

INTISARI

KORELASI ANTARA FUNGSI GINJAL CANGKOK DAN KADAR HEMOGLOBIN PADA PASIEN PASKA TRANSPLANTASI GINJAL DI RSUP DR. SARDJITO YOGYAKARTA

Erlangga Prasamya*, Calcarina F. Retno Wisudarti**, Untung Widodo**, Djayanti Sari**

*Trainee PPDS 2 Keseminatan KIC Departemen Anestesi dan Terapi Intensif FKMK UGM
Yogyakarta/ RSUP Sardjito ** Konsultan ICU Departemen Anestesi dan Terapi Intensif
FKMK UGM Yogyakarta/ RSUP Sardjito

Latar Belakang : Penyakit ginjal kronis merupakan masalah kesehatan masyarakat global dengan peningkatan prevalensi, prognosis yang buruk, dan biaya yang tinggi. Pilihan terapi transplantasi ginjal menjadi pilihan utama dibanding dialisis seumur hidup bagi pasien gagal ginjal kronis tahap akhir. Peningkatan jumlah pasien cangkok ginjal perlu diikuti dengan studi keberhasilan fungsi ginjal cangkok. Ginjal cangkok yang bekerja dengan baik akan meningkatkan fungsi endokrin pasien resipien dengan meningkatkan eritropoietin (EPO). Peningkatan EPO akan meningkatkan sel darah merah dan hemoglobin.

Tujuan : Penelitian ini bertujuan untuk mengetahui korelasi antara fungsi ginjal cangkok dengan kadar hemoglobin pada pasien paska transplantasi ginjal di RSUP Dr. Sardjito.

Metode : Penelitian ini merupakan penelitian kohort retrospektif. Pengambilan subjek dilakukan dengan *time-based sampling* yaitu mengambil seluruh pasien resipien cangkok ginjal ≥ 18 tahun yang menjalani operasi transplantasi ginjal pada tahun 2017-2023 di RSUP Dr. Sardjito. Data fungsi ginjal cangkok dan kadar hemoglobin dicatat kemudian dianalisis menggunakan analisis *bivariate* serta *multivariate* SPSS versi 26 untuk menentukan hubungan kedua variabel.

Hasil:. Korelasi kuat antara fungsi ginjal cangkok dengan hemoglobin. Analisis *multivariate* menunjukkan fungsi ginjal cangkok melalui serum kreatinin bulan pertama dalam penelitian ini ($OR\ 9.71$, $p\text{-value}\ 0.002$) dapat memprediksi peningkatan kadar hemoglobin tiga bulan paska transplantasi. Kurva *ROC* menunjukkan nilai *cut-off* terbaik kadar kreatinin bulan pertama paska transplantasi ginjal dalam memprediksi kadar hemoglobin pada bulan ketiga adalah $1,88\text{mg/dl}$ dengan $AUC\ 0,796$ ($CI\ 95\%\ 0,67\text{-}0,92$), sensitivitas $71,4\%$ dan spesifisitas 83% . ginjal. Jenis kelamin, usia, obesitas dan durasi operasi serta waktu iskemia tidak menunjukkan hasil yang signifikan terhadap kenaikan hemoglobin pada bulan ketiga paska transplantasi.

Kesimpulan: Ada korelasi antara fungsi ginjal cangkok dan kadar hemoglobin pada pasien paska transplantasi ginjal di RSUP Dr. Sardjito.

ABSTRACT

RENAL GRAFT FUNCTION IN PREDICTING INCREASED HEMOGLOBIN LEVELS IN POST KIDNEY TRANSPLANT PATIENTS IN DR. SARDJITO GENERAL HOSPITAL YOGYAKARTA

Erlangga Prasamya*, Calcarina F. Retno Wisudarti**, Untung Widodo**, Djayanti Sari**

*Intensive Care Trainee ** ICU Consultant Department of Anesthesiology and Intensive Therapy Faculty of Medicine Universitas Gadjah Mada Yogyakarta/ Sardjito General Hospital Yogyakarta, Indonesia

Background: Chronic kidney disease is a global public health problem with increasing prevalence, poor prognosis, and high costs. Kidney transplantation therapy is the leading choice compared to lifelong dialysis for patients with end-stage chronic renal failure. The increase in kidney transplant patients needs to be followed by successful studies of graft kidney function. A well-grafted kidney will improve the recipient patient's endocrine function by increasing erythropoietin (EPO). Increasing EPO will increase red blood cells and hemoglobin.

Objective: This study aims to determine the correlation between graft kidney function with hemoglobin levels in post-kidney transplant patients at RSUP Dr. Sardjito.

Methods: This research is a retrospective cohort study. Subjects were taken using time-based sampling, namely taking all kidney transplant recipient patients ≥ 18 years old who underwent kidney transplant surgery in 2017-2023 at RSUP Dr. Data on graft kidney function and hemoglobin levels will be recorded and then analyzed using bivariate and multivariate analysis SPSS version 26 to determine the relationship between the two variables.

Results: Strong correlation between graft kidney function and hemoglobin. Multivariate analysis showed that graft kidney function through serum creatinine in the first month in this study (OR 9.71, p-value 0.002) could predict an increase in hemoglobin levels three months after transplantation. The ROC curve shows that the best cut-off value for creatinine levels in the first month after kidney transplantation in predicting hemoglobin levels in the third month is 1.88mg/dl with an AUC of 0.796 (CI 95% 0.67-0.92), sensitivity of 71.4% and specificity 83%. Gender, age, obesity, surgery duration, and ischemia time did not show significant results in increasing hemoglobin in the third month after transplantation.

Conclusion: There is a correlation between graft kidney function and hemoglobin levels in post-kidney transplant patients at RSUP Dr. Sardjito.

Keywords: Kidney Transplantation, Hemoglobin Levels, Grafted Kidney Function