



Risk Factors of Osteoporosis and Post-Discharged Supplements and Drugs Intake in Patients with Lower Body Fractures

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Dear Editor-in-Chief

Lower body fracture is a serious phenomenon due to its notable morbidity and mortality among older population. Supplements like calcium and vitamin D may promote fracture healing. The objective of this study was to determine the risk factors of osteoporosis and post-discharge supplements among older adults with lower body fracture.

In this study, 129 patients were recruited during ward admission phase. All information was collected at the ward by questioning the patients and was tabulated in Table 1. At three-month post discharged, patients were followed up for their dietary supplementation status and the data was tabulated in Table 2.

Majority of the lower body fracture patients were in the older age category (>65 yr old). Chinese ethnicity, female and sustaining a hip fracture represented the majority of patients. Majority of the patients did not have fracture history and osteoporosis history in their family. This agreed with a study in Malaysia that revealed family his-

tory of osteoporosis and fracture history were not the significant risk factors for fragility fracture (1). For the co-morbidities, majority of the patients were in the group of 0-2 diseases and was in accordance to Endo et al, which showed most fracture patients had 0-2 comorbidities (2). In terms of milk intake, majority of the patients did not take milk supported by Norimah et al, that most Malaysian population did not take milk as a daily consumption (3). In terms of smoking status, the highest percentage of patients were non-smoker which might be due to self-awareness regarding the dangerous effects of smoking among the Malaysian population (4). For alcohol intake status, most patients did not take alcohol, supported by the fact that older population in Malaysia had low alcohol intake (5). For physical activity status, most of the subjects were reported as "not active". However, performing physical activity and exercise can be a way to prevent fracture among older population (6).



Table 1: The demographic and risk factors of osteoporosis for patients with lower body fracture

<i>Demographic data</i>	<i>Frequency (%), N=129</i>
Age (mean ± SD)	71.29 ± 10.94
Age group (yr)	
Middle age (50-64)	39 (30.2)
Older age (>65)	90 (69.8)
Ethnic/Race	
Malay	48 (37.2)
Chinese	59 (45.7)
Indian	22 (17.1)
Gender	
Male	50 (38.8)
Female	79 (61.2)
Fracture type	
Hip fracture	78 (60.5)
Other than hip fracture	51 (39.5)
Risk Factors of Osteoporosis	
Family history of osteoporosis	
Yes	14 (10.9)
No	115 (89.1)
Fracture history	
Yes	33 (25.6)
No	96 (74.4)
Number of co-morbidities	
0-2	88 (68.2)
≥ 3	41 (31.8)
Milk intake status	
Yes	46 (35.7)
No	83 (64.3)
Smoking status	
Current smoker	19 (14.7)
Past smoker	21 (16.3)
Never a smoker	89 (69.0)
Alcohol intake status	
Current alcohol drinker	11 (8.5)
Past alcohol drinker	16 (12.4)
Never an alcohol drinker	102 (79.1)
Physical activity status	
Frequent	31 (24.0)
Occasional	7 (6.7)
Not active	91 (70.5)

Table 2: Dietary supplementation and drugs intake three months post-discharged

<i>Dietary Supplements and Drugs Intake</i>	<i>Frequency (%), N=89</i>
Calcium	
Yes	72 (80.9)
No	17 (19.1)
Vitamin D	
Yes	49 (55.1)
No	40 (44.9)
Anti-Osteoporosis drugs	
Yes	2 (2.2)
No	87 (97.8)

For the analyses of three months' follow-up, 89 patients were still available, and the results showed that most of the patients took calcium and vitamin D as supplements. However, the intake of anti-osteoporotic drugs by patients were low and it was in line with several previous studies (7, 8). A meta-analysis study has recommended the use of calcium in combination with vitamin D supplementation as a preventive treatment for fractures and bone loss in older adult (9). Older adults should be alert to the associated factors of osteoporotic fractures. Majority of the patients were taking calcium for preventive measure, but the use of osteoporotic drugs was very low.

Conflict of Interest

The authors declare that there is no conflict of interest.

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