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6 – Osteoporosis and Osteopenia in Postmenopausal Women

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Mexico is a country that is in full demographic transition, experiencing rapid population ageing process. It is estimated that approximately 18% of people are over 50 years and in 2050 this percentage could represent 37% of the total population. Of the total of people over 50 years of age, little more than half is represented by the female gender. (1)

Osteoporosis is a multifactorial disease characterized by loss and deterioration of bone microarchitecture compromising their resistance and therefore increases the likelihood of fracture. In the case of women at all ages, they have lower bone mass than a man. This disadvantage is accentuated with decreasing oestrogen at the onset of menopause, predisposing to accelerated bone loss. The prevalence of osteoporosis can range from 15% for ages 50 to 59, up to 80 % for women 80 years and over. (2,3)

About the factors that influence the presentation of osteoporosis, one of the most important ones is genetic, accounting for 46-62 %. A study in Mexico in the state of San Luis Potosi in women over age 40, established as risk factors for osteoporosis: older age, early menopause, late menarche, prolonged breastfeeding and alcohol in postmenopausal women. In a study conducted in 2013 in the city of Guadalajara in postmenopausal women, osteoporosis was present in 25.3% of women. (3)

The clinical practice guideline for the diagnosis and treatment of osteoporosis in postmenopausal women in Mexico, based on the International Society for Clinical Densitometry (ISCD) recommends considering major criteria (Low bone mineral density, personal and/or family of fracture, age, white race, low weight, history of falls, no current use of oestrogen and poor physical condition) which indicate a high risk of fracture and minor criteria (snuff, alcohol, caffeine, low intake of calcium and vitamin D), which indicate a moderate risk of fracture. The major criteria are the most predictive for osteoporosis in postmenopausal women, leading most likely to fracture, forcing the evaluation and specific treatment for this group of patients. (4)

The family physician can identify these risk factors and can build different tools, one of the most important is the FRAX (Fracture Risk Assessment Tool) by which the risk of hip fracture for the next 10 years is established, applicable in Latin American countries. The tool establishes the following scores: low risk (risk of fracture at 10 years <10%), intermediate risk (10-19%) and high risk (>20%) for major osteoporotic fractures and low risk (<3%) or high risk (>3%) for hip fractures. (5) In this regard, the importance of FRAX lies in its application but unfortunately it is underused; in a study conducted at the Family Medicine Unit No. 21 of the Mexican Social Security Institute in Mexico City, it was found that up to 23% of the study population (men and women 40-90 years old) had a high risk of hip fractures for the next 10 years. (6)

The diagnosis of osteoporosis

The diagnosis of osteoporosis is based on measurements of bone mineral density, meaning that this is the amount of bone mass per unit volume or per unit area and both can be measured by densitometric techniques, one of the most used is the dual X-ray absorptiometry (DEXA), wherein the term bone mineral content describes the amount of mineral in a specific bone site . Densitometers are used preferably in central areas of the body, that is, hip and spine ; however there are studies that recommend the use of peripheral densitometers for screening, specifically calcaneus, obtaining diagnoses of osteoporosis with a sensitivity and specificity of 90 % . (7) Peak bone mass is obtained during the third decade of life, with consequent decrease in density over the years, which may be accelerated by the combination of the different risk factors mentioned above, so that a recommendation for performing densitometry is directed to the over-50 years old. (8)

As for therapeutic measures, we emphasize that all people must have access to care, and to address patients with osteopenia and osteoporosis. Among non-pharmacological measures, moderate and individualized physical activity in the context of health of each patient, elimination of toxic habits (alcohol and snuff), balanced diet, adequate intake of calcium and vitamin D (daily calcium intake of 1000mg and serum levels of 25-OH vitamin D of 30ng/dl), have demonstrated a beneficial effect in reducing fractures and amount of bone mass.⁵ Other important points are preventing falls, with a focus on knowledge of the subject and coordination of these measures: vision corrections, reduction of the consumption of drugs that alter alertness, and improve the domestic environment. Regarding pharmacological measures we can mention bisphosphonates (alendronate, risedronate, ibandronate, zoledronic acid), whose effect on reducing vertebral fractures is 40-50 % and non- vertebral and hip fractures by 45%. The recommendations prescribe that the use is temporary for 5 years, and should be used for a minimum of three years.

In Mexico and probably in most Latin American countries there are no programs of national broadcast for the prevention of osteoporosis. The largest country's health institutions do not have specific goals in the care of the patient with osteopenia and osteoporosis in primary care. It is a highly prevalent disease whose clinical complications constitute fragility fractures and the consequences that this entails. We should not overlook that there is no pharmacological treatment to nullify the risk of fractures. The specialist in family medicine may find a chance for prevention in people after 30 years of age, when we begin to lose bone mass, identifying prevalent risk factors for our type of population and influence them upon detection, causing a positive impact not only on the patient at risk, but in the same family. Educate and prevent disease in the population is the main function of specialist doctors in primary care, therefore once again early detection remains the best arsenal for tackling these patients.

Take Home Message

- In 2050 the number of people over 50 years old could represent 37% of the total population .
- The prevalence of osteoporosis can range from 15% for ages 50 to 59, up to 80 % for women 80 years or over.
- By FRAX we can establish the risk of hip fracture 10 years through the identification of risk factors.
- The specialist in family medicine has a chance in prevention; after 30 years of age, we begin to lose bone mass, identifying risk factors to influence them, causing a positive impact not only on the patient at risk, but in the same family .
- Bisphosphonates reduce the risk of vertebral fractures by 40-50 % , non- vertebral and hip fractures by 45% and should be used for at least three years

Original Abstract

<http://www.woncaeurope.org/content/abstract-no-560-free-standing-paper-osteoporosis-and-osteopenia-postmenopausal-women>

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