

## Patient Reported Outcomes after Conversion Total Hip: A Matched Comparison to Primary Total Hip Arthroplasty

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**Introduction:** Total hip arthroplasty (THA) reliably reduces pain and improves health-related quality of life as measured by patient-reported outcome measures (PROMs) among patients with osteoarthritis. However, the effectiveness of conversion THA, which requires a more extensive operation, on improving PROMs has not been previously assessed.

**Methods:** 81 conversion THAs performed by three surgeons at a tertiary care center between 12/06/2010 and 02/18/2020 were retrospectively reviewed. Conversion THA patients were matched to primary unilateral THAs on sex, ASA-PS classification, age, and body mass index (BMI). PROMs were prospectively collected preoperatively, and at four months and one year postoperatively.

**Results:** 77 conversion THAs were matched to 77 primary THAs. Between conversion and primary THAs, there was no significant difference in age (56.0 versus 56.5 years;  $p=0.875$ ), BMI ( $31.0 \text{ kg/m}^2$  versus  $30.3 \text{ kg/m}^2$ ;  $p=0.617$ ), or ASA-PS classification ( $p=0.173$ ). Conversion cases had history of fracture fixation (75.3%), hemiarthroplasty (9.1%), osteotomy (6.5%), SCFE pinning (6.5%), resurfacing (1.3%), and core decompression with a tantalum rod (1.3%). Average preoperative UCLA activity level score was lower in the conversion group (3.3 versus 4.1;  $p=0.049$ ), remained lower four months postoperatively (4.5 versus 5.5;  $p=0.010$ ) but continued to improve and exceeded the minimal clinically important difference of 0.92 at one year postoperatively (5.1). The absolute value of improvement was not significantly different between groups.

**Conclusion:** Patients with prior trauma, surgery, and/or existing hardware needing conversion THA are more debilitated, functioning at lower levels, and have a greater incidence of deleterious co-morbid conditions, including lumbar spine disease and depression, than matched primary THA patients. Further, their recovery after THA is slower, most likely due to the more extensive surgery required in the setting of existing scar tissue and hardware. However, conversion patients improve substantially by one year. Future research will include adding additional patient numbers to the dataset and expanding to knee conversions.