WPP01. VITAMIN D DEFICIENCY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Introduction: Vitamin D has multiple physiological functions in the human organism; including significant role in the regulation of the immune system. Nowadays vitamin D deficiency and insufficiency are widespread conditions and is associated with the pathogenesis of several autoimmune diseases including rheumatoid arthritis.

Objectives: To evaluate the frequency of vitamin D insufficiency and deficiency in patients with rheumatoid arthritis and its association with disease activity.

Methods: The study included 93 patients with rheumatoid arthritis, 74.2% were women. Mean age of women was (53.45 ± 11.16) and men. (53.29 ± 12.06) yr. old (p > 0.05). Mean duration of the disease was (8.59 ± 5.99) yrs. Subjects suffering from liver and kidney insufficiency and those who had received vitamin D in the previous 3 months have been excluded. Disease activity was assessed by DAS-28 score, joint pain degree, morning stiffness time and laboratory measures including ESR. The level of 25(OH)D was assessed by electrochemiluminescence method (Elecsys 2010 Roche). Vitamin D deficiency was defined as a 25(OH)D level below 20 ng/ml, and vitamin D insufficiency as 25(OH)D of 21–29 ng/ml.

Results: In patients with rheumatoid arthritis the frequency of vitamin D insufficiency and deficiency was 37.63 and 54.84% accordingly. 13.98% subjects with rheumatoid arthritis had severe vitamin D deficiency. 25(OH)D was associated with ESR level (r = -0.26, p < 0.05), DAS-28 (r = -0.36, p = 0.001), CRP (r = -0.24, p < 0.05), Hb (r = 0.27; p = 0.01). The risk of high disease activity is in patients with vitamin D deficiency (RR = 3.00 (95%CI: 1.01. 8.86, p < 0.05). The correlation between the TBS and the vitamin D plasma levels in normal men and in postmenopausal normal women; the obtained data suggest that vitamin D levels could also play a main role on bone quality.

Conclusions: Vitamin D deficiency can be an important factor in the worsening of rheumatoid arthritis. The effect of vitamin D supplementation is needed to determine if a causal relationship exists.

WPP02. THE LEVEL OF VITAMIN D IN PATIENTS WITH CHRONIC PERIODONTITIS

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Introduction: Recent studies discussed the possibility effects of vitamin D on chronic periodontitis. It’s related to its effect on calcium metabolism, immune system and stimulation production of antimicrobial peptides. Many authors showed the presence of vitamin D deficiency and insufficiency, both in Ukraine and others European countries.

Objectives: To determine level of 25(OH)D (25(OH)D2 + 25(OH)D3) in patients with chronic periodontitis.

Methods: Study involved 198 patients with chronic periodontitis aged 18-68 years old. The diagnosis of chronic periodontitis was determined based on clinical and radiographic methods of investigation. The determination of 25(OH)D level was performed by Elecsys 2010 analyzer (Roche Diagnostics, Germany).

Results: This study shown that 73.7% of patients with chronic periodontitis had vitamin D deficiency (31.8%) and insufficiency (41.9%). Normal level of vitamin D had 26.3% patients with chronic periodontitis. Only 4.6% of subjects had severe deficiency. The mean level of vitamin D in patients with chronic periodontitis was 25.08 ± 10.1 ng/ml. There is no significant correlation between vitamin D levels in patients with severe (22.99 ± 7.49 ng/ml) and moderate (23.86 ± 9.46 ng/ml) periodontitis.

Conclusions: Most patients with chronic periodontitis have vitamin D deficiency and insufficiency. No significant correlation between vitamin D levels in patients with severe and moderate periodontitis was observed.

WPP03. THE WAYS OF VITAMIN D DEFICIENCY CORRECTION IN UKRAINE

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Introduction: Vitamin D deficiency (VDD) and insufficiency are widespread conditions. Only 4.6% of the Ukrainian citizens were found to have normal 25(OH)D values, whereas 81.8% were diagnosed with VDD. High incidence of vitamin D hypovitaminosis makes doctors to search for the ways of its effective treatment and prevention.

Methods: In cooperation with Ukrainian National University of Food Technologies high-fiber baked bread with a cholecalciferol concentration of 25 μg per 277 g was developed. To study its safety and efficacy in VDD correction, 30 postmenopausal women aged 45-80 years were examined. The study lasted for 21 days. Likewise, individual targeted therapy of vitamin D deficiency (ITTVD) was developed for correction of VDD. ITTVD consists of two phases – saturation period and maintenance period. The saturation therapy includes combined medication: calcium (1,000 mg) and 800 IU of vitamin D and an additional 3,000 IU of vitamin D per day. Maintenance therapy includes 2,000 IU of vitamin D per day. To study the efficacy and safety of ITTVD, 70 postmenopausal women aged 46-87 years with skeletal diseases were enrolled. Serum 25(OH)D level was assessed by electrochemiluminescent method (Elecsys 2010).

Results: Intake of fortified bread has facilitated a significant increase in serum 25(OH)D levels. The mean level of serum 25(OH)D increased from 14.20 ± 2.60 to 20.05 ± 2.74 ng/ml (p < 0.001) in women with VDD. 3 months of ITTVD leads to a significant (p < 0.001) increase in serum 25(OH)D levels: 35.60 ± 8.21 nmol/l as compared to baseline levels of 25.20 ± 9.76 nmol/l.

Conclusions: Based upon our results, ITTVD and fortified bread administration can be recommended for vitamin D correction in older age groups. Our ITTVD equation has proven to be effective.