Medicines Optimisation In Patients With Fragility Fractures

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Background

Osteoporosis is a condition where bone mass is reduced resulting in bone fragility. Over 300,000 patients present with fragility fractures to UK hospitals each year. Osteoporosis increases with age e.g. more than 25% of 80 year old women are osteoporotic. This increases the risk of fragility fractures in the aging population resulting in disability, reduced quality of life and cost implications. Further as longevity of our population increases, then so will osteoporosis and fragility fractures.

South Eastern Trust provides a multi-disciplinary rehab service to post fracture patients within an Intermediate care setting. After a fragility fracture patients are frequently commenced on a bisphosphonate, calcium and vitamin D supplements. However, not all of these medicines may be required and treatment should be individualised after careful assessment thereby reducing unnecessary pill burden and potential adverse drug effects.

Aim

To develop a bone health assessment tool to assist the team optimise treatment, tailored to individual patient needs based on national recommendations.

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Bone Health Assessment

Patient Name..... Date.....

H&C.....

DOB.....

Fracture History		Fragility fracture Yes/No
Frax required Yes/No		
Age	Parental hip #	2nd osteoporosis
Weight kg	Current smoking	Alcohol 3 or more units/day
Height cm	glucocorticords	Femoral neck BMD
Previous fracture	RA	
10 year probability of fracture Major osteoporotic..... Hip Fracture..... Nogg Guidance Treat/Measure BMD/Lifestyle advice and reassure		
Dietary Calcium Assessment Supplement if intake < 700mg day		
Vit D level Supplement if level < 50nmol/L		
Dental Health		
Action Plan **Referral required Follow up OP/Dexa scan/osteoporosis service** **Biphosphonate continue/discontinue/commence** **Alternate bone protection required**		
Comments		

Methods

A review of published UK guidelines on bone health , fragility fractures and osteoporosis was carried out to identify tools for assessing individuals risk of fracture and treatment strategies. A Bone Health Assessment tool was then developed and trialed.

Results

Twelve bone health assessments were completed which resulted in 22 interventions e.g. seven patients referred for BMD measurement, bisphosphonate stopped in 2 patients, vitamin D commenced in 5 patients and stopped in 2 patients, calcium commenced in 2 patients and stopped in 4 patients.

Case Study

Male patient, aged 85yrs with a fractured neck of femur was admitted to the rehab unit on alendronic acid, calceos and colecalciferol. After a bone health assessment alendronic acid and calcium were discontinued as FRAX tool guidance suggested lifestyle advice and his daily dietary calcium intake was greater than 700mg (National Osteoporosis Group guideline).

Conclusions

The use of the bone health assessment tool facilitates individual patient assessment resulting in optimised tailored treatment to their individual needs. Further, the involvement of the patient in the assessment and decision making process will hopefully improve patient awareness and concordance with the treatment plan.