

Profil sepsis klinis anak di RSCM dengan kajian khusus imunoparalisis = Profile of pediatric clinically sepsis in Cipto Mangunkusomo Hospital, investigation on immunoparalysis

Nasution, Badai Buana, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20478704&lokasi=lokal>

Abstrak

Sepsis memiliki angka kematian yang cukup tinggi di seluruh dunia. Hal ini disebabkan sebagian besar oleh karena penegakan diagnostik, pemantauan, dan tatalaksana yang tidak adekuat. Mortalitas dan morbiditas sepsis masih dalam banyak penelitian di seluruh dunia. Penyebab terbanyak adalah keadaan imunoparalisis pada sepsis. Penelitian ini bertujuan untuk melihat kejadian, gambaran klinis imunoparalisis pada sepsis klinis anak. Penelitian ini dengan desain deskriptif, dimana subjek di IGD, PICU, dan ruang rawat anak RSCM usia 1 bulan – 18 tahun dengan diagnosis sepsis klinis yang memiliki 2/lebih dari 4 kriteria: 1 takikardia; 2 takipnu; 3 hipo/hipertermia; 4 leukositosis/leukopenia, dengan bukti infeksi berupa prokalsitonin 0,5 ng/mL dan/atau dijumpai pertumbuhan kuman pada kultur. Setelah orangtua subjek mengisi informed consent, pasien dilakukan pemeriksaan darah rutin, analisa gas darah, prokalsitonin, kultur darah, dan darah diambil untuk pemeriksaan TNF alfa ex vivo. Pemeriksaan TNF alfa ex vivo dilakukan dengan menstimulasi darah segar dengan lipopolisakarida salmonella serotipe abortus equii 500 pg/mL yang kemudian akan dilakukan inkubasi pada suhu 37°C selama 4 jam dan disentrifugasi 1000XG selama 5 menit, dilakukan pemeriksaan TNF alfa dengan metode ELISA. Subjek dikatakan imunoparalisis jika didapati hasil TNF alfa ex vivo < 200 pg/mL. Hasil penelitian menunjukkan angka kejadian imunoparalisis 12,17,1 dari 70 subjek terdiagnosa sepsis klinis. Proporsi laki:perempuan 1,4:1. Status gizi kurang n=8/66,7 lebih banyak didapati pada imunoparalisis sepsis klinis. Fokus infeksi tersering adalah infeksi pada sistem hematologi, nefrologi dan respirasi. Subjek demam 541,7, takikardia 325, takipnu 325 dari 12 subjek imunoparalisis pada sepsis klinis anak. Untuk pemeriksaan laboratorium, prokalsitonin >2,0 ng/mL dan jumlah leukosit > 11.000/mm³ lebih sering dijumpai. Simpulan: angka kejadian imunoparalisis pada sepsis klinis anak di RSCM 17,1. Gambaran pasien imunoparalisis pada sepsis klinis yang memiliki persentase besar adalah gizi kurang; pasien dengan fokus infeksi hematologi, nefrologi, dan respirasi; prokalsitonin ≥ 2 ng/mL; dan leukosit ≥ 11.000/mm³.

<hr>

Mortality in sepsis is high worldwide. It is caused by the diagnostic, monitoring, and inadequate therapeutic. Mortality and morbidity in sepsis is still in research. Immunoparalysis is a leading cause of mortality and morbidity of sepsis. The objectives of this study were investigating incidence, clinical characteristics immunoparalysis in clinically sepsis. Design of study was descriptive. The subjects were children age 1 month-18 years from emergency room, PICU, and pediatric ward with clinically sepsis following ≥ 2 of 4 criterias: 1 tachycardia; 2 tachypnea; 3 hypo/hyperthermia; 4 leucocytosis/leucopenia, with proven infection such as procalcitonin 0.5 ng/mL with/without positive culture. After informed consent was filled, subjects were examined blood sample, procalcitonin, blood culture, and TNF alpha ex vivo. Whole blood was stimulated with lipopolysaccharides salmonella serotype abortus equii, incubated in 37°C for 4 hours, centrifugated 1000XG for 5 minutes, and examined for TNF alpha with ELISA. Subjects was defined imunoparalisis with TNF alpha ex vivo < 200 pg/mL. We found the incidence of immunoparalysis was 12,17,1 from 70 subjects diagnosed with sepsis. Male:female ratio 1,4:1. Nutritional status deficiency n=8/66,7 more often found in immunoparalisis sepsis. Most common infection focus is hematological, nephrological and respiratory. Subject fever 541,7, tachycardia 325, tachypnea 325 from 12 subjects immunoparalisis in sepsis children. For laboratory examination, procalcitonin >2,0 ng/mL and total leukocyte > 11.000/mm³ more often found. Conclusion: incidence of immunoparalysis in sepsis children in RSCM 17,1. Characteristic of immunoparalisis in sepsis children with high incidence are nutritional deficiency; patient with infection focus in hematological, nephrological and respiratory system; procalcitonin ≥ 2 ng/mL; and leukocyte ≥ 11.000/mm³.

17.1 of 70 clinically sepsis subjects. Malnourished status n=8/66.7 was higher frequency. The large numbers for focus of infection were hematologic, nephrologic, and respiratory system. Subjects had fever 5 41,7 , tachycardia 3 25 , and tachypnea 3 25 from 12 imunoparalysis clinically sepsis subject. Laboratorium findings showed procalcitonin > 2.0 pg/mL 8 66,7 subjects and leucocyte > 11.000/mm³ 6 50 subjects. Conclusion: The incidence of imunnoparalysed sepsis was 17.1 . Profile of pediatric clinically sepsis had a big number in malnourished status, focus infectious on hematology, nephrology, and respitarory with laboratorium findings showed procalcitonin > 2.0 ng/mL and leococyte > 11.000/mm³ had a high numbers in immunoparalysed clinically sepsis.