Comparison of Serum 25-Hydroxyvitamin D Levels in Women of Childbearing Age, Oral Contraceptive Users, Postmenopausal and Who Take Hormone Replacement Therapy

RAFRAF M, PhD: Assistant Professor of Nutrition Sciences (Corresponding author)
E-mail: rafrafm@tbzmed.ac.ir
RASHIDI MR, PhD: Professor of Pharmaceutical Chemistry
MAHDAVI R, PhD: Associate Professor of Nutrition Sciences
MESGARI M, DVM: Research Staff

Department of Food Sciences and Nutrition, and Nutritional Research Center of Tabriz University of Medical Sciences

ABSTRACT

Background and Objectives: There is a growing awareness that vitamin D sufficiency is required for optimal health, and also the role of vitamin D in calcium absorption and metabolism for bone health is well known. The objective of this study was to investigate the serum vitamin D level in childbearing age and postmenopausal women and comparing with women who use oral contraceptive pills (OCP) and who take hormone replacement therapy (HRT).

Material and Methods: Ninety-seven healthy non pregnant-non lactating women with a mean age of 32.67±5.14 years old (50 OCP users and 47 non- OCP users) and 56 healthy postmenopausal women, with a mean age of 51.42±3.22 years old (29 were taking HRT and 27 were not taking HRT) were studied using biochemical procedures (measurement of serum 25-hydroxyvitamin D), anthropometric measurements (weight and height) and completing 24-hour recall questionnaire for determining daily dietary calcium intake.

Results: No significant differences were found between either OCP and non- OCP users or HRT and non- HRT groups in terms of mean body mass index (BMI), and dietary intakes of calcium. Mean daily calcium intake in all groups was lower than recommended daily allowances. There was no significant difference in serum 25- hydroxyvitamin D levels between OCP- users and non-OCP users, However the mean serum 25- hydroxyvitamin D level in HRT group was significantly higher than that of non- HRT group (P<0.01). The majority of subjects in OCP and non - OCP, and HRT groups had serum vitamin D levels lower than normal limit.

Conclusion: Vitamin D deficiency was common in the study subjects, which may have important health consequences. Using low- dose OCP had not resulted in altered Vitamin D metabolism compared to non -OCP users. However, in postmenopausal women, taking HRT had positive effect on serum vitamin D level. It is suggested to emphasize for overcoming vitamin D deficiency in community as one of the health priorities.

Key words: Vitamin D, Oral Contraceptives, Hormone Replacement Therapy.