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Serum Calcium Level, and Radiological Appearance of Second Metacarpal Bone in Normal Postmenopausal Women in Ismailia

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Protocol of Thesis

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(سورة البقرة آية ٢٨٦)

Dedicated to

My Family

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INTRODUCTION

The postmenopause applies to the whole of a woman's life after the menopause, extending into old age when the pathological changes due to loss of ovarian function may become manifest. The number of postmenopausal women is increasing and will continue to increase as the population ages. The average woman undergoing menopause will spend at least 30 years, or more than one third of her life, in the hypoestrogenic state. (2)

Osteoporosis is one of the most significant long-term sequelae of menopause. (2) It is the most prevalent metabolic disease of the bone, causing a reduction in the mineral and protein matrix of bones that results in diffuse reduction of bone density, which enables the bone to fracture under minimal stress. (3) It occurs in approximately, one fourth of all elderly persons and most commonly in women between 50-70 years old (4,5). It costs more than \$10 billion a year worldwide, (6,7) given the increasing size of the world's elderly population; its toll is expected to rise. (8)

Osteoporosis causes kyphosis, and a reduction in height. Spinal pain can be experienced, especially in the lumber region, and the bones tend to fracture more easily. Some patients may be asymptomatic, however, and unaware of the problem until it is detected by radiography. (9)

Increasing mortality and morbidity are the adverse outcomes of osteoporotic fractures⁽¹⁰⁾. Deaths resulting from osteoporosis, mainly presenting as fracture of the femoral neck in elderly women, account for more deaths per annum than those

caused by carcinoma of breasts, ovary and uterus. Morbidity also includes severe pain and disability from osteoporosis of the spine.⁽¹¹⁾

The goal of all nursing intervention for patients with osteoporosis is to prevent or delay the destructive bone changes that are characteristic of the disease⁽¹²⁾ through the patient education regarding disease process and treatment regimen^(13,14).

This public health burden will worsen dramatically in future decades. (10) So, the nursing researches which are targeted toward studying the process of this disease, and evaluation of strategies to prevent the osteoporotic fractures are important, and have become an urgent priority.

AIM OF THE WORK