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Outcomes After Isolated Acetabular Osteoplasty for Combined-Type Femoroacetabular Impingement: Minimum 2-Year Follow-Up

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Summary:
Good-to-excellent outcomes and a high degree of patient satisfaction were noted, with significantly higher scores in younger patients, those without degenerative changes, and patients undergoing labral repair, while the preoperative alpha-angle had no effect on postoperative outcomes.

Abstract:
BACKGROUND
The cam- and pincer-type lesions of femoroacetabular impingement cause repetitive damage to the chondrolabral junction and acetabular labrum. The arthroscopic treatment of FAI involves adequate decompression of the underlying osseous abnormalities. While each lesion is typically separately addressed, femoral osteochondroplasty carries a theoretical risk of avascular necrosis, heterotopic ossification, and femoral neck fracture. The purpose of this study was to evaluate whether acetabular rim resection may allow for adequate decompression and earlier weight bearing in combined-type FAI.

METHODS
A review of a prospectively collected registry identified 25 patients (29 hips) with an average age of 28.5 years (range, 17-54 years) with combined-type FAI that underwent isolated acetabular osteoplasty. Twenty-five patients underwent labral repair, and four underwent labral debridement. Preoperative alpha-angle and degree of radiographic degenerative changes were recorded. Clinical outcomes were assessed with the modified Harris Hip Score (MHHS) and patient satisfaction score (on a scale from 1-10) at a minimum two-year follow-up.

RESULTS
Clinical follow-up was obtained at a mean follow-up of 33.1 months (range, 24.4-54.9 months). The average alpha-angle was 64.0° (range, 55-77°). The mean postoperative MHHS was 81 (95% CI, 71.2-89.9). The average satisfaction score was 7.9 (95% CI, 6.7 to 9.3). Patients with Tönnis grade 0 and I findings had higher MHHS and patient satisfaction scores than patients with Tönnis grade II changes ($P < 0.001$ for both scores). Patient age correlated with MHHS ($r2 = 0.836$, $P < 0.001$) and satisfaction scores ($r2 = 0.782$, $P < 0.001$). No significant correlation was noted between the preoperative alpha-angle and either MHHS ($r2 = 0.001$, $P = 0.926$) or satisfaction scores ($r2 = 0.012$, $P = 0.682$). Both MHHS and satisfaction scores were significantly higher when labral repair versus debridement was performed ($P = 0.002$ and $P < 0.001$, respectively). There were no cases of revision surgery or progression to arthroplasty.

CONCLUSION
Isolated acetabular decompression may adequately address the underlying impingement in combined-type FAI. Good-to-excellent outcomes and a high degree of patient satisfaction were noted, with significantly higher scores in younger patients, those without degenerative changes, and patients undergoing labral repair. The preoperative

alpha-angle had no effect on postoperative outcomes.