



Paper #17

No Differences in Patient Function Six Weeks after Direct Anterior or Posterior THA: A Randomized Study

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Introduction: The direct anterior approach (DAA) has become an increasingly popular technique due in large part to the perceived improvements in early functional recovery. While improvements have been demonstrated when compared to lateral approaches, subjective and objective measures of postoperative function have not consistently demonstrated a clear benefit of the DAA over a posterior approach (PA). The purpose of this randomized study was to determine if functional recovery during the early postoperative period differs between DAA and PA THA.

Methods: Per our power analysis, 26 THAs per group was required. To date, 48/52 THAs have completed data collection. Patient-reported outcome tools included modified Harris Hip Scores (HHS), the Lower Extremity Function Scale (LEFS), Single Assessment Numeric Evaluation (SANE) and the SF-12. A dual force platform was used to collect force data of the involved and uninvolved limbs as patients performed a sit-to-stand maneuver, stair descent, and the timed-up-and-go test (TUG). Patient-reported outcomes, max force when rising from a chair, eccentric function when descending stairs, and TUG data were compared between groups using 2 x 2 ANOVAs. We also compared the duration of hospital stay and number of days to discontinued use of an assistive ambulatory device using independent t-tests.

Results: The DAA group demonstrated significantly shorter length of hospital stay (1.4 days vs. 2.0 days, $p=.02$) with an earlier ability to discontinue use of an assistive device (32.2 days vs. 43.3 days, $p=.04$). Regardless of group, HHS, LEFS, and SANE scores as well as the force generated when rising from a chair and descending stairs significantly improved between the preoperative and 6-week time points. The DAA group demonstrated significantly greater changes in HHS and Pain Scores after surgery than the PA group; however, none of the other subjective or objective functional measures differed between groups.

Conclusion: The DAA resulted in an earlier hospital discharge, earlier ability to walk without an assistive device, and better pain relief at 6 weeks. However, contrary to our hypotheses, neither patient-reported nor objective functional measures differed between the 2 approaches.
