

Can Patients Who Have Low-Grade Hip Osteoarthritis Expect the Same Outcome After Total Hip Arthroplasty Compared to Those Who Have End-Stage Osteoarthritis? - A Matched Case-Control Study

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Introduction

Total hip arthroplasty (THA) is an effective procedure for patients with end-stage hip osteoarthritis (OA). In addition, when hip preservation surgery is no longer indicated due to the presence of early or mild arthritic changes, THA can also be considered. Whether these patients can expect the same outcome after THA as patients who have end-stage OA remains unclear. The goal of this study was to compare the clinical outcomes after THA of patients who have low-grade OA versus a matched cohort with end-stage OA.

Materials & Methods

This is a retrospective, single-center, multisurgeon case-control study in a high-volume referral center. Based on a cohort of 2,189 primary anterior approach THAs (1,815 patients), 50 low-grade OA cases were matched 1:1 by age, sex, and body mass index to 50 controls who have end-stage OA. Patient-reported outcome measures (PROMs) were Hip Disability and Osteoarthritis Outcome Scores and Short Form-36.

Results

No significant differences in preoperative PROMs between low-grade and end-stage OA patients were found, except for 36-item Short Form Survey pain (33.0 versus 41.0; $P = .045$). In both groups a significant improvement of all PROMs was found postoperatively. However, all Hip Disability and Osteoarthritis Outcome Scores were significantly lower in the low-grade OA group compared to the end-stage OA group. In the group with low-grade OA, a significantly lower percentage of patients achieved the minimal clinically important difference and substantial clinical benefit after THA compared to the group with end-stage OA.

Conclusions

Patients who have low-grade OA can expect substantial clinical improvement after THA. However, the improvement is lower compared to patients who have end-stage OA. A thorough understanding of the factors that may lead to inferior clinical outcomes is imperative to improving the indications for THA in individuals who have low-grade OA.