



Systematic Versus Topical using of Calcium and Phosphate in Treatment of Osteoporosis in Postmenopausal Women

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Abstract : This study was conducted to determine the efficacy of systematic versus topical using of Calcium and Phosphate in treatment of osteoporosis in post-menopausal women. Thirty volunteer osteoporotic postmenopausal women participated into this study. Their ages ranged from 55 to 65 years old, their parity ranged from 1 to 3, their body mass index (BMI) < 30 kg/m² and all of them were at least 5 years postmenopause. The patients characterized by low bone density with T score of DEXA less than -1. Patients were divided randomly into two equal groups. Group (A) (Study group) : 15 patients who will receive topical Calcium and Phosphate through iontophoresis 30 min /session, 3 times weekly for 12 weeks, group (B) (Control group) : 15 patients who will receive their routine medical treatment including systematic supplementation of Calcium and Phosphate for 12 weeks. Dual energy X - ray Absorptiometry (DEXA) for measurement of bone mineral density (BMD), Present pain intensity (ppi) scale, Questionnaire for assessment of quality of Life and Laboratory analysis of Calcium and Phosphate (for both groups).

The obtained results showed a highly statistically significant ($P < 0.01$) increase in BMD of femur and L2-L4 immediately after treatment as well as after 3 months of re-evaluation in group (A) more than group (B). Also, there was a statistically highly significant reduction in bone pain, improve the quality of life in its physical, mental and social levels and increase Calcium and Phosphate contents in group (A) more than group (B).

Accordingly, it could be concluded that topical using of Calcium and Phosphate is very effective, noninvasive, safe, easy to perform, simple and successful for treatment of osteoporosis in postmenopausal women.

Key words: Topical treatment, Osteoporosis, Calcium, Phosphate, postmenopausal women.