Hubungan Antara Kadar Serum Vitamin D (25-Hydroxyvitamin D) dan Kadar Plasma Reseptor Vitamin D Dengan Indeks Bakteri Pada Pasien Kusta = Association between Serum Level of Vitamin D (25-Hydroxyvitamin D) and Plasma Level of Vitamin D Receptor with Bacteriological Index in Leprosy Patients

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Abstrak

Salah satu peran sistem imunitas terhadap infeksi M.leprae adalah respons makrofag melalui interaksinya dengan vitamin D dan reseptor vitamin D (RVD). Interaksi vitamin D dengan RVD pada berbagai sel imun akan menstimulasi ekspresi katelisidin. Penelitian ini bertujuan untuk menganalisis kadar serum 25-hydroxyvitamin D (25(OH)D) dan kadar plasma RVD serta hubungannya dengan IB pada pasien kusta. Penelitian ini berupa observasional-analitik dengan desain potong lintang. Sebanyak 28 subjek penelitian (SP) menjalani pemeriksaan slit-skin smear kemudian diagnosis kusta ditegakkan berdasarkan tanda kardinal kusta. Penelitian ini juga menilai kecukupan pajanan matahari menggunakan kuesioner pajanan matahari mingguan. Kadar serum 25(OH)D diperiksa dengan metode chemiluminescent immunoassay (CLIA) dan kadar plasma RVD dilakukan dengan metode enzyme linked immunosorbent assay (ELISA). Median kadar serum 25(OH)D adalah 12,68 ng/ml (4,88 – 44,74). Median kadar plasma RVD adalah 1,36 ng/ml (0,26 – 8,04). Berdasarkan analisis regresi multivariat, tidak terdapat hubungan antara IB dengan kadar serum 25(OH)D dan kadar plasma RVD (R square = 0,055). Tedapat korelasi positif kuat antara kadar serum 25(OH)D dengan skor pajanan sinar matahari (r = 0,863; p < 0,001).
.....One of many immunity system’s roles against M. leprae infection is macrophage response through its interaction with vitamin D and vitamin D receptor (VDR). The interaction between vitamin D and VDR in various immune cells will stimulate the expression of cathelicidin. The objective is to analyze the serum level of 25-hydroxyvitamin D (25(OH)D) and plasma level of VDR as well as their association with IB in leprosy patients. This observational analytic study was performed with cross-sectional design. A total of 28 subjects underwent a slit-skin smear examination and then the diagnosis of leprosy was made based on the cardinal signs. This study also assessed the patient’s sun exposure with weekly sun exposure questionnaire. Serum 25(OH)D level was assessed with chemiluminescent immunoassay (CLIA) method and RVD plasma level was measured by enzyme linked immunosorbent assay (ELISA). Median serum level of 25(OH)D was 12.68 ng/ml (4.88 – 44.74). Median plasma level of VDR was 1.36 ng/ml (0.26 – 8.04). Based on multivariate regression analysis, there was no significant association between BI and serum level of 25(OH)D and plasma level of VDR (R square = 0.055). There was strong positive correlation between serum level of 25(OH)D and sun exposure score (r = 0.863; p < 0.001).