


# Mobility and Hip Function Among Geriatric Patients With Displaced Neck of Femur Fractures Treated With Arthroplasty

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Jade Pei Yuik Ho, MBBS, MS Orth, FRCS<sup>1</sup> , Amy Yoke Foong Wong, MD<sup>1</sup>,  
Lik Han Ong, MBBS, MS Orth<sup>2</sup>, Ankimtay Rutel, MBBS, Dr Orth & Tr<sup>1</sup>,  
Sabaruddin Abdullah, MBBCh, MS Orth<sup>1</sup>, Mohd Shahrul Azuan Jaffar, MD, MS Orth<sup>1</sup>,  
Chun Haw Bong, MD, MS Orth<sup>1</sup>, Kean Tee Tan, MD, MS Orth<sup>1</sup>,  
Reuben Prashant Rao, MD, MS Orth<sup>1</sup>, and Faris Kamaruddin, MBBS, MS Orth<sup>1</sup>

## Abstract

**Background:** Neck of femur fractures result in impaired function for older people. Despite surgery, many patients experience a decrease in functional level and poorer health status after the injury. The objectives of this study were (1) to determine the short-term mobility and hip function of geriatric patients who underwent hip replacement surgery for a displaced neck of femur fracture in our local population and (2) to identify factors which affect the functional outcome of these patients. **Methods:** Patients aged 60 years and above, who were admitted for neck of femur fracture from January 2017 to December 2020, and treated surgically with arthroplasty, were included. Information on patient demography, comorbidities, perioperative data, mobility, hip function and complications were retrospectively collected. Outcome measures used were independent ambulation and recovery of pre-fracture mobility at 1 year after surgery while hip function was assessed using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) total, pain, stiffness, and physical function scores. Factors associated with these outcomes were analyzed. **Results:** 168 patients with a mean age of 75.2 (SD 8.4) years met the inclusion criteria. 32.1% of patients regained their pre-fracture mobility and 59.6% remained independent 1 year after surgery. Logistic regression analysis identified age, gender, surgical procedure, and time to surgery as significant contributors to recovery of pre-fracture mobility. Older age and increasing requirement for postoperative ambulatory aid resulted in worse WOMAC total and physical function scores. No significant differences were observed in patient-reported hip function between those who had a total hip arthroplasty and those who had a hemiarthroplasty. **Conclusion:** Most geriatric patients with displaced neck of femur fractures did not regain pre-fracture mobility despite surgical treatment with arthroplasty.

## Keywords

mobility, hip function, geriatric, neck of femur fracture, arthroplasty

## Introduction

Neck of femur fractures remain a global public health concern. With an increasingly aged population worldwide, the incidence is expected to rise in tandem alongside healthcare costs and expenditure.<sup>1</sup> Most neck of femur fractures are a result of low-energy trauma in osteoporotic

<sup>1</sup>Department of Orthopaedic Surgery, Sarawak General Hospital, Ministry of Health Malaysia

<sup>2</sup>Department of Orthopaedic Surgery, Universiti Malaysia Sarawak, Kota Samarahan, Malaysia

### Corresponding Author:

Jade Pei Yuik Ho, Department of Orthopaedic Surgery, Sarawak General Hospital, Jalan Hospital, 93586 Kuching, Malaysia.  
Email: [peiyuik@gmail.com](mailto:peiyuik@gmail.com)



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