

Correlation of zinc plasma and IgM anti-PGL-1 levels among close contact of leprosy

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Abstrak

Latar belakang: Berbagai studi menunjukkan pasien kusta memiliki status zinc yang rendah. Namun status zinc pada narakontak kusta, yang ditentukan dengan kadar IgM anti-PGL1, belum diketahui. Tujuan penelitian ini untuk mengetahui hubungan antara kadar zinc plasma dengan IgM anti-PGL-1 pada narakontak kusta.

Metode: Penelitian ini merupakan studi observasi. Subjek penelitian terdiri dari 186 narakontak kusta. Pengukuran status plasma zinc menggunakan atomic absorption spectrophotometer sedangkan pemeriksaan kadar IgM anti-PGL1 level menggunakan ELISA (Polyclonal rabbit anti human IgM/HRP/(Dako®)).

Hasil: Kadar rata-rata IgM anti-PGL1 subjek adalah 804 unit/mL ($\pm 439,4$) dan kadar rata-rata plasma zinc adalah 16,6 $\mu\text{mol/L}$ ($\pm 3,5$). Ada hubungan yang signifikan antara kadar plasma zinc dengan IgM anti-PGL1 ($r = -0,230$; $p = 0,002$).

Kesimpulan: Terdapat hubungan yang bermakna antara kadar plasma zinc dengan IgM anti-PGL1 pada nara kontak.

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Abstract

Background: Previous study showed leprosy patients have low zinc status. Yet the status of zinc in close-contact, which indicated by IgM anti-PGL1 level, have not determined. The aim of the study was to determine the association of zinc plasma and IgM anti-PGL-1 levels among close contact of leprosy patients in Indonesia.

Methods: This was an observational study. Subjects were 186 close-contact leprosy patients. Measurement of zinc plasma status used atomic absorption spectrophotometer while examination of IgM anti-PGL1 level used ELISA (Polyclonal rabbit anti human IgM/HRP/(Dako®)).

Results: The average level of IgM anti-PGL1 and zinc plasma were 804 unit/mL (± 439.4) and 16.6 $\mu\text{mol/L}$ (± 3.5) consecutively. There was significant correlation between zinc plasma and IgM anti-PGL1 ($r = -0.230$; $p = 0.002$).

Conclusion: There is a significant correlation between zinc plasma and IgM anti-PGL1 in close contact of leprosy