

Direct Anterior Hip Yields Faster Voluntary Cessation of All Walking Aids in a Randomized Trial

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Introduction: Direct anterior total hip arthroplasty (DA-THA) has been touted as providing more rapid functional recovery, yet few randomized trials have queried this supposition. We sought to examine clinical and radiographic differences between DA-THA and tissue sparing mini-incision posterior approach THA (MPA-THA).

Methods: Fifty-four patients were randomized to two treatments; MPA-THA or DA-THA. A single surgeon familiar with both approaches, utilizing identical implants, performed all surgeries. Physical therapy protocols were standardized and patients were encouraged to progress at their own pace. Patient recorded diaries were collected at 3 and 6 weeks, and at 1 year. Two independent reviewers reviewed radiographs. SF-12 v1, WOMAC[®] and HHS scores were tabulated and all statistical analysis was performed with SAS.

Results: Time to ambulation without any assistive device strongly favored DA-THA (22.8 days vs 35.1 days, $p = 0.04$). Three week WOMAC[®] function, 6 week HHS ROM and 1 year HHS function scores all trended toward significance favoring DA-THA ($p = 0.08$; $p = 0.07$; $p = 0.07$, respectively). Three week SF mental scores favored MPA-THA (59.8 vs 55.7, $p = 0.03$). No statistical difference was noted for leg length (3.3 mm, SD 4.8 anterior; 3.5 mm, SD 4.2 posterior, $p = 0.88$) or acetabular component abduction angle (38.7° SD 4.1° anterior; 39.1°, SD 4.1° posterior). Acetabular component anteversion was higher with MPA-THA (28.9°, SD 4.6° vs. 25.6°, SD 3.2, $p = 0.004$). Inter-rater reliability was high ($p < 0.004$). No differences were seen with time to narcotic cessation, WOMAC[®] or HHS pain or stiffness sub-scores or with total scores at any time interval.

Conclusions: In a randomized trial, patients undergoing THA via direct anterior approach voluntarily quit use of all walking aids on average 12 days earlier than patients with a mini-incision posterior approach. Little additional clinical or radiographic benefit was seen between the cohorts.

