

# Arthroscopic Outcomes as a Function of Acetabular Coverage From a Large Hip Arthroscopy Study Group.

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## **Abstract**

### **PURPOSE:**

To report comparative hip arthroscopic outcomes of patients with low (borderline dysplasia), normal, and high (global pincer femoroacetabular impingement [FAI]) lateral acetabular coverage.

### **METHODS:**

A retrospective analysis of prospectively collected data from a multicenter registry was performed. Primary hip arthroscopy patients were assigned to 1 of 3 groups based on preoperative lateral center-edge angle: borderline dysplasia ( $\leq 25^\circ$ ), normal ( $25.1^\circ$ - $38.9^\circ$ ), and pincer ( $\geq 39^\circ$ ). Repeated-measures analysis of variance compared preoperative with 2-year minimum postoperative International Hip Outcome Tool (iHOT-12) scores. Subsequent

analysis of variance determined the effect of acetabular coverage on magnitude of change in scores.

## **RESULTS:**

Of 437 patients, the only statistical difference between groups was a lower prevalence of acetabuloplasty in the borderline dysplasia group ( $P = .001$ ). A significant improvement in the preoperative to postoperative iHOT-12 scores for patients with normal acetabular coverage, acetabular undercoverage, and acetabular overcoverage was observed:  $F(1, 339) = 311.06$ ;  $P < .001$ , with no statistical differences in preoperative ( $P = .505$ ) and postoperative ( $P < .488$ ) iHOT-12 scores when comparing the groups based on acetabular coverage. Mean iHOT-12 scores increased from 37.3 preoperatively to 68.7 postoperatively ( $P < .001$ ) in the borderline dysplasia group, from 34.4 to 72 ( $P < .001$ ) in the normal coverage group, and from 35.3 to 69.4 ( $P < .001$ ) in the pincer group. These preoperative scores increased by 31.4, 37.8, and 34.1, respectively, with no effect for acetabular coverage on the magnitude of change from preoperative to postoperative iHOT-12 scores:  $F(2,339) = 1.18$ ;  $P = .310$ . Ten patients (2.3%) underwent conversion arthroplasty, and 19 patients (4.4%) underwent revision arthroscopy with no significant effect of acetabular coverage on the incidence of revision or conversion surgery:  $\chi^2(6,433) = 11.535$ ;  $P = .073$ .

## **CONCLUSIONS:**

Lateral acetabular coverage did not influence outcomes from primary hip arthroscopy when performed in patients with low (borderline dysplasia), normal, and high (global pincer FAI) lateral center-edge angle. Borderline dysplasia and moderate global pincer FAI with no or minimal osteoarthritis do not compromise successful 2-year minimum outcomes or survivorship following primary hip arthroscopy when performed by experienced surgeons.

## **LEVEL OF EVIDENCE:**

Level III, retrospective therapeutic trial.

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