



Paper # 36

Intermediate Term Results of the Bernese Periacetabular Osteotomy for the Treatment of Acetabular Dysplasia

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Introduction: In patients with symptomatic acetabular dysplasia, periacetabular osteotomy (PAO) is an effective procedure for deformity correction and early relief of pain and hip dysfunction. There is a paucity of data regarding the intermediate term results of this procedure. The purpose of this study was to analyze the intermediate term clinical and radiographic results as well as determine the conversion to THA and potential predictors of clinical failure following PAO for the treatment of acetabular dysplasia in adolescent and young adult patients.

Methods: Retrospective review for patients who underwent PAO for acetabular dysplasia was performed. 246 hips (210 patients) were treated with periacetabular osteotomy from July 1994 through December 2008 for acetabular dysplasia had an average follow-up of 5.5 years (0.2 to 17.9). Clinical data including patient demographics, radiographic measurements, and patient-rated outcome scores were collected.

Results: 162 females and 48 males with average age of the patient at the time of surgery was 25 years (range, 10-60). There were an average improvements of 24.7° (from 5.8° to 30.5°, $p < 0.001$) in the lateral center-edge angle, 28.7° (from 4.1° to 32.8°, $p < 0.001$) in the anterior center-edge angle, and 20.0° (from 24.8° to 4.8°, $p < 0.001$) in Tönnis angle. The Harris Hip score improved 18.5 points (from 64.2 to 82.7, $p < 0.001$) and the UCLA score improved from 6.7 to 7.1 points. 3.7% of the hips had required conversion to total hip arthroplasty. Only BMI and a low pre-op HHS were predictive of clinical failure ($p < 0.05$). Age, pre-op radiographic deformity severity, and post-op deformity correction didn't correlate with clinical success ($p > 0.05$).

Conclusion: The periacetabular osteotomy is an effective technique for surgical correction of a dysplastic acetabulum in adolescents and young adults. In this series, the intermediate term results were very good with a low conversion rate to total hip arthroplasty.

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