

RISK FACTORS FOR MORBIDITY AND MORTALITY FOLLOWING HIP FRACTURES – ANZHFR STUDY



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Introduction

Hip fractures are common geriatric orthopaedic problem nationally and internationally. There were over 25000 cases reported to the ANZHFR in 2019. Hip fractures are associated with significant mortality and morbidity, with health. Health statistics in New Zealand reporting 27% mortality within 1 year of injury. The estimated cost to the economy is NZD 1 billion per year due to the loss of function and independence.

The aim of the study is to identify patient, fracture and management factors associated with survival, mobility and residential status at 120 days.

Method

All NZ patients from 2018 – 2020 were included. Demographics, management factors, and 120 day key outcomes (change in walking status, residential status and survival) were recorded. Univariate and multivariate analysis were performed to identify patient and management factors independently associated with outcomes.



Results

Data from 9432 patients were analysed.

The average age was 82.8 years, 70.3% were females. 39.5% of patients were cognitively impaired on admission. At 120 days post injury, 10.9% had died, 15.3% had a decrease in their residential status, 44.9% had a reduction in walking ability.

On multivariate analysis; older age (RR1.1/yr, $p < 0.001$), male sex (RR1.7, $P < 0.001$), cognitive impairment (RR2.2, $p < 0.001$) and ASA>3 (RR3.7, $p = 0.015$) were risk factors for death. Similarly, increasing age (RR1.1 per year, $p < 0.001$), cognitive impairment (RR1.2, $p = 0.04$) and ASA>3 (RR2.9, $p = 0.047$) were significant risk factors for increasing level of care. Decreasing mobility was associated with extracapsular fractures (RR1.4, $p = 0.01$).

After adjustment for patient factors, performing total hip arthroplasty was preventative for both worsening residential status (RR0.23, $p < 0.001$) and decreasing walking ability (RR 0.21, $p < 0.001$). There was no significant survival, functional or revision differences for other fixation types.

Conclusion

The significant decline in walking ability post hip fracture is a key contributor to long-term morbidity. The benefits of THA in preserving mobility and independence should be further investigated. Additional discharge planning are likely required for high-risk patients of older age, with cognitive impairment and extracapsular fractures.

ANZHFR (NZ)
2018-2020
n = 9431

Demographics

Fracture

Management



Univariate & multivariate analysis

120 day Survival
Mobility
Residence

Other outcomes	Mean/%
Total length of stay	19.1 days
Re-operation	2.1%
Delirium during admission	57.2%

Table 1. Other key outcomes analysed

Figure 1. Flow chart on analysis performed