

No Evidence for Higher Patient-Reported Outcome Scores After Total Hip Arthroplasty with the Direct Anterior Approach at 1.5 Months Postoperatively and Through a 5-Year Follow-Up

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Introduction: The direct anterior approach (DAA) to total hip arthroplasty (THA) may result in faster postoperative patient recovery, as assessed by patient reported outcome measures (PROMs). However, many studies do not collect postoperative PROMs until 3 months, and do not report achievement of a patient acceptable symptom state (PASS) or a minimal clinically important improvements (MCII). This study compared PROMs between THA patients treated with the DAA or posterolateral approach between 1.5 months and 5 years, using literature-defined PASS and MCII thresholds.

Methods: A propensity score match of 100 DAA patients to 100 posterolateral patients from a multicenter US collaboration (6 centers, 398 patients) was performed, based on age, sex, body mass index, and Charnley class. The Harris Hip Score (HHS), the Short-Form 36 (SF-36), and a numerical rating scale (NRS) for hip-related pain were collected preoperatively, postoperatively (median weeks: 5.4), and at 1-, 3-, and 5-year follow-up visits. The proportion of patients reaching the HHS PASS, Pain MCII, and Function MCII in the DAA and the posterolateral groups was compared using binary logistic regressions, controlling for confounders. Power analysis revealed that an HHS PASS achievement difference of 19% (power=80%; alpha=0.05) could be detected.

Results: The DAA patients were significantly less likely to reach the HHS PASS at the postoperative visit ($p=0.002$; Odds Ratio (OR)=0.382), but not at later visits. The DAA patients had no difference from the posterolateral patients in their tendency to reach the Pain MCII at the postoperative ($p=0.419$), or 1-year mark ($p=0.099$). The DAA patients were less likely to reach the Function MCII at the postoperative visit ($p=0.001$; OR=0.334), but not at the 1-year visit ($p=0.452$).

Conclusions: The results did not support faster THA recovery after DAA and instead showed limited evidence that the posterolateral approach may result in faster recovery due to greater hip function.