

Examining the Prevalence of Falls and Future Falls Risk in Adults One-Year After Total Hip Arthroplasty

W. C. I. Janes¹, B. Lanting², L. Somerville², J. Howard², E. Vasarhelyi², S. MacDonald², D. Naudie², S.W. Hunter³

1. Faculty of Health Sciences, University of Western Ontario;
2. Department of Surgery, Schulich School of Medicine & Dentistry, University of Western Ontario;
3. School of Physical Therapy, University of Western Ontario.

Contact Information: Dr. Susan Hunter, email: susan.hunter@uwo.ca



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BACKGROUND

- ❖ One in three older adults fall annually, a prevalence that further increases to 45% among people with hip osteoarthritis.
- ❖ Falls can result in serious consequences, such as fractures.
- ❖ Hip osteoarthritis can be treated with total hip arthroplasty (THA), however, the effect of THA on falls risk has received limited attention.

OBJECTIVES

- 1) To estimate the prevalence of falls in the 12 months following THA surgery.
- 2) To evaluate future falls risk at one year after surgery.

METHODS

- ❖ Design: cross-sectional
- ❖ Participants 50+ years of age recruited at their one-year follow-up for THA surgery.
- ❖ The Falls Risk For Older People in a Community Setting Questionnaire (FROP-Com) was used to assess falls risk as mild, moderate or severe.
- ❖ Dynamic balance was assessed using the Step Test, as number of steps in 15 seconds.
- ❖ The 30-Second Chair Stand Test (30CST) was used to evaluate lower-extremity strength.
- ❖ Functional mobility was assessed using the Timed-Up-and-Go (TUG) Test.

METHODS

- ❖ Gait velocity was assessed over a 6-meter distance using LEGSys™ body-worn accelerometers.
- ❖ Results on physical measures were compared with normative scores for community-dwelling older adults to determine the percentage of participants with deficits.

RESULTS

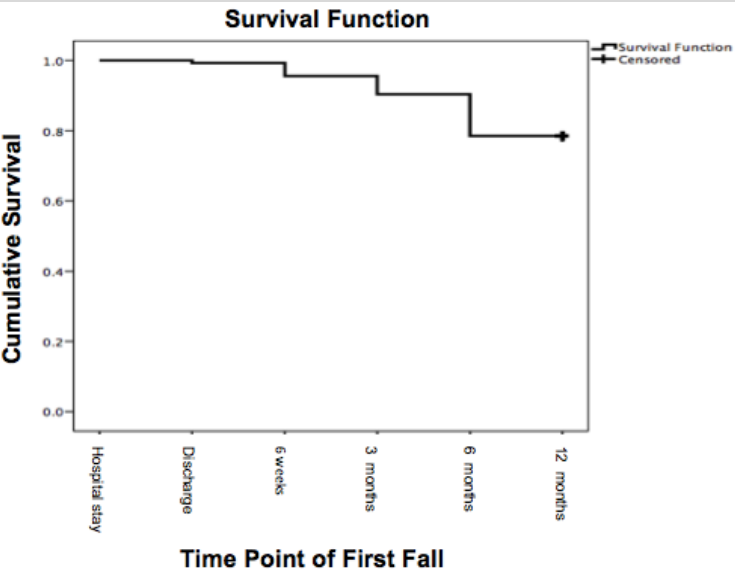


Figure 1: Kaplan-Meier Survival curve depicting time to first fall and total falls in the sample over 12 months after unilateral total hip arthroplasty.

RESULTS

Table 1: FROP-Com falls risk classification in individuals one-year after total hip arthroplasty.

FROP-Com Scores	Total (n)
Mild (0 – 10)	90
Moderate (11 – 19)	17
Severe (20+)	1

Table 2: Average scores and percentage of participants presenting with deficits on physical measures one-year after total hip arthroplasty.

Physical Measure	Mean ± SD	Percentage with deficits
Gait Velocity (m/s)	1.14 ± 0.21	21.6%
Step Test (operative side)	11.53 ± 3.72	83.5%
Step Test (non-operative side)	11.69 ± 3.73	82.6%
TUG	10.29 ± 3.07	77.6%
30CST	10.91 ± 3.87	65.7%

CONCLUSIONS

- ❖ Falls prevalence was lower than the general risk for older adults and individuals with hip osteoarthritis before surgery.
- ❖ At one year after surgery, falls risk factors were present, some of which are potentially modifiable with physiotherapy.