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Gender Difference in the Association between Different Components of the Metabolic Syndrome and Vitamin D Levels in Saudi Patients

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Abstract : Background: Several studies have suggested non-skeletal effects of vitamin D and linked its deficiency with features of many chronic conditions. In this study, We aimed to investigate the relationship between vitamin D levels and different components of the metabolic syndrome in male and female Saudi patients. Methods: the study population consisted of 111 patients with metabolic syndrome (71 females and 40 males) aged 37-63 years enrolled from patients attending the internal medicine outpatient clinics of King Fahad Medical City. The parameters for diagnosis of the metabolic syndrome according to the National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III) were measured, which included waist circumference, TG, HDL-C, Blood pressure and fasting blood glucose (FBS). The association between each parameter and serum 25-hydroxyvitamin D (25(OH) D) was studied in both male and female patients separately. Results: in male patients, 25(OH) D levels were inversely associated with FBS and TG and positively associated with HDL-C and diastolic blood pressure, With highest association with the HDL-C levels. On the other hand 25(OH) D, Showed no significant association with any of the measured metabolic syndrome parameters in female patients. Conclusion: in Saudi patients with metabolic syndrome, the association between the parameters of metabolic syndrome and the levels of 25 (OH) D is more pronounced in males rather than females.

Keywords : gender, metabolic syndrome, Saudi patients, vitamin D
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