

Orthogeriatrics in Malta: a 3 year experience

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Abstract

The orthogeriatric service in Malta started in 2012 and expanded in 2014. From admission, the patient is offered a ward based hip fracture programme that includes orthogeriatric assessment, management and co-ordinated multidisciplinary review.

457 patients were seen by the orthogeriatric service when this study was done. Mean age was 83 and 69% of patients were female. The Nottingham Hip Fracture Score (NHFS) is a scoring system that reliably predicts 30-day and 1-year mortality for patients after hip fracture. It is made up of seven independent predictors of postoperative mortality that have been incorporated into a risk score. The score ranges from 0-10 and the mean score for this cohort was 5.1. There was a statistically significant correlation between age and high NHFS scores. 30 day mortality was 5.9% and 1 year mortality was 24.4%. Compared with the Nottingham data both 30 day and 1 year mortality were less for the orthogeriatric department in Malta.

The orthogeriatric service in Malta achieved better results when comparing mortality with the UK. In the future expansion of data collected should be considered to better evaluate standards of care in the department.

Keywords

Orthogeriatrics; Hip fractures; Mortality; Older people.

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Introduction

Hip fractures are associated with significant morbidity and mortality. Approximately 10% of patients who have a neck of femur fracture die within a month from the traumatic event, and 30% within a year. About half of these patients do not return to their pre-fracture level of mobility and only half eventually return home. 80% of older women say they would rather die than experience the loss of independence and quality of life associated with a hip fracture. It is common as well as expensive with 80,000 hip fractures and direct costs of 2 billion pounds each year in the United Kingdom.¹

Orthogeriatrics is the subspeciality area in geriatrics involved in the care of older people with fragility fractures.² It was introduced when it was found that there was a need to improve the efficiency and quality of hip fracture injury treatments and care of patients involved with such injuries. To this end, the geriatricians and orthopaedic surgeons organized an effort toward forming so called "orthogeriatrics" collaboration in various countries.

Orthogeriatrics offers to fragility fracture patients' pre-operative assessment/optimisation, management of peri-operative complications, rehabilitation, as well as falls and bone health assessments.³ It has been shown that a good service reduces mortality, complications, length of stay and improves functional outcomes such as mobility and return to independence.¹

Orthogeriatrics in Malta

The orthogeriatric service in Malta was started in January 2012 with the introduction of a 6 bedded unit within an acute orthopaedic ward. Elderly over the age of 60 with a proximal fracture femur were eligible for this unit. The service was run by the geriatric department in collaboration with orthopaedic department. Daily proactive ward rounds by the geriatricians were done and the patient was seen till discharge to their home or to a rehabilitation unit.

The service was expanded in February 2014. All older people with a proximal hip fracture over the age of 70 present in any orthopaedic ward were eligible to be under the care of an orthogeriatrician. The aim of the study was to assess NHFS scores and mortality statistics in the orthogeriatric service in Malta and compare these with the United

Kingdom.

Data

Data was collected for all patients seen by the orthogeriatric service from its introduction till January 2015. Descriptive data including age and sex was collected from the. Mortality data and Nottingham hip fracture scores (NHFS) were also collected retrospectively. The NHFS is a weighted score of 7 independent admission variables that reliably predicts 30-day, 1-year postoperative mortality and functional outcome. The variables are sex, age, admission haemoglobin, abbreviated mental test score, living in institution, number of co-morbidities and malignancy. This data was taken from the patient's history and the total score calculated. Informed consent from patients was done and the data protection team approved this study. The range for the score is 0-10.⁴ The score calculation can be seen in Table 1. Data was analysed by using SPSS 13.0.0.

Table 1: Nottingham Hip Fracture Score

Variable	Value	Score
Age	<66	0
	66–85 yr	3
	≥86 yr	4
Sex	Male	1
Admission Hb	≤10 g dl ⁻¹	1
MMTS	≤6 out of 10	1
Living in an institution	Yes	1
Number of co-morbidities	≥2	1
Malignancy	Yes	1

Results

There were a total of 457 patients seen. 318 (69.5%) were female whilst 139 (30.5%) were male. Mean and median age of the patients was 83 years with a 6.6 standard deviation (SD). Age range varied between 61 and 98 years. Till January 2014 monthly admissions seen by the orthogeriatric service ranged from 6 to 15. From the expansion of the orthogeriatric service this went up with monthly admissions seen ranging from a minimum of 17 to a maximum of 44.

Mean levels for NHFS were 5.1 with a median of 5.0, 1.3 SD and range was 0 to 8. Univariate analysis found a significant link between mortality

and increasing NHFS (p-value <0.01). One way ANOVAs found a significant link between increasing age and higher NHFS (p-value <0.01).

There were a total of 27 deaths out of the 457 (5.9%) patients seen by orthogeriatrics in the first 30 days from admission. 50 patients out of 209 (data of patients from admission till March 2014) died within 1 year of admission to orthogeriatrics which was 23.9% of total. The mean death rate was 135.2 days whilst the median date rate was 68.0 days.

Discussion

The current results show that compared to studies done in the United Kingdom and Denmark admissions in Malta tend to be older (83 vs 82 years) and there is a higher percentage of males with fractures (30.5% in Malta vs 21.7% in the United Kingdom).^{2,4-5} The NHFS scores in Malta tend to be higher than in the United Kingdom (5.1 vs 3.9).^{2,4} This suggests that patients seen by the orthogeriatric service in Malta tend to be older and frailer than in other European countries.

As regards mortality various studies and meta-analyses have shown that the overall 1 month mortality in hip fracture patients is 13.3%.⁶ The overall 1 year mortality is 24.5% but ranges between 18.8-33%.⁶⁻⁷ The result from our data show that our 1 month mortality is very low when compared with these studies. As for the 1 year mortality this is marginally lower with data found in these studies. Patients in the orthogeriatric service in Malta who die tend to do this within the first 3 months.⁸⁻⁹ This is similar to data in other studies.

Conclusion

In conclusion data collected during the first 3 years of the orthogeriatric service in Malta shows that it is doing well as regards mortality compared with other countries despite having frailer patients. Despite this, more data needs to be collected to view performance in reducing length of stay in hospital, discharge destination and independence level on discharge post rehabilitation.

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