

The Effects of Multiple Sclerosis on Total Hip Arthroplasty: A Retrospective Study

Background: Multiple sclerosis (MS) is a neuroinflammatory disease with debilitating manifestations that may predispose patients to hip fracture and osteoarthritis and may affect recovery from total hip arthroplasty (THA). With increased longevity of MS patients and growth in demand for arthroplasty in this population, it is important to understand outcomes of THA in patients with MS.

Aim: We sought to compare outcomes of THA among persons with MS and without MS.

Methods: ICD-9-PCS codes for hip arthroplasty (815.1) were used to identify all patients in the New York Statewide Planning and Research Cooperative System (SPARCS) database who underwent THA between 2000 and 2014. Patients with MS, the primary exposure, were identified using ICD-9-CM code 340. The study outcomes of length of stay (days), discharge disposition, index admission mortality, 90-day readmission, 1-year revision arthroplasty, and 1-year all-cause mortality were evaluated using multivariable regression analyses inclusive of basic demographics, admission source, disposition, payer, comorbidity, and socioeconomic status (SES).

Results: Compared to patients without MS, those with MS had marginally longer lengths of stay (mean ratio (MR) 1.05, 95% confidence interval (CI) 1.01 to 1.10, $p=0.0142$), higher risk for institutional discharge disposition (odds ratio (OR) 2.03; 95% CI 1.54 to 2.70, $p<0.0001$), higher risk of readmission for revision hip arthroplasty (OR 2.60, 95% CI 1.07 to 6.35, $p=0.035$). However, MS patients had similar risk for 90-day readmission and one-year all-cause mortality as compared with non-MS patients.

Conclusions: Although patients with MS who underwent total hip arthroplasty had a 90-day complication risk that was similar to those without MS, the risk for requiring revision surgery was more than two-fold higher. Additional studies are needed to understand the reasons for revision surgery and for developing strategies to mitigate the risk of complications.