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Title: Asthma and vitamin D

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Body: Objectives: Recent studies indicate a relationship between low vitamin D level and asthma pathogenesis. The aim of this prospective study is to evaluate vitamin D levels in asthmatic patients and investigate the relationship between vitamin D and asthma pathogenesis. Material and method: 112 asthmatic patients and 94 healthy people who admitted to Cukurova University Chest Diseases Department were included. The age and gender of asthmatics and control group were similar. The demographic data were recorded. Both asthmatics and control group had detailed pulmonary function tests and their serum vitamin D levels are studied with liquid chromatography. Results: 86 (76.8%) of asthmatics were female, 26 (23.2%) were male. Mean age of asthmatics were 43.6 ± 14.1 . Sixty two (66%) of control group were female and 32 (34%) were male. The age and gender were similar between asthmatics and control group. No statistically significant difference was determined between vitamin D levels of asthmatics and control group ($p=0.27$). The mean vitamin D level of asthmatics was 25.19 ± 12.01 , of control group was 27.09 ± 12.9 ng/ml. When the mean Vitamin D levels were compared in asthmatics according to gender, the mean vitamin D level of female patients was significantly lower than the male patients (23.88 ± 11.92 ng/ml in females and 29.52 ± 11.48 ng/ml in males) ($p=0.03$). Again in asthmatic patients, a significant positive correlation is determined between the forced expiratory volume in first second and serum vitamin D level ($p=0.004$). Conclusion: With these results, it is thought that vitamin D levels could be associated with asthma pathogenesis especially in females and poor lung functions.