Studi Asosiasi Kadar CRP, NLR dan PLR Serum Maternal Terhadap Kejadian Korioamnionitis dan Sepsis Neonatus Awitan Dini Berdasarkan Pemeriksaan Histopatoplogi Korioamnion dan Kultur Membran Amnion pada Pasien Ketuban Pecah Dini Preterm = Association of CRP, NLR and PLR in Maternal Serum on Chorioamnionitis and Early Onset Neonatal Sepsis Based on Histopathological Examination of Chorioamnion and Amniotic Membrane Culture in Patients with Preterm Preterm Rupture of Membrane

Anandha Mardhia Prefitri, author

Abstrak

Latar Belakang : Korioamnionitis telah dihubungkan dengan kejadian ketuban pecah dini preterm (PPROM), persalinan preterm dan luaran kehamilan yang buruk salah satunya adalah kejadian sepsis neonatus awitan dini (SNAD). Infeksi ditengarai mempunyai peran penting terhadap kejadian korioamnionitis. Hingga saat ini pemeriksaan histopatologi merupakan standar baku emas untuk menegakkan diagnosis korioamnionitis. C-Reactive Protein (CRP), Neutrophil to Lymphocyte Ratio (NLR) dan Platelet to Lymphocyte Ratio (PLR) adalah marker inflamasi dari serum darah maternal, dan menggambarkan keadaan infeksi dan inflamasi. Tujuan penelitian ini adalah untuk mengetahui asosiasi antara kadar CRP, NLR dan PLR serum maternal serta kultur kuman membran amnion dengan kejadian korioamnionitis dan SNAD.Metode: Penelitian potong lintang terhadap 61 orang ibu dengan PPROM usia kehamilan £32 minggu. Kadar NLR dan PLR merupakan rasio neutrofil absolut dan platelet dengan limfosit absolut. Korioamnionitis ditegakkan dengan pemeriksaan histopatologi korioamnion. Dan jenis kuman diketahui dari kultur membran amnion. Hasil: Kejadian korioamnionitis pada pasien PPROM adalah 27,8%. Pada sampel dengan korioamnionitis Median NLR 8,59 (4,20–22,67) ; p = 0,03 , sedangkan PLR dan CRP berturut-turut adalah 166,10 (84,89–396,27) dan 5,80 (0,03–88); p>0,05. Terdapat 25% sampel dengan korioamnionitis yang luarannya menderita SNAD. Kadar NLR, PLR dan CRP sampel dengan luaran SNAD berturut-turut adalah 7,13(3,03–16,15); 154,30(45,2-444,08); dan 12,40 (2,4 –67,53), semuanya mempunyai nilai p>0,05. Jenis bakteri yang terbanyak berasal dari ordo Enterobacteriales (68%) dan E. Coli (23,4%) merupakan spesies terbanyak. Namun tidak terdapat asosiasi antara jenis bakteri dengan kejadian korioamnionitis dan SNAD (p<0,05) Kesimpulan: Terdapat asosiasi NLR dengan kejadian Korioamnionitis. Namun tidak terdapat marker inflamasi maternal yang berasosiasi dengan kejadian SNAD. Pada penelitian ini tidak terdapat hubungan antara jenis bakteri dengan kejadian korioamnionitis maupun SNAD.
.....Background: Chorioamnionitis has been associated with the incidence of preterm premature rupture of membranes (PPROM), preterm labor and poor pregnancy outcomes, one of which is the incidence of early onset neonatal sepsis (EONS). Infection is suspected to have an important role in the occurrence of chorioamnionitis. Until now, histopathological examination is the gold standard for diagnosing chorioamnionitis. C-Reactive Protein (CRP), Neutrophil to Lymphocyte Ratio (NLR) and Platelet to Lymphocyte Ratio (PLR) are inflammatory markers from maternal serum, and can describe the state of infection and inflammation. The purpose of this study was to determine the association between levels of

CRP, NLR and PLR in maternal serum and amniotic membrane culture with the incidence of chorioamnionitis and EONS. Methods: A cross-sectional study of 61 mothers with PPROM at 32 weeks' gestation. NLR and PLR levels are the ratio of absolute neutrophils and platelets to absolute lymphocytes. Chorioamnionitis is confirmed by histopathological examination of the chorioamnion. And the type of germ is known from amniotic membrane culture. Results:The incidence of chorioamnionitis in PPROM patients was 27.8%. In samples with chorioamnionitis Median NLR 8.59 (4.20–22.67) ; p = 0.03 , while the PLRââand CRP were 166.10 (84.89–396.27) and 5.80 (0.03–88) respectively; p>0.05. There are 25% of samples with chorioamnionitis whose outcome with EONS. The NLR, PLR and CRP levels of the samples with EONS were 7.13(3.03–16.15); 154.30(45.2-444.08); and 12.40 (2.4 –67.53), all of which have a value of p>0.05. The most types of bacteria come from the order Enterobacteriales (68%) and E. Coli (23.4%) are the most species. However, there was no association between the type of bacteria and the incidence of chorioamnionitis and SNAD (p<0.05). Conclusion: There is an association of NLR with chorioamnionitis. However, there were no maternal inflammatory markers associated with EONS. In this study, there was no relationship between the type of bacteria and the incidence of chorioamnionitis or EONS.