

Glenoid Osteotomy for Multidirectional Instability of the Shoulder associated with Generalized Joint Laxity

Koh Maruyama, MD, Ph.D.

Department of Orthopaedic Surgery, Nihon University School of Medicine, Tokyo, JAPAN

15 patients 20 joints of multidirectional instability of the shoulder (MDI) associated with generalized joint laxity (GJL) underwent surgical stabilization. They were reviewed at an average of 3.3 years (between 2.1 and 5.8 years). All patients showed bilateral three-directional laxity during stress testing. 9 joints out of 20 had had an episode of dislocation or subluxation including 3 joints of habitual dislocation but there was no voluntary dislocation.

5 patients 9 joints underwent capsular shift (group A) and 10 patients 11 joints, which revealed dysplastic glenoid by preoperative arthroscopic examination, underwent both glenoid osteotomy and capsular shift (group B). Anterior approach was used in 18 joints and posterior in 2 according to the main direction of joint instability. In glenoid osteotomy the axillary nerve was identified and protected and an iliac bone was grafted so as to elongate the inferior part of the glenoid rim. Rotator interval was also repaired if its lesion existed. Furthermore, transplantation of the conjoint tendon was done in case the joint having an episode of anterior dislocation.

The joint was immobilized for 4 to 6 weeks postoperatively. No infection and no neurovascular complication occurred in this series.

Recurrence of instability occurred in 3 joints of group A and 2 of group B. 8 joints of excellent, 6 of good, 4 of fair and 2 of poor were obtained according to the C. Rowe shoulder scoring system. Revision was performed in 4 joints. No statistical difference in the results of these groups was found ($p < 0.05$) unless joint laxity was stronger in group B than in group A.

It is generally said that MDI associated with GJL is much more difficult to be stabilized surgically than MDI without GJL. We consider that both soft tissue restraint and bone-cartilage restraint should be reconstructed simultaneously to stabilize the joint of MDI with GJL. From the results above it is concluded that glenoid osteotomy combined with capsular shift is recommended for MDI with GJL.