

Dysplastic Hips that are Too Late for Periacetabular Osteotomy are Not Too Early for Total Hip Arthroplasty

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INTRODUCTION:

Total hip arthroplasty (THA) is often performed in symptomatic patients with developmental dysplasia of the hip (DDH) who do not qualify for periacetabular osteotomy (PAO). The impact of osteoarthritis (OA) severity on postoperative outcomes in DDH patients who undergo THA is not well described. We hypothesized that DDH patients who undergo THA with mild OA have slower initial recovery postoperatively, but similar one-year patient-reported outcome measures (PROMs) when compared to DDH patients with severe OA.

METHODS:

We performed a retrospective review at a single academic institution over a six-year period of patients with DDH who underwent primary THA and compared them to patients without DDH who underwent THA. Within the DDH cohort, we compared PROMs stratified by DDH severity and OA severity. Diagnosis of DDH was verified using radiographic lateral center edge angle (LCEA). Minimum one-year follow up was required. PROMs were collected through one-year postoperatively. Logistic and linear regression models were used adjusting for age, sex, body mass index, and Charlson Comorbidity Index.

RESULTS:

A total of 263 patients with DDH were compared to 1,225 THA patients without DDH. No significant differences were found in postoperative PROMs or revision rates ($p=0.49$). When stratified by DDH severity, patients with $LCEA < 10^\circ$ had worse preoperative pain ($p=0.01$), mental health ($p < 0.01$), and physical function ($p=0.03$) scores but no significant difference in postoperative PROMs. Within the DDH group, when stratified by OA severity, patients with Grade 3 Tonnis score had worse preoperative pain ($p=0.04$) but no significant difference in postoperative PROMs. Recovery curves in DDH patients based upon severity of DDH and OA were not significantly different at 2-weeks, 6-weeks, and 1-year.

DISCUSSION AND CONCLUSION:

DDH patients who have mild OA have similar recovery curves compared to those with severe OA. THA is reasonable in symptomatic DDH patients who have mild arthritis and do not qualify for PAO.