

Low Back Surgery Prior To Total Hip Replacement Is Associated With Worse Patient-Reported Outcomes

Orthopaedics / Pelvis, Hip & Femur / Joint Replacement - Primary

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Introduction

Coexistence of degenerative disorders of the hip joint and the lumbar spine, known as the hip-spine syndrome, is a common encounter in clinical practice. These conditions may cause similar symptoms posing diagnostic challenges in determining the origin of pain. While this combination of degenerative diseases has been proposed to cause significant impairment, little is known about the outcomes of total hip replacement (THR) in patients with previous low back surgery (LBS). A better understanding of the hip-spine syndrome may help improve care and decrease health-care costs.

The aims of this investigation were 1) to describe the prevalence of previous LBS in patients eligible for THR, and 2) to compare patient-reported outcomes in patients with LBS prior to THR and a matched control group of patients with isolated THR.

Objectives

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Methods

For this ethical review board approved study we obtained demographic and surgical data, along with patient-reported outcome measures (PROMs) on patients with LBS or THR due to degenerative disease from the Swedish Hip Arthroplasty Register (SHAR) and the Swedish Spine Register (Swespine) from 2002 until 2012. The patient-reported outcome measures (PROMs) used were collected via the nationwide PROMs program for elective THR patients run by the SHAR. The questionnaire comprises the EQ-5D health status questionnaire, a hip pain visual analogue scale (VAS) and at follow-ups a satisfaction VAS. We merged data from the two registers in order to identify patients occurring in both registries. Prevalence of previous LBS was calculated among THR patients operated in 2012. We defined the study population by selecting patients with LBS prior to THR. Patients with uncommon surgical THR approaches, uncommon prostheses, all second THRs, incomplete or missing PROMs data were excluded. A control group of patients with THR from SHAR with no history of LBS due to degenerative disease was selected by direct matching on age, gender, year of surgery, implant fixation, surgical approach, Charnley class, preoperative EQ-5D index and pain score.

Finally, we investigated differences in patient-reported outcomes between the study population and the controls. Adjusting for relevant confounders, linear regression analyses were used to explore the associations between previous LBS and one year

PROs following THR.

Results

There were 108,483 patients in SHAR and 43,763 patients in Swespine. The prevalence of previous LBS in patients undergoing THR in 2012 (n=15553) was 2.6% (n=409). Using the selection criteria we identified a total of 997 patients with LBS prior to their THR. For each THR patient with a history of previous LBS a matched control with no history of previous LBS was successfully identified.

Linear regression analyses showed that LBS prior to THR was associated with worse EQ-5D index (B=-0.089, 95% CI:-0.112, -0.066), worse EQ VAS (B=-7.55, 95% CI:-9.41, -5.70), more pain (VAS) (B=3.99, 95% CI: 2.19, 5.79) and less satisfaction (VAS) (B=5.36, 95% CI: 3.33, 7.39).

Conclusions

This observational register study demonstrated that 2.6% of all THR patients operated in 2012 had undergone LBS prior to their hip surgery. Considering that some patients may have had LBS before 2002, this is a conservative estimate of the true prevalence. Patients who had undergone LBS before their THR generally experienced worse health-related quality of life, pain reduction, and satisfaction (VAS) one year after THR. This may be important information to communicate in the shared decision-making process and may help set proper expectations on the outcomes of THR.