

Early Clinical and Radiographic Outcomes of Combined Hip Arthroscopy and Periacetabular Osteotomy: Results of 85 Consecutive Cases

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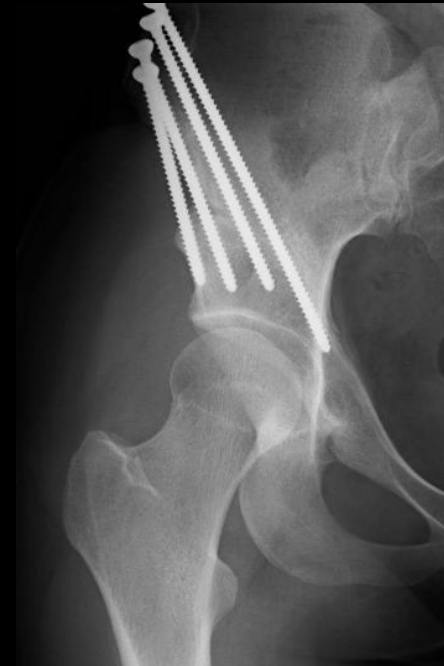
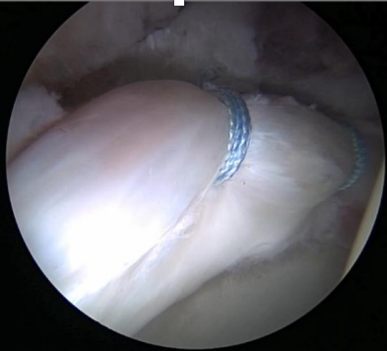
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Disclosures

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Background

- Modern treatment of hip dysplasia has focused on the correction of the structural deformity with the periacetabular osteotomy (PAO)
- Hip arthroscopy has allowed an increased awareness of the intra-articular pathology associated with acetabular dysplasia.

Background

- The combination of hip arthroscopy with periacetabular osteotomy allows for treatment of both intra-articular and structural abnormalities associated with hip dysplasia.
- Limited information regarding this combined approach for treating symptomatic acetabular dysplasia and its associated intra-articular abnormalities.

Purpose

- Report the early clinical and radiographic outcomes of combining hip arthroscopy with PAO in selected patients with symptomatic acetabular dysplasia.

Methods

- 85 consecutive hips review (81 patients) that underwent hip arthroscopy combined with a periacetabular osteotomy (HS-PAO).
- A comparison group of 139 hips (120 patients) who underwent PAO alone were also analyzed. The minimum clinical follow-up of the HS-PAO group was 12 months (mean, 26 months; range, 12-78 months).

Methods

- Pre-operative and post-operative standardized radiographs were analyzed for findings of acetabular dysplasia, including lateral center-edge angle (LCEA), acetabular inclination, anterior-center edge angle (ACEA), and Tönnis osteoarthritis grade.
- Clinical outcomes were evaluated with the UCLA activity score, modified Harris hip score (mHHS), short form-12 (SF-12), and the Western Ontario and McMaster Universities Arthritis Index (WOMAC). Perioperative complications were graded.

Results

- The mean age of the patients in the HS-PAO group was 28.7 years (range, 12 to 49 years), which was slightly older than the comparison group (mean age 25.6 years; $p = 0.03$).
- Seventy-five hips (92%) were in female patients, and 56% were right-sided.
- There was significant change in
 - mean LCEA (16.0° vs. 29.2° ; $p < 0.0001$),
 - acetabular inclination (15.2 vs. 3.9° ; $p < 0.0001$)
 - ACEA (18.2° vs. 30.7° ; $p < 0.0001$).

Results

- The preoperative UCLA, SF-12 physical, and SF-12 mental scores were not significantly different between groups
- PAO-HS group had a lower mHHS and higher WOMAC scores.
- The PAO-HS saw improvements in all clinical scores, while the PAO alone group saw significant improvements in the mHHS, SF-12 Physical, WOMAC Pain, Stiffness, Function, and Total Scores.
- The PAO alone group did not have a significant improvement in the UCLA activity or the SF-12 mental scores.

Summary

- At short-term follow-up, hip arthroscopy with PAO shows equal improvement in clinical outcomes with similar radiographic changes when compared to PAO alone.
- Selected patients who underwent a combined hip arthroscopy and PAO had more pain and dysfunction pre-operatively. These patients also experienced a significant improvement in the activity level.