

Puasa Saat Transfusi Sel Darah Merah dengan Kejadian Enterokolitis Nekrotikans pada Bayi Prematur = Withholding Feeds during Red Blood Cell Transfusion and Necrotizing Enterocolitis in Premature Infants

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Abstrak

Latar belakang: Enterokolitis nekrotikans merupakan salah satu komplikasi pada bayi prematur dengan angka mortalitas tinggi. Patogenesis terjadinya enterokolitis nekrotikans hingga kini belum dipahami namun bersifat multifaktorial. Berbagai penelitian mengaitkan enterokolitis nekrotikans dengan transfusi sel darah merah. Salah satu upaya untuk mencegahnya adalah dengan melakukan puasa saat transfusi, namun hingga kini masih bersifat kontroversial. Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan puasa saat menjalani transfusi sel darah merah dengan kejadian enterokolitis nekrotikans pada bayi prematur. Metode: Penelitian menggunakan desain studi kohort retrospektif dilakukan di Rumah Sakit Cipto Mangunkusumo menggunakan data rekam medis. Bayi prematur yang dirawat di Unit Perinatologi RSCM dalam periode Januari 2019 hingga Desember 2023 dan menjalani transfusi sel darah merah, serta memenuhi kriteria inklusi dan eksklusi diikutsertakan dalam penelitian. Subyek kemudian dikelompokkan berdasarkan puasa atau tidak puasa saat menjalani transfusi sel darah merah. Diagnosis enterokolitis nekrotikan ditegakkan melalui hasil foto polos abdomen. Dilakukan pula pencatatan terhadap status maternal, usia gestasi, data antropometri saat lahir, skor APGAR usia 5 menit, jenis nutrisi enteral saat dilakukan transfusi sel darah merah. Hasil: Sebanyak 240 bayi prematur yang menjalani transfusi sel darah merah diikutsertakan dalam analisis. Seratus empat puluh empat bayi lelaki (60,0%), dengan rerata usia gestasi 31 (SD 2,69) minggu dan median berat lahir 1.256 (RIK 1.005-1.653) gram. Enterokolitis nekrotikans ditemukan pada 23,75% subyek dan EKN awitan dini lebih banyak ditemukan yaitu sebanyak 54,39% subyek. Proporsi bayi yang dipuaskan mengalami EKN lebih rendah dibandingkan yang tidak dipuaskan (22,09% dan 27,94%). Tidak ditemukan hubungan bermakna secara statistik antara kejadian EKN pada kelompok puasa dibandingkan kelompok tidak puasa saat menjalani transfusi sel darah merah (RR 1,081 (IK 95% 0,913-1,279)). Kesimpulan: Puasa saat transfusi sel darah merah tidak memiliki hubungan bermakna secara statistik menurunkan kejadian enterokolitis nekrotikans.

.....Background: Complications due to prematurity are major problems for premature infants. Necrotizing enterocolitis has been one of the most considered complication with high mortality rate. Pathogenesis of necrotizing enterocolitis yet to be fully understood, however multiple factors were proven to be associated. Transfusion associated necrotizing enterocolitis has been studied in many researches. Withholding feeds during red blood cell transfusion were postulated to decrease the rate of necrotizing enterocolitis in premature infants, however controversy still found among the research published. Objective: This study aimed to evaluate the association between withholding feeds during red blood cell transfusion and incidence of necrotizing enterocolitis in premature infants. Method: We conducted a retrospective cohort study in Cipto Mangunkusumo Hospital. Premature infants admitted from January 2019 to December 2023 who received red blood cell transfusion were selected according to inclusion and exclusion criteria. Subjects were divided into two group by looking at withholding feeds status during transfusion or fed during transfusion.

Necrotizing enterocolitis was diagnosed by radiologist using abdominal radiograph. Maternal status, gestational age, birth anthropometric measurement, 5-minutes APGAR score, and type of enteral nutrition (breast milk or formula) while receiving red blood cell transfusion were recorded. Results: Two hundred and forty subjects included in this study. Among all subjects, male infants 144 (60%), mean gestational age was 31 (SD 2,26) weeks, and median birthweight was 1.256 (IQR 1,005-1.653) grams. Necrotizing enterocolitis were slightly lower in withholding feeds during transfusion group compared to fed group (22,09% and 27,94%, respectively). No association was found between withholding feeds during red blood cell transfusion compared to fed during transfusion with incidence of necrotizing enterocolitis (RR 1,081 (95% CI 0,913-1,279). Conclusion: Withholding feeds during red blood cell transfusion did not significantly decrease the incident of necrotizing enterocolitis in this study.