

# Factors involved in morbidity and mortality due to hip osteoporotic fracture in a South American geriatric cohort.

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## Introduction

Mortality after a hip fracture increases compared to the general population. The main objective of this study is to examine the incidence, trends, and factors associated with mortality in patients with osteoporotic hip fractures.

## Methodology and Results

This is a retrospective cohort study from a South American hospital. Patients older than 65 years with osteoporotic hip fracture between 2015 and 2018 were identified. Demographic data and comorbidities were obtained. The incidence rate, standardized mortality rate, trend (Poisson regression), and risk (hazard ratio) were calculated.

## Results

A total of 304 patients admitted for osteoporotic hip fracture were found, 240 (79%) were women with a mean age of 81.3 years (SD 8.45) and 64 (22.1%) were men with a mean age of 85.42 years (SD 10.08). The cumulative incidence of mortality was 72.5%. The annual mortality rate was 75.6/1000 patients/year (54.8 in men and 20.8 in women). The 1-year mortality rate increased significantly by 2% per year (HR 1.05, 95% CI 1.002–1.08). Median overall survival was 854 days (95%CI 802-906). The mortality probability density was 18% for women and 27% for men (first 90 days).

Table 1. Risk factors associated with mortality.

Variables	HR	95%CI for Exp (B)	
		Lower	Superior
Men	1,323*	1,213	1,443
Charlson > 2	1,984*	1,738	2,264
> 75 years	2,482*	2,173	2,835
Age	1,055*	1,049	1,060
institutionalization	1,476*	1,382	1,600
Diabetes	1,120*	1,024	1,225
Obesity	0,909	0,728	1,138
Severe to moderate liver disease	3,249*	2,172	4,862
COPD	1,465*	1,303	1,648
Cerebrovascular disease	1,136	.973	1,326
Pressure ulcers	1,377	.877	2,162
Peripheral arterial disease	1,785*	1,237	2,575
Myocardial infarction	1,711*	1,399	2,094
intracapsular fracture	0,953	0,884	1,026
Heart failure	2,498*	2,077	3,004
Neoplasia	1,881*	1,511	2,341
Dementia	1,456*	1,309	1,621
Renal insufficiency	1,873*	1,603	2,187
Hearing impairment**	1,529*	1,188	1970
Vision disorders**	1,503*	1,110	2,037
Urinary incontinence**	1,537*	1,251	1,889
Fecal incontinence**	1,860*	1,329	2,075
Antiplatelet therapy**	1,173	.918	1,498
Anticoagulant therapy**	1,320	.969	1,798
Downton Scale **	1,857*	1,321	2,080
Norton scale 5–11**	0,489*	0,358	0,619

\* p < 0.05

## Conclusions

A more significant increase in mortality was observed in men than in women. Hospitalization combined with comorbidities are associated with higher mortality.

## References

1. LeBoff MS, Greenspan SL, Insogna KL, Lewiecki EM, Saag KG, Singer AJ, et al. The clinician's guide to prevention and treatment of osteoporosis. *Osteopores Int* [Internet]. 2022;33(10):2049–102. Available at: <http://dx.doi.org/10.1007/s00198-021-05900-y>