

Hubungan Kadar Seng Plasma dengan Derajat Penyakit Pneumonia

Paramita Diah Winarni,¹ Dedi Rachmadi,² Nanan Sekarwana²

¹Rumah Sakit MH. Thamrin Purwakarta, ²Departemen Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Padjadjaran-Rumah Sakit Dr. Hasan Sadikin Bandung

Abstrak

Pneumonia merupakan masalah kesehatan utama anak di dunia dan sebagai penyebab terbanyak morbiditas dan mortalitas anak di negara berkembang. Anak dengan defisiensi mikronutrien termasuk seng berisiko tinggi terjadi pneumonia, karena gangguan sistem imun. Penelitian ini bertujuan mengetahui hubungan kadar seng plasma dengan pneumonia, pneumonia berat, dan sangat berat pada anak usia 2–59 bulan. Penelitian observasi analitik dengan rancangan potong lintang dilakukan bulan Agustus sampai November 2009 di Departemen Ilmu Kesehatan Anak RS Dr. Hasan Sadikin Bandung, RS Ujung Berung, dan RS Cibabat. Subjek harus memenuhi kriteria diagnosis klinis pneumonia menurut *World Health Organization* (WHO) Indonesia dan berusia 2–59 bulan. Pengambilan sampel darah untuk pemeriksaan kadar seng plasma dilakukan saat penderita datang. Analisis data menggunakan uji eksak Fisher dan untuk melihat hubungan kadar seng plasma dengan derajat pneumonia menggunakan uji Mann-Whitney. Dari total 42 subjek yang memenuhi kriteria inklusi, didapatkan 1 (2%) anak pneumonia, 32 (76%) pneumonia berat, dan 9 (22%) pneumonia sangat berat. Terdapat perbedaan bermakna ($p=0,032$) kadar seng plasma antara kelompok pneumonia berat dan sangat berat dengan median 96,685 $\mu\text{g/dL}$ (57,32–195,66 $\mu\text{g/dL}$) untuk pneumonia berat dan 80,240 $\mu\text{g/dL}$ (63,01–111,84 $\mu\text{g/dL}$) untuk pneumonia sangat berat. Penelitian ini menunjukkan bahwa kadar seng plasma memiliki hubungan dengan pneumonia berat dan sangat berat pada anak usia 2–59 bulan. [MKB. 2012;44(4):213–17].

Kata kunci: Pneumonia, seng plasma, sistem imun

Association Plasma Zinc Level with Severity of Pneumonia

Abstract

Pneumonia is a major health problem affecting children all over the world and remains a major cause of childhood morbidity and mortality in developing countries. Children with micronutrients deficiency including zinc, which might cause immune system disorder, have higher risk to have pneumonia. The aim of this study was to investigate the association between plasma zinc level and pneumonia, severe, and very severe pneumonia in children aged 2–59 months. This observational analytic with cross-sectional study was performed at the Pediatric Department of Dr. Hasan Sadikin General Hospital, Ujung Berung Hospital and Cibabat Hospital, in August to November 2009. Subjects of this study were 2–59-month-old children who meet the WHO Indonesian classification for pneumonia. Blood samples for plasma zinc examination were collected on admission. Data were analysed using exact Fisher and Mann-Whitney test for the association between plasma zinc level and severity of pneumonia. A total of 42 subjects were enrolled, 1 (2%) child were classified as having pneumonia, 32 (76%) children with severe, and 9 (22%) with very severe pneumonia. There were significant differences ($p=0.032$) in plasma zinc levels between severe and very severe pneumonia with a median of 96.685 $\mu\text{g/dL}$ (57.32–195.66 $\mu\text{g/dL}$) for severe pneumonia and 80.240 $\mu\text{g/dL}$ (63.0–111.84 $\mu\text{g/dL}$) for very severe pneumonia. This study shows an association between plasma zinc levels and severe and very severe pneumonia in children aged 2–59 months. [MKB. 2012;44(4):213–17].

Key words: Pneumonia, plasma zinc, immune system

Korespondensi: Paramita Diah Winarni, dr., Sp.A, M.Kes, Rumah Sakit MH. Thamrin Purwakarta, jalan Raya Bungursari 36 Purwakarta, e-mail paramitadw@yahoo.com