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Prevalence of Risk Factors of Osteoporosis among a Group of Middle-aged Premenopausal Women in Sri Lanka

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Background: Osteoporosis has a multitude of risk factors and many of those begin in the middle age. Early recognition and management of risk factors in the middle age helps prevention of osteoporosis in old age.

Objectives: To assess the prevalence of osteoporosis risk factors among a group of premenopausal women in Sri Lanka.

Methods: This cross-sectional study included 323 community-dwelling premenopausal women aged 20-40 years. Sociodemographic data and the prevalence of risk factors of osteoporosis were assessed using an interviewer administered questionnaire. Previous history of fracture, parental history of fragility fracture, prolonged systemic glucocorticoid use (>3 months), smoking and alcohol use, rheumatoid arthritis, chronic disease conditions, parity and duration of breast feeding, exposure to sunlight, calcium and vitamin D rich food intake were evaluated as main risk factors. Anthropometric measurements were made following standard procedures.

Results: Mean±SD age and body weight of the study sample were 31±6 years and 54.5±12.0 kg, respectively. Among the participants, 27.6% were overweight (BMI ≥25 kg/m²) and 20.1% had lower BMI (<18.5 kg/m²). Approximately 13.7% had a family history of hip or major osteoporotic fractures. Prevalence of non-communicable diseases (diabetes, hypertension, asthma, hypercholesterolemia) was very low (6%). None were current smokers or alcohol users or on prolonged glucocorticoid therapy. About 3.7% women did not consume any dairy product while one third of the sample had very low dairy and non-dairy calcium rich food consumption. Median (IQR) duration of total breastfeeding was 48 (24-48) months. Among the breastfed women, 70% had very longer durations of breast feeding (>24months). Daily exposure to sunlight was <2 hours in 55.7% of women.

Conclusions: Less exposure to sunlight, low intake of calcium rich foods, long-term breast feeding and underweight are the potentially modifiable risk factors of osteoporosis prevalent among middle aged premenopausal women. Lifestyle modifications are the best option to reduce them.

Keywords: *Osteoporosis, Risk factors, Women*