allograft placement via postrolateral portal and graft suspension fixation using transosseous suture for bone graft compression. We used this technique combined with arthroscopic anterior inferior capsular shift in treatment of complicated anterior shoulder instability with large Hill Sachs defect.



HillSachs Defect Holes in the Graft and a superior Cannula is placed in the defect after Abrasion of the defect

in the defect after Abrasion of the defect



A suture passer wire is inserted through the graft to the anterior head

Another suture is passer through the other hole

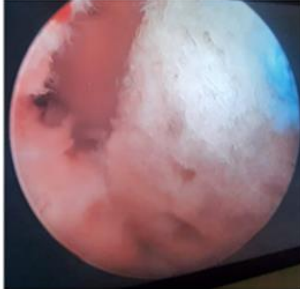
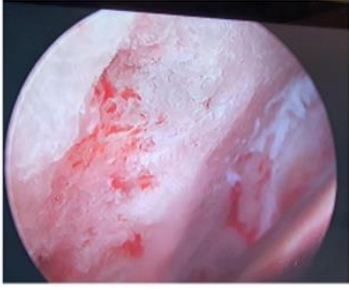
A knot is made in each of the posterior end of each suture and tied from anterior to make a mattress fixation



Abrasion of the Hill-Sachs defect

After putting the bone block

After suture fixation



Eight cases of recurrent shoulder dislocation were treated between 2017 and 2021 by one surgeon in two centers. There were 8 males with an average age of 24 years (between 16 and 30). The depth of the defect was more than 10 mm. Arthroscopic inferior capsular shift plus arthroscopic bone grafting was done in all cases. We were able to evaluate 7 of the 8 cases treated with an average follow up of 18 months (between one and four years).

Results

The postoperative rehabilitation took 4 months. The range of motion and function in all cases was normal. No symptoms of subluxation or dislocation had occurred in any of cases. The strength compared to the opposite normal side was similar. was complaining of instability. The x-rays done 3 months after surgery showed filling of the empty bone spaces. According to Neer score all cases were rated excellent.

Conclusions

The clinical and radiographic result strongly encourage using Arthroscopic Bone Grafting of the Humeral Head techniques for recurrent shoulder dislocation with Hill large Sachs defect.