



INTISARI

Latar belakang: Angka mortalitas anak sakit berat di Indonesia masih cukup tinggi dan mencapai 51,85% pada pasien dengan MODS. Berbagai penelitian menyebutkan malnutrisi sebagai faktor risiko mortalitas, sehingga terapi nutrisi berupa masukan kalori awal menjadi salah satu aspek manajemen penting pada perawatan anak sakit berat.

Tujuan: Mengetahui hubungan antara masukan kalori awal (rute pemberian kalori awal, waktu dimulainya pemberian kalori, dan pencapaian kalori) dan mortalitas anak sakit berat.

Metode: Kami melakukan penelitian kasus kontrol berpasangan dengan subyek anak usia 1 bulan-18 tahun yang dirawat selama minimal 4 hari di bangsal PICU RSUP Dr. Sardjito pada tahun 2015. Data deskriptif disajikan dalam bentuk narasi dan tabel. Analisis statistik bivariat menggunakan analisis *McNemar* dan multivariat menggunakan uji *conditional logistic regression* metode *stepwise*. Besar sampel minimal 50 subyek pada tiap kelompok.

Hasil: Dari 102 subyek (51 subyek pada tiap kelompok) didapatkan proporsi malnutrisi pada kelompok kasus lebih tinggi dibandingkan kontrol (58,8% dan 29,4% berturut-turut). Analisis bivariat variabel bebas menyatakan rute parenteral dan kurangnya pencapaian kalori di hari ke-3 sampai ke-6 perawatan meningkatkan risiko mortalitas secara bermakna ($p < 0,05$) berturut-turut dengan nilai OR 13 (IK95% 1,95-552,47), OR 3,8 (IK95% 1,37-13,02), OR 4,25 (IK95% 1,39-17,26), OR 4,00 (IK95% 1,08-22,09), dan OR 10,0 (IK95% 1,42-433,98). Waktu pemberian kalori >48 jam tidak berpengaruh secara bermakna terhadap mortalitas ($p > 0,05$). Analisis bivariat variabel perancu menyatakan derajat keparahan penyakit, pemakaian ventilator, kejadian HAP, VAP, dan kondisi malnutrisi meningkatkan risiko mortalitas secara bermakna ($p < 0,05$). Analisis multivariat menunjukkan rute parenteral dan kondisi malnutrisi secara bermakna ($p < 0,05$) mempengaruhi kejadian mortalitas berturut-turut dengan OR 36,05 (IK95% 3,22-404,13) dan OR 9,04 (IK95% 2,09-39,19).

Kesimpulan: Hanya aspek rute pemberian kalori awal dari masukan kalori awal yang berhubungan dengan mortalitas anak sakit berat.

Kata kunci. anak sakit berat, PICU, mortalitas, terapi nutrisi



ABSTRACT

Background: The mortality rate of critically ill children in Indonesia remains substantial and reaches 51.85% in patients with MODS. Various studies suggested malnutrition as a risk factor for mortality, hence nutrition therapy in the form of initial caloric administration became an important aspect in management of critically ill patients.

Objective: To determine the relationship between initial caloric administration (initial route of administration, time to initiate and the achievement of caloric requirement) and mortality of critically ill children.

Methods: We conducted a case-control study involving children aged 1 month-18 years old hospitalized for minimally 4 days at PICU during 2015. Descriptive data were presented in narrative form and tables. We used McNemar test as a bivariate analysis and conditional logistic regression with stepwise method as a multivariate analysis. Minimum sample size was 50 subjects in each group.

Results: Of 102 subjects (51 subjects in each group), the proportion of malnourished children in the case group was higher than that of the control (58.8% and 29.4% respectively). McNemar test concluded parenteral route and lack of caloric achievement within the 3rd to 6th day of hospitalization significantly increased the risk of mortality ($p < 0.05$) with OR 13 (95%CI 1.95 to 552.47), 3.8 (95%CI 1.37 to 13.02), 4.25 (95%CI 1.39 to 17.26), 4.00 (95%CI 1.08 to 22.09), and 10.0 (95%CI 1.42 to 433.98) respectively. Caloric initiation after the first 48 hours of hospitalization did not affect mortality significantly ($p > 0.05$). Confounding variables that affected mortality were severity of the disease, ventilator usage, HAP, VAP, and malnutrition ($p < 0.05$). Multivariate analysis revealed parenteral route and malnutrition significantly influenced mortality with OR 36.05 (95%CI 3.22 to 404.13) and 9.04 (95%CI 2.09 to 39.19) respectively.

Conclusion: There is a relationship between route of initial caloric administration and mortality of critically ill children.

Keywords. critically ill, pediatric intensive care unit, mortality, nutrition therapy