Kadar D-Dimer Plasma sebagai Prediktor Kematian Penderita Pneumonia Usia 2–59 Bulan

Retno Saraswati,[1] Dzulfikar D. Lukmanul Hakim,[2] Herry Garna[2]
[1]Rumah Sakit MH. Thamrin Cileungsi, [2]Departemen Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Padjadjaran-Rumah Sakit Hasan Sadikin Bandung

Abstrak

Pada pneumonia berat, terjadi koagulasi intravaskular dan intraalveolar yang merupakan respons proses inflamasi lokal dan sistemik infeksi paru. Konsekuensi klinis dari perubahan koagulasi ini yaitu peningkatan kadar D-dimer plasma sebagai petanda aktivitas koagulasi dan fibrinolisis serta meluasnya disfungsi organ bahkan kematian. Tujuan penelitian ini untuk mengetahui validitas kadar D-dimer plasma yang tinggi sebagai prediktor kematian penderita pneumonia usia 2 sampai 59 bulan. Penelitian ini merupakan penelitian observasional analitik dengan rancangan prospektif yang dilaksanakan di Rumah Sakit Dr. Hasan Sadikin Bandung. Subjek penelitian anak usia 2 sampai 59 bulan yang didiagnosis sebagai pneumonia dan berobat ke Instalasi Gawat Darurat Anak selama bulan Oktober–November 2009. Pemeriksaan D-dimer plasma dilakukan saat penderita datang dan kemudian dilakukan observasi sampai penderita meninggal atau dipulangkan dari rumah sakit. Empat puluh lima anak ikut serta dalam penelitian ini, 15 (33%) di antaranya meninggal selama observasi. Kadar D-dimer plasma menunjukkan hubungan yang bermakna (p=0,04) terhadap kematian penderita pneumonia dengan median dan rentang sebesar 0,60 mg/L (0,1–5,10 mg/L). *Cut-off point* D-dimer plasma >0,4 mg/L sebagai prediktor kematian penderita pneumonia memberikan sensitivitas 73,3% (IK 95%; 44,9–92,0) dan spesifisitas 70,0% (IK 95%; 50,6–85,2%) dengan akurasi 71,1%. Simpulan, kadar D-dimer plasma yang tinggi dapat memprediksi kematian penderita pneumonia usia 2 sampai 59 bulan. [**MKB.** 2012;44(1):57–62].

Kata kunci: Kadar D-dimer plasma, koagulasi, pneumonia, prediktor kematian

Plasma D-Dimer Level as Predictor of Mortality in 2–59-Month-Old Pneumonia Patients

Abstract

Intravascular and intraalveolar coagulation can be found in severe pneumonia as a response to local and systemic inflammation process in severe pneumonia. Clinical consequences of this coagulation changes is an increase of plasma D-dimer levels as a marker of coagulation and fibrinolyis activation, the number of organ dysfunction even death. The aim of this study was to understand the validity of high plasma D-dimer levels as a predictor of mortality in 2 to 59-month-old pneumonia patients. This was a prospective observational analytic study which was held in Dr. Hasan Sadikin Hospital Bandung. The subjects of this study were 2 to 59 months old children who were diagnosed as pneumonia and visited Pediatric Emergency Departement during October–November 2009. Plasma D-dimer assay was performed at admission and observed until the patient died or discharged from the hospital. Forty-five children were included in this study, 15 (33%) died during observation. Plasma D-dimer level showed significant correlations (p=0.04) with the mortality in 2 to 59-month-old pneumonia patients with median and range of 0.60 mg/L (0.1–5.10 mg/L). Plasma D-dimer cut-off point of >0.4 mg/L gave 73.3% sensitivity (CI 95%, 44.9–92.0%), and 70.0% specificity (CI 95%, 50.6–85.2%) with 71.1% accuracy for predicting mortality in 2 to 59-month-old pneumonia patients. In conclusions, there were significant correlations between elevated plasma D-dimer levels and mortality in 2 to 59-month-old patients with pneumonia. [**MKB.** 2012;44(1):57–62].

Key words: Coagulation, plasma D-dimer levels, pneumonia, predictor of mortality

Korespondensi: Retno Saraswati, dr., Sp.A, Rumah Sakit MH. Thamrin Cileungsi, jalan Narogong Km 16 Limusnunggal Cileungsi Bogor 16820, telepon (021) 8235052, *mobile* 08122353061, *e-mail* retno_1978@yahoo.co.id