

Do Patients With Borderline Dysplasia Or Pincer Morphology Have Inferior Outcomes Following Hip Arthroscopy For FAI With Capsular Plication Compared To Patients With Normal LCEA?

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Introduction

- Hip arthroscopy is an effective treatment option for patients with symptomatic femoroacetabular impingement (FAI) and associated chondrolabral pathology.^{1,2}
- Patients with FAI can have a wide range of acetabular morphology ranging from acetabular undercoverage (dysplasia) to global acetabular overcoverage.³

Purpose: The objective of this study was to assess differences in outcomes of hip arthroscopy for femoroacetabular impingement (FAI) in groups of patients with borderline dysplasia, normal coverage and pincer morphology.

Methods

-Patient Selection: Cohorts comprised of consecutive patients undergoing primary hip arthroscopy with capsular plication for FAI between January 2012 and January 2014 with at least 2 year minimum follow up.

-Intraoperative data: Procedures performed included labral debridement and repair, acetabular rim trimming, femoral osteochondroplasty and capsular plication.

- **Primary outcome measure:** HOS-ADL questionnaire.
- **Secondary outcome measures:** HOS-SS and HHS, patient pain, and satisfaction with surgery.
- **Exclusion:** 1 patient with an LCEA of less than 18 was excluded from the study.

Methods

- Patients were divided into 3 groups based on their preoperative LCEA:
 - Borderline dysplastic group (LCEA 18-24.9)
 - Normal group (LCEA 25-39.9)
 - Pincer group (LCEA >40)
- Patient Acceptable Symptomatic State (PASS) cutoffs of 87 for the HOS-ADL, 75 for the HOS-SS, and 74 for the HHS were used to assess for clinically significant improvement.

Results

- 375 of 494 patients in our institutional repository had at least 2 year follow up.
- Borderline dysplastic group had 38 (8%) patients, normal group had 382 (80%) and pincer group had 58 (12%) patients.
- No differences were observed between the groups based on age, BMI, smoking status, preoperative alpha angle, preoperative joint space width, or Tonnis grade.
- There were more females in the borderline dysplastic group than in normal group (30/38 (79%) vs. 222/382 (58%); $p=0.01$)
- No gender difference between the pincer and normal groups was observed.

Results

- All three groups demonstrated significant improvements from preoperative to postoperative scores for the HOS-ADL, HOS-SS, and MHHS ($p < 0.05$ in all cases).
- There were no differences between the borderline dysplastic and normal groups in two-year postoperative HOS-ADL (83.0 ± 18.2 vs. 85.8 ± 16.5 ; $p = 0.40$), or MHHS (74.5 ± 16.9 vs. 76.4 ± 15.9 ; $p = 0.55$).
- There were no differences in two-year postoperative scores between the normal and pincer groups.
- There were no differences in patients meeting PASS between the three groups (HOS-ADL: Borderline 15(56%), Normal 99(64%), Pincer 34(73%) $p = 0.32$; HOS-SS: Borderline 11(42%), Normal 168 (58%), Pincer 24(53%) $p = 0.25$; HHS: Borderline 14(52%), Normal 193 (62%), Pincer 32 (70%)

Conclusion and Limitations

- Patients undergoing hip arthroscopy for FAI with capsular plication experienced significant clinical improvements regardless of whether their acetabulum had borderline dysplasia or normal coverage.
- Further follow-up in larger patient cohorts with long-term follow-up will be necessary to confirm these findings and their durability over time.

References

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