

Arthroscopic Autogenous Iliac Bone Grafting to Treat Recurrent Anterior Shoulder Instability with Glenoid Bone Defect

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Summary:

To evaluate the technique of arthroscopic autogenous iliac bone grafting and its clinical outcomes on treating recurrent anterior shoulder instability with glenoid bone defect.

Abstract:

Purpose To evaluate the technique of arthroscopic autogenous iliac bone grafting and its clinical outcomes on treating recurrent anterior shoulder instability with glenoid bone defect.

Methods From March 2013 to June 2015, 24 cases were included (18 males, 6 females. Aged 17 to 39 years, mean age 26.5 years). For all cases, patients underwent MRI and 3D-CT examination preoperatively to fully inspect the glenoid labrum, glenoid bone defects and rule out other shoulder diseases. When the glenoid bone defect is greater than 25%, a 2cm*1cm*1cm ICB block is harvested on the same side of the patient and transplanted to the glenoid defect under arthroscopy. Fix the ICB block with double row anchors, and the Bankart lesion is repaired at the same time. ASES, Constant, UCLA and Rowa score are recorded before surgery and in the postoperative follow-up. All patients take CT examination 6 months after surgery to evaluate the bone block healing. All the data and functional status were statistically analyzed.

Results The average follow-up period was 18 months (ranged from 12 to 24 months). At final follow-up, the ASES score, Constant-Murley score, UCLA score and Rowe score were found to have improved significantly from 32.7±5.2, 74.2±15.7, 24.3±4.7 and 62.5±4.4, preoperatively to 37.8±2.0, 97.0±2.5, 34.2±0.9 and 96.8±2.9, postoperatively (P<0.05). The CT taken 6 months postoperatively showed that the iliac bone block and the defected glenoid had a pleasant bony healing process. No recurrent dislocation is found in all 24 cases.

Conclusions The treatment for recurrent anterior shoulder instability with glenoid bone defect is intractable which simple Bankart repair may lead to a higher recurrence rate. Arthroscopic autogenous iliac bone grafting is an effective way to treat recurrent anterior shoulder instability with glenoid bone defect.

Key Words Arthroscopy; Shoulder Instability; Bone Defect; ICB Grafting