

Vitamin D Status in Tunisian Obese Patients

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Abstract : Introduction: Although current evidence emphasizes a high prevalence of vitamin D deficiency and an inverse association between serum 25-hydroxyvitamin D (25-OHD) concentration and obesity, no studies have been conducted in Tunisian obese. The objectives of our study were to estimate the vitamin D deficiency in obese, identify risk factors for vitamin D deficiency, demonstrating a possible association between vitamin D levels and metabolic parameters. Methods: This was a descriptive study of 100 obese 18-65 year-old. Anthropometric measurements were determined. Fasting blood samples were assessed for the following essays : serum calcium, 25 OH vitamin D, inorganic phosphorus, fasting glucose, HDL, LDL cholesterol and triglyceride. Insulin resistance was evaluated by fasting insulin, HOMA-IR and HOMA- β . Consumption of foods riche in vitamin D, sunscreen use, wearing protective clothes and exposed surface were assessed through applied questionnaires. Results: The deficit of vitamin D (< 30 ng/ml) among obese was 98,8%. Half of them had a rate < 10ng/ml. Environmental factors involved in vitamin D deficiency are : the veil (p = 0,001), wearing protective clothes (p = 0,04) and the exposed surface (p = 0,011) and dietary factors are represented by the daily caloric intake (p = 0,0001). The percent of fat mass was negatively related to vitamin D levels (p = 0,01) but not with BMI (p = 0,11) or waist circumference (p = 0,88). Similarly, lipid and glucose profile had no link with vitamin D. We found no relationship between Insulin resistance and vitamin D levels. Conclusion: At the end of our study, we have identified a very important vitamin D deficiency among obese. Dosage and systematic supplementation should be applied and for that physician awareness is needed.

Keywords : insulinresistance, risk factors, obesity, vitamin D

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