

Paper #44

Does Low Back Pain Improve Following Total Hip Arthroplasty?

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Introduction: Patients indicated for total hip arthroplasty (THA) frequently present with both hip and low back pain (LBP). The purpose of this study was to compare patients whose back pain resolved following THA to those whose LBP did not resolve and to identify how to predict pain resolution using spinopelvic parameters.

Methods: A consecutive series of 500 patients who underwent THA for unilateral hip osteoarthritis was reviewed. All patients underwent biplanar standing and sitting EOS radiographs preoperatively. Patients with previous spine surgery or femoral neck fracture were excluded. The Oswestry Disability Index (ODI) scores was calculated preoperatively and at 1- and 2-years postoperatively. Spinopelvic parameters included pelvic incidence and change in sacral slope (SS) from standing to sitting with patients divided into 3 categories: <10, 10-25, >25-degree change.

Results: Of the 500 patients, 204 (41%) had documented LBP prior to THA. At one- and 2-year follow-up, resolution of back pain occurred in 168 (82.4%) and 187 (91.2%) patients respectively. The ODI for patients improved from 38.9±17.8 preoperatively to 17.0±10.6 at one year postoperatively (p<0.001). Pelvic incidence was not predictive of back pain resolution. When comparing spinopelvic parameters between the two groups, all patients whose back pain resolved had a sacral slope change from standing to sitting of >10 degrees while all patients whose back pain did not resolve had a change of <10 degrees.

Conclusion: This study demonstrates that symptomatic LBP resolved in 82% of patients after THA. The results of this study may be used to counsel patients regarding back pain and its resolution following total hip replacement and may help surgeons in the planning whether to address hip or spine pathology first.

Notes
