

HUBUNGAN TRANSFUSI PACKED RED CELL TERHADAP MORTALITAS PADA PASIEN PASCA OPERASI LAPAROTOMI ELEKTIF DEWASA

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ABSTRAK

Latar Belakang. Mortalitas akibat laparotomi dilaporkan dapat mencapai 15% di Indonesia. Mayoritas kasus dikaitkan dengan perdarahan dan anemia, yang seringkali membutuhkan transfusi *packed red cell* (PRC). Meskipun bermanfaat, namun transfusi dilaporkan meningkatkan risiko efek samping dan mortalitas. Penelitian ini bertujuan untuk menganalisis pengaruh transfusi PRC terhadap mortalitas dan komplikasi pasca operasi pada pasien dewasa yang menjalani laparotomi elektif.

Metode. Penelitian kohort retrospektif melibatkan 138 pasien dewasa yang menjalani laparotomi elektif dan mendapatkan transfusi PRC perioperatif. Luaran utama penelitian adalah mortalitas 28 hari pasca operasi. Analisis regresi multivariat dilakukan untuk mengevaluasi hubungan anemia dan transfusi PRC dengan mortalitas, disesuaikan terhadap karakteristik dasar.

Hasil. Hasil Rerata kadar hemoglobin preoperasi adalah $10,22 \pm 2,26$ g/dL dengan 83,3% mengalami anemia. Pasien yang mengalami mortalitas memiliki rerata kadar hemoglobin preoperasi ($9,60 \pm 2,32$ vs $11,02 \pm 1,94$ g/dL; $p=0,001$) dan postoperasi ($8,12 \pm 2,22$ vs $10,45 \pm 1,75$ g/dL; $p<0,001$) yang lebih rendah, serta mendapatkan transfusi lebih banyak ($2,18 \pm 1,34$ vs $0,87 \pm 0,98$ kolf; $p<0,001$). Regresi logistik menunjukkan kadar hemoglobin postoperasi (OR 20,3; 95% CI 6,27-56,07; $p<0,001$) merupakan faktor yang meningkatkan mortalitas.

Kesimpulan. Pasien dengan kadar hemoglobin preoperasi dan pasca operasi, serta menerima transfusi *packed red cell* dapat meningkatkan mortalitas pasien pasca operasi laparotomi.

Kata kunci : anemia, transfuse, packed red cell, laparotomi, mortalitas

ABSTRACT

Background. Mortality following laparotomy in Indonesia has been reported to reach up to 15%. The majority of cases are associated with bleeding and anemia, often requiring packed red cell (PRC) transfusion. Although beneficial, transfusions have been reported to increase the risk of adverse effects and mortality. This study aimed to analyze the impact of PRC transfusion on postoperative mortality and complications in adult patients undergoing elective laparotomy.

Methods. A retrospective cohort study was conducted involving 138 adult patients who underwent elective laparotomy and received perioperative PRC transfusion. The primary outcome was 28-day postoperative mortality. Multivariate regression analysis was performed to evaluate the association between anemia and PRC transfusion with mortality, adjusted for baseline characteristics.

Results. The mean preoperative hemoglobin level was 10.22 ± 2.26 g/dL, with 83.3% of patients experiencing anemia. Patients who died had significantly lower preoperative (9.60 ± 2.32 vs 11.02 ± 1.94 g/dL; $p=0.001$) and postoperative (8.12 ± 2.22 vs 10.45 ± 1.75 g/dL; $p<0.001$) hemoglobin levels and received more transfusions (2.18 ± 1.34 vs 0.87 ± 0.98 units; $p<0.001$). Logistic regression analysis showed that lower postoperative hemoglobin (OR 20.3; 95% CI 6.27–56.07; $p<0.001$) was associated with increased mortality.

Conclusion. Low preoperative and postoperative hemoglobin levels and PRC transfusion are associated with increased postoperative mortality in patients undergoing laparotomy.

Keywords: anemia, transfusion, packed red cells, laparotomy, mortality