

INTRODUCTION

Hip fractures affect millions of elderly people each year, and are ranked among the top 10 causes of disability

Diabetic patients are at higher risk of osteoporosis and hip fractures

Data regarding the effect of Diabetes Mellitus on post hip fracture geriatric rehabilitation is inconclusive

OBJECTIVES

To compare the effectiveness of inpatient geriatric rehabilitation in achieving functional improvement between diabetic and non-diabetic hip-fractured elderly patients

To assess the effect of diabetes mellitus on functional rehabilitation outcomes and 1-year prognosis

METHOD

A retrospective study comparing diabetic and non-diabetic elderly patients with a recent hip fracture who were admitted to a geriatric rehabilitation facility during a 5-year period (2014-2019)

The Functional Independence Measure (FIM) was used to assess physical and cognitive function on admission and discharge

RESULTS

Total sample size was 630, of whom 70.48%(444) were females and 30.63% (193) Diabetic patients (TABLE 1)

Diabetic patients were younger, had higher BMI and higher frequency of all co-morbidities that were examined (TABLE 1)

All rehabilitation outcomes measured were similar between groups (TABLE 2)

A trend towards increased 1-year mortality among diabetic patients (TABLE 2)

RESULTS

For the total sample, younger age, male gender, and elevated BMI were associated with higher delta motor FIM

For the diabetic group, higher creatinine levels were associated with 1-year additional fractures and hospitalizations

After adjusting for covariates, Diabetes Mellitus was found predicting higher rate of mortality (OR = 2.78, p = .01),

TABLE 1- PATIENTS BASE LINE CHARACTERISTICS

Variable	DM	Non-DM	P-value
N (%)	193 (30.63)	437 (69.37)	
Age, years	81.42 ± 7.62	84.28 ± 7.06	< .01
Gender			.85
* Female, n (%)	135 (69.90)	309 (70.70)	
* Male, n (%)	58 (30.10)	128 (29.30)	
BMI, kg/m ²	26.33 ± 4.81	24.69 ± 4.34	< .01
Laboratory data on admission for rehabilitation			
MMSE	20.98 ± 6.61	21.29 ± 6.91	.47
Cognitive FIM	23.72 ± 6.04	23.67 ± 6.08	.97
Motor FIM	39.22 ± 11.24	40.27 ± 11.50	.29

TABLE 2- REHABILITATION OUTCOMES

Variable	DM	Non-DM	P-value
N (%)	193 (30.63)	437 (69.37)	
Discharge destination			.32
Home, n (%)	178 (92.20)	392 (89.70)	
Nursing care, n (%)	15 (7.80)	45 (10.30)	
Delta motor FIM	15.56 ± 8.95	14.78 ± 8.79	.35
Recurrent fracture, n (%)	13 (6.70)	25 (5.70)	.62
Recurrent hospitalization, n (%)*	70 (36.3)	142 (32.5)	.35
Mortality, n (%)*	21 (10.9)	29 (6.6)	.07

CONCLUSIONS

Diabetic post -hip fracture elderly patients achieve similar functional improvement to non-diabetic despite excess of co-morbidity
 These results support inclusion of diabetic patients in post hip-fracture rehabilitation programs
 Diabetic patients requires closer post- rehabilitation monitoring and risk factor management due to tendency to higher mortality