Kadar antioksidan dan parameter biokimia hati dalam darah sebagai faktor prognostik kolestasis terkait sepsis neonatorum dengan proven sepsis = Antioxidant levels and biochemical liver parameters in the blood as a prognostic factor of neonatal sepsis associated cholestasis with proven sepsis

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Abstrak

Latar Belakang : Sepsis adalah penyebab utama kematian pasien dengan penyakit kritis. Uji fungsi hati memiliki nilai prognostik untuk menentukan terjadinya kolestasis terkait sepsis (KTS). Antioksidan diduga berpengaruh dalam KTS sehingga perlu dibuktikan.

Tujuan : Mengetahui gambaran umum penderita KTS neonatorum di Departemen IKA FKUI-RSCM. Mengetahui apakah antioksidan (seng, vitamin A dan vitamin D) dan nilai parameter biokimia hati (bilirubin, AST, ALT dan GGT) memiliki nilai prognostik untuk luaran (baik dan buruk) pada KTS.

Metode: Penelitian uji prognostik dengan metode kohort prospektif periode Desember 2011-Desember 2012. Subjek penelitian kali ini adalah neonatus cukup bulan usia 0-28 hari atau kurang bulan sampai 42 minggu usia koreksi. Data dilakukan tabulasi untuk melihat karakteristik dan distribusi data kadar antioksidan dan parameter biokimia hati. Analisis statistik menggunakan analisis bivariat (uji Kai kuardat atau Fisher) dan multivariat (uji regresi logistik).

Hasil : Penelitian sejak Desember 2011-Desember 2012 terdapat 1052 neonatus, 332 tersangka sepsis, 225 proven sepsis. Penelitian dilakukan pada 80 subjek (50 KTS dan 30 sepsis tanpa kolestasis). Sebagian besar subjek lelaki (61%), berat lahir <2500 gram (41%), usia gestasi cukup bulan (63%). Manifestasi klinis tersering adalah instabilitas suhu (55%), letargis (51%),dan distres pernapasan (45%). Bakteri utama penyebab sepsis adalah Staphylococcus epidermidis (31%), Acinetobacter sp. (16%), dan Enterobacter cloacae (14%). Faktor yang memiliki nilai prognostik untuk memprediksi luaran pada KTS adalah defisiensi vitamin A (RR 0,2; IK95%=0,06-0,78; p=0,020) dan kadar GGT (RR 10; IK95%=1,72-58,31; p=0,010).

Simpulan :. Antioksidan, defisiensi vitamin A terbukti sebagai faktor prognostic unutk luaran baik pada KTS neonatorum. Parameter biokimia hati dalam hal ini GGT terbukti sebagai faktor prognosis untuk luaran buruk pada KTS neonatorum.
<hr><i>Background: Sepsis is the leading cause of death in critically ill patients. Liver plays a role in multiorgan failure during sepsis. Biochemical liver parameters have prognostic value for determining the occurrence of Neonatal sepsis-associated cholestasis (NSAC). Micronutrients thought to play a role in NSAC so it is necessary to prove its contribution to the NSAC.

Objective: To determine the characteristics of patients in the NSAC Child Health Department Faculty of medicine-RSCM in the period December 2011 - December 2012. Knowing the characteristics of the levels

of substances such as zinc, vitamin A, and vitamin D and levels of liver function tests such as bilirubin, AST, ALT and GGT which has prognostic value for the occurrence of NSAC outcomes.

Methods: This is a prognostic study with cohort prospective method during December 2011-December 2012. Subjects were full-term neonates aged 0-28 days or preterm neonates until 42 weeks of age correction, has proven sepsis and clinical sepsis. The data was then tabulated to see the characteristics of the data subject and the distribution of antioxidant and biochemical liver parameters. Statistical analysis was performed to search for prognostic factors associated with NSAC with Chi-Square or Fisher (bivariate analysis) and logistic regression (multivariate analysis).

Results: Patients treated in the period December 2011 - December 2012 as many as 1052 patients, 332 subjects suspected sepsis, with 225 proven sepsis. The study was conducted on 80 subjects, consisting of 50 subjects and 30 subjects NSAC sepsis, neonatal majority of subjects were male (61%), gestational age at term (63%) and birth weight < 2500 gram. The clinical manifestations of sepsis are the most temperature instability (55%), followed by symptoms letargis (51%) and respiratory distress (45%). Based on the data, blood culture results obtained with the major bacterial cause of neonatal sepsis in a row is Staphylococcus epidermidis (31%), Acinetobacter sp (16%), and Enterobacter cloacae (14%). Based on logistic regression, micronutrients: deficiency vitamin A (p = 0.020; RR0,2 (95% CI = 0.06 to 0.78) and liver function tests: GGT (p = 0.010; RR10 (95% CI =1.72 to 58.31) has a prognostic value to predict outcomes in NSAC.

Conclusion: Vitamin A deficiency has been demonstrated to have a good prognostic factor for the outcome of NSAC. While low GGT level has been demonstrated to have a poor prognostic factor for the outcome of NSAC.</i>