

FAKTOR YANG MEMPENGARUHI KEGAGALAN PENCAPAIAN KADAR ALBUMIN NORMAL PASCATRANSFUSI ALBUMIN PADA NEONATUS

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INTISARI

Transfusi albumin pada neonatus dengan hipoalbuminemia dapat menurunkan morbiditas jika kadar albumin pascatransfusi tercapai ≥ 3 g/dL. Dosis albumin intravena bervariasi tetapi mayoritas menggunakan 1 g/kg/hari. Pada kondisi dengan gangguan integritas endotel (seperti pada sepsis dan sakit kritis), albumin yang ditransfusikan akan keluar ke interstitium dan kadar albumin serum akan menurun sehingga tidak mencapai kadar yang diharapkan pascatransfusi. Penelitian yang menilai faktor yang mempengaruhi kegagalan mencapai kadar albumin normal pada neonatus masih sangat sedikit.

Tujuan penelitian ini untuk menentukan faktor yang mempengaruhi kegagalan pencapaian kadar albumin normal pascatransfusi albumin pada neonatus. Metode penelitian yaitu kasus kontrol menggunakan rekam medis di Instalasi Maternal Perinatal RSUP Dr.Sardjito dari tahun 2007 sampai 2012. Kadar albumin yang ditargetkan 3 g/dL. Kelompok kontrol yaitu kadar albumin pascatransfusi ≥ 3 g/dL. Kelompok kasus yaitu kadar albumin pascatransfusi < 3 g/dL. Data dianalisis dengan regresi logistik.

Selama 6 tahun, 181 neonatus mendapatkan transfusi albumin dan didapatkan 124 neonatus yang memenuhi kriteria inklusi dan eksklusi. Dengan analisis multivariat diperoleh faktor yang mempengaruhi kegagalan pencapaian kadar albumin normal yaitu kadar albumin sebelum transfusi (OR:12,27 IK95%: 2,17-69,30), kondisi sakit kritis (OR:4,01 IK95%:1,49-10,79), sepsis (OR:3,56 IK95%:1,36-9,32), dan waktu pemeriksaan albumin (OR:0,06 IK95%: 0,01 - 0,37).

Disimpulkan kegagalan pencapaian kadar albumin normal pascatransfusi albumin ditentukan oleh kadar albumin sebelum transfusi, sakit kritis, sepsis, dan waktu pemeriksaan albumin.

Kata kunci: neonatus, transfusi albumin, kadar albumin pascatransfusi

FACTORS AFFECTING THE FAILURE TO
ACHIEVE NORMAL ALBUMIN SERUM LEVEL
AFTER ALBUMIN TRANSFUSION IN NEONATES

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ABSTRACT

Albumin transfusion in neonatal hypoalbuminemia may reduce morbidity. In conditions with disrupted endothelial integrity (e.g. sepsis and critically ill), administered albumin may leak into the interstitial space and albumin serum levels fall below the expected levels after transfusion. This study was conducted to determine the affecting factors of neonatal albumin level after transfusion.

This was a case control study in the Perinatal Ward of Dr.Sardjito Hospital from 2007 to 2012. Normal albumin level was defined as 3 g/dL. Neonates with post-transfusion albumin level < 3 g/dL were case group and those with ≥ 3 g/dL were the control group. Neonates who received intravenous transfusion of 25% and 20% albumin with indications according to clinical standard of the Neonatal Ward of Dr.Sardjito Hospital were included. Neonates with very low birth weight, severe birth trauma, burn injuries, severe bleeding, and incomplete medical records were excluded. The data were analyzed with logistic regression.

From January 2007 to December 2012, 124 neonates were enrolled. Multivariate analysis showed albumin level before transfusion (OR 12.27, 95% CI 2.17-69.30), critically ill condition (OR 4.01, 95% CI 1.49-10.79), sepsis (OR 3.56, 95% CI 1.36-9.32), and interval between albumin examination and transfusion (OR 0.06, 95% CI 0.01-0.37) were factors affecting the failure to achieve normal albumin level.

In conclusion, failure to achieve normal albumin level after transfusion in neonates was determined by albumin level prior to transfusion, critically ill condition, sepsis, and albumin examination interval.

Key words: neonates, albumin transfusion, albumin level after transfusion