

Hospital Readmissions for a Second Operative Hip Fracture in Older Patients

◆ Background

Hospital performance is often measured by the number of readmissions following a specific surgery. Readmissions following hip fracture surgery are not uncommon, reported up to 32.0% at a year, and mostly attributed to medical complications¹.

Many older people presenting with a hip fracture have osteoporosis², which increases their risk of a secondary fracture³. As such, a proportion of the quoted readmissions would be due to another hip fracture after initial hospitalization, but these rates of readmissions are rarely reported.

◆ Aims

This study aims to estimate the hospital readmission rate for a second operative hip fracture in older patients within a year of initial surgery and to determine the period until readmission.

◆ Methods

This is a retrospective exploratory study conducted at a Victorian metropolitan hospital for admissions between July 2011 and July 2015. Patients included were 65 years and older, their admission diagnosis was hip fracture and they underwent surgical repair.

After institutional ethics approval, the hospital database identified 1221 patients who met the inclusion criteria, of whom, 20 patients were subsequently readmitted for another operative hip fracture (periprosthetic or contralateral).

The following data for these 20 patients were extracted and analyzed: age, gender, date of discharge from initial hospitalization, readmission date and diagnosis. Based on the collected data, the days between admissions for operative hip fractures (DOHF) were calculated, which is defined as: the period from the initial hospital discharge to readmission.

Descriptive statistics were used.

◆ Acknowledgement

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◆ References

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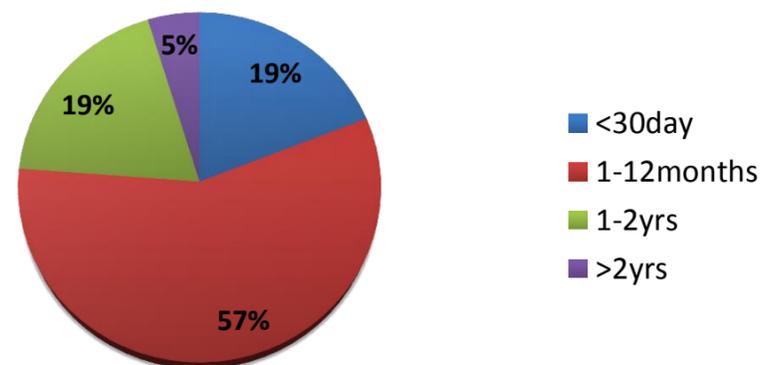
◆ Results

Most patients (75%) were female, with an average age of 82 years (range 66-92). Among them, 5 patients had periprosthetic fractures (PPF), 14 suffered from contralateral hip fractures, and one patient experienced both and was readmitted twice.

The results indicated that, over the 4-year study period, about 1.7% of older patients were readmitted for a second hip fracture surgery, either suffering from contralateral hip fracture (1.2%) or PPF (0.5%) with a median DOHF of 187 (Interquartile Range 57-405). Of concern, over three quarters (76%) of these hip fractures happened within a year after hospital discharge (**Figure 1**), representing an overall one-year readmission rate at 1.3%.

In our study, all of the 6 PPF's were readmitted in the first postoperative year with a median DOHF of 88 (Interquartile Range 22-209), accounting for 0.5% of the readmission rate. On further examination, 5 PPF's occurred following an initial surgery of internal fixation, one after hemiarthroplasty but none post total hip replacement.

Figure 1. When do the hospital readmissions occur for a second operative hip fracture?



◆ Discussion

The authors believe this is the first study on readmission rate for a second hip fracture surgery within a year of hospital discharge.

The results indicated that at least 1.3% of older patients would return to the original hospital for a second hip fracture surgery during the first postoperative year. Among them, 0.5% sustained PPF, which is a well-recognized serious and complex injury after surgical treatment⁴.

However, these results may be significantly underestimated, since such data are only available for readmissions to the original hospital where the initial surgery was performed, and also errors and omissions can occur with hospital databases.

While this study is limited by the sample size, study period and retrospective analysis, further studies are warranted to assess such re-admissions on hospital performance and the impact on the wider community, in particular, clinical and health economic implications on medical practice and community services.