

Intra-Articular Hip Corticosteroid Injection as a Predictor for THA Outcomes: A Retrospective Study

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BACKGROUND

Total Hip Arthroplasty (THA) is a common intervention for patients with hip osteoarthritis (OA) who have failed conservative management. The prevalence of these procedures has been on the rise over the last 2 decades, increasing >50% from 1995-2005, and projected to increase ~150% from 2005 to 2030. (Otten) These trends are likely due to an aging population, an increase in obesity, better long-term outcomes of the procedure, and a more active lifestyle of the elderly population. (Otten). Although the overall successful procedure rate is high, 10-15% of patients are not satisfied with their outcomes. (Hofstede). This leaves thousands of patients dissatisfied with their outcomes every year. The longevity of these prosthesis are limited as well, with revisions having worse outcomes than primary THA. (Hofstede) This leads to the need for better predictive outcomes for patients undergoing the procedure. BMI has long been a good predictor of outcomes, with higher BMI correlating with worse outcomes, however, there has not been many other predictive factors identified. Recent systematic reviews have urged further research to find factors that can be predictive for THA. Most guidelines state indications for THA as failure of conservative treatment but do not specifically identify hip corticosteroid injections as part of this grouping. (AAOS). Most studies do not identify this intervention as part of the failed conservative treatment for patients as well. Our study looks to identify if relief following an intra-articular hip corticosteroid injection for OA is an indicator for relief following THA.

METHODS

This study was a multi-center, retrospective review of patients treated within the Medstar-Georgetown health system, as well as the George Washington University health care system. 101 Patient charts were identified from 2019-2021 who had a THA and a documented intra-articular hip joint CSI performed prior to the surgery. Inclusion criteria included: CSI and THA performed solely for hip OA. Exclusion criteria included patients who underwent THA for other diagnoses including femoroacetabular impingement, trauma, avascular necrosis. Other demographics evaluated were age, BMI, and time from injection to surgery. All patients were referred to physical therapy post-surgery.

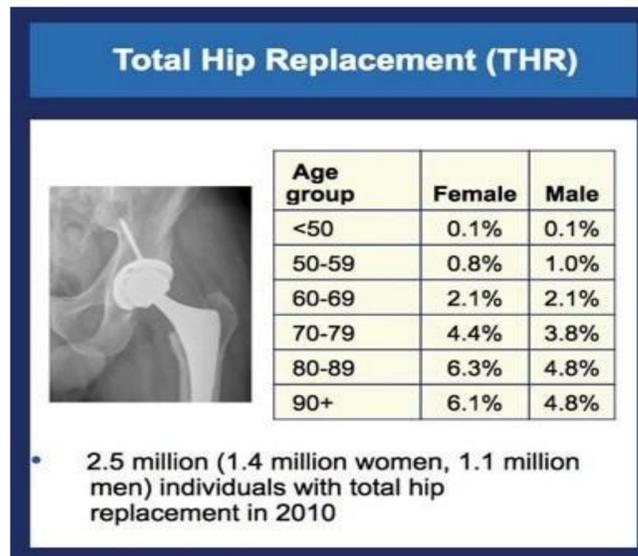


Table 1
First nationwide prevalence study of hip arthroplasty (2010)



Figure 1
Preferred hip injection technique under ultrasound

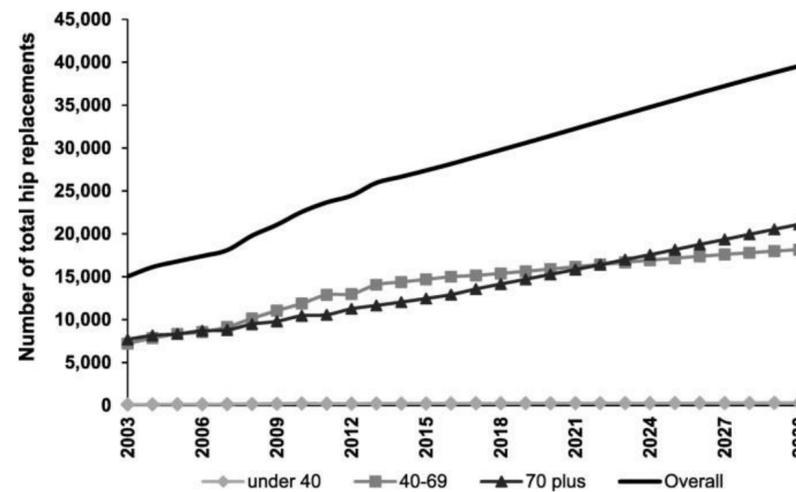


Table 2
Projected burden of primary total hip replacements.

Results

92/101 (91%) of patients reported significant pain relief and improvement in function 6 weeks after THA on subjective reporting during their follow up visit. 9 patients reported no relief from their surgery. No demographic differences reached statistical significance aside from BMI which was 30.9 in the group with good outcomes, and 31.9 in those without relief.

DISCUSSION

Our study had many limitations including but not limited to, 1. No control group of patients who did not receive a hip CSI prior to THA. 2. The retrospective nature allowed only for subjective response from patients in terms of good outcomes without the use of a standardized scale. 3. Short-term follow up only of 6 weeks. Strengths of our study include clear documentation of patients' responses to injection and surgery, as well as the multicenter nature of the study. Our study's hypothesis was a positive correlation for patients receiving a hip CSI prior to THA and good THA outcomes.

CONCLUSION

This study is the first to the authors knowledge to evaluate if receiving an intra-articular hip CSI can be a good predictor of THA outcomes. Our study showed there may be a correlation between patients receiving benefit from a hip CSI prior to THA. Further studies are needed to look into this as a predictor of THA outcomes.

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