

# Level Of Serum Vitamin D in Allergic Rhinitis Patients Compared to Healthy Controls in Rumah Sakit Cipto Mangunkusumo, Jakarta

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## Abstrak

Background: Vitamin D role in immune system have been investigated due to the presence of VDR on immune cells. Based on this information deficient level of vitamin D could affect the progression of allergic rhinitis. Unfortunately the data regarding vitamin D status in the normal population and allergic rhinitis patient were very limited in Indonesia. This research was done to provide illustration regarding the status of vitamin D in healthy and allergic rhinitis patients in Jakarta and also to investigate the factor that might affect the level of vitamin D in allergic rhinitis. Methods: This research was an observational cross sectional research. There were 22 subjects used during this research all diagnosed with moderate-severe allergic rhinitis. The study used the Electrochemiluminescence Immunoassay (ECLIA) technique. The data then were analyzed with IBM® SPSS statistic version 22 Results: The difference between the mean vitamin D of patients suffering from allergic rhinitis with healthy controls ( $12.7 \pm 10.3$  ng/mL to  $15.1 \pm 8.1$  ng/mL). There was no significant difference in mean vitamin D between the gender groups (Independent Sample T-test  $p = 0.62$ ). There were no statistical difference between the vitamin D level in patient with different eosinophil count and IL-5 level (IL-5 group: one-way ANOVA:  $p = 0.897$ ; eosinophil group: One Way ANOVA:  $p = 0.752$ ). Conclusion: The mean level of vitamin D in allergic rhinitis patients compared to healthy controls showed no significant difference. Comparison studies about level of vitamin D between groups with different gender, IL-5 and eosinophil count showed no significant difference