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Ten-year probability of fragility fractures in peri and postmenopausal Saudi Women of Al Ahsa region according to WHO Fracture Risk Assessment Tool (FRAX™)

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Introduction: Osteoporosis is a major global public health problem, associated with significant morbidity, mortality and socioeconomic burden. It's defined as a skeletal disorder characterized by low bone strength, leading to an increased risk of fragility fractures. The greatest bone loss occurs in women during peri-menopause, associating with estrogen insufficiency, a condition of menopause. The FRAX tool is developed by WHO to evaluate fracture risk of patients. It's based on individual patient models that integrate the risks associated with clinical risk factors as well as bone mineral density (BMD) at the femoral neck (if available).

Materials & Methods: A prospective cross sectional study, conducted in one year recruiting 400 cases. They were asked to fill FRAX questionnaire. The fracture risk assessment was done with the help of online tool for FRAX calculation. Patients were explained about fracture risk in next ten years and preventive measures were advised in terms of dietary supplementation, Lifestyle modification and pharmacological interventions. Follow up is planned after every one year assessing efficacy of treatment and disease progression.

Results: The average major osteoporotic fracture risk probability in next 10 years among Saudi females of Al Ahsa region (Average age 48.3 ± 1.2 Years) was found to be 3.0% ($\pm 0.2\%$) and average hip fracture risk probability in next 10 years was around 0.7% ($\pm 0.08\%$). The ten-year probability of fragility fractures according to FRAX is higher in Saudi peri and postmenopausal women as compared to that of other Asian countries including India and China but relatively lower than those in western population.

Conclusion: Fragility fractures in postmenopausal Saudi women are one of the leading causes of disability and socioeconomic loss. The extent of problem is quite prevalent in Saudi population. With the help of FRAX we can estimate the probability of such fractures and can take preventive measures to avoid them.

Biography

Ahmed Al-Fayaa is a 6th year medical student. He showed interest in medicine ever since he was 16. After finishing high school in August 2010, he joined college of medicine in King Faisal University, Al Ahsa. During his time there, he has participated in many extracurricular activities, like giving presentation about various medical topics in research. After studying various surgical specialties, he had special interest in the field of orthopedics and his plan to pursue an orthopedic residency program.

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