OP_A006

EVALUATION OF BONE MINERAL DENSITY AND ASSOCIATION OF FRAX SCORE WITH FRACTURES AND DIABETES: A SINGLE-CENTRE CROSS-SECTIONAL REVIEW

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INTRODUCTION

Both osteoporosis and diabetes mellitus are highly prevalent among postmenopausal women and the elderly in Malaysia. Individuals with diabetes are known to fracture at a relatively higher bone mineral density (BMD). We aimed to describe the demographic, clinical characteristics and treatment regimen among patients screened for osteoporosis at Selayang Hospital and examine the relationship between FRAX score and fracture in subjects with diabetes versus in those without diabetes.

METHODOLOGY

This is a cross-sectional review of patients aged 40 to 90 who underwent bone densitometry screening at Selayang Hospital. Subjects who were commenced on osteoporosis medication for more than 12 months at the time of BMD assessment were excluded. Demographic and clinical characteristics were obtained from electronic medical record. The 10-year risk of fracture was estimated using FRAX-Singapore (www.sheffield.ac.uk/FRAX/tool.aspx).

RESULT

Three hundred thirty-four patients were included. The mean age was 64 ± 9.2 years old, 92% were women. Majority were Chinese (47%) followed by Malay (35%) and Indian (18%). The mean BMI was 25 kg/m^2. Diabetes was present in 22%. Other common risk factors include rheumatoid arthritis (38%) and glucocorticoid exposure (14%). Forty patients (12%) had a previous fracture. The mean FRAX scores for major osteoporotic and hip fractures were 10.9% and 4.5% respectively. One hundred fifty-six subjects (47%) had FRAX score above the recommended treatment threshold for osteoporosis but only 66% of them were commenced on treatment. Prevalent fracture was positively correlated with FRAX scores for both major osteoporotic and hip fractures ($p=0.01$). This association did not differ significantly among individuals with diabetes versus those without diabetes.

CONCLUSION

Osteoporosis is highly prevalent in this cohort with 12% already fractured before BMD evaluation. Forty-seven percent (47%) fulfilled the recommended threshold for treatment, but more than one-third were not offered treatment. High FRAX score was associated with a previous fracture. The presence of diabetes did not negatively impact this association.