

**FAKTOR PROGNOSTIK PRAOPERATIF DAN INTRAOPERATIF  
YANG BERPENGARUH TERHADAP MORBIDITAS  
PEMANJANGAN WAKTU PENGGUNAAN VENTILATOR DAN  
OKUPASI ICU PASCA OPERASI *DOUBLE VALVE REPLACEMENT*  
DI RSUP DR. SARDJITO YOGYAKARTA**

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**INTISARI**

**Latar belakang:** Penyakit jantung katup merupakan penyakit jantung yang membutuhkan intervensi bedah sebagai tatalaksana definitif. Operasi *Double Valve Replacement (DVR)* merupakan prosedur bedah yang rumit dan memiliki angka mortalitas yang tinggi. Identifikasi dini faktor praoperatif dan intraoperatif berguna dalam mencegah munculnya morbiditas dan mortalitas pasca operasi.

**Tujuan:** Mengkaji faktor prognosis praoperatif dan intraoperatif yang berpengaruh terhadap morbiditas pemanjangan waktu penggunaan ventilator dan okupasi *Intensive Care Unit (ICU)* pasca operasi DVR.

**Metode:** Penelitian observasional kohort retrospektif menggunakan data rekam medis pasien yang menjalani operasi DVR di RSUP dr Sardjito periode 1 Januari 2013 – 31 Juli 2020. Analisis bivariat *Chi-square test*, *Fisher's exact test* atau *Independent T test* digunakan untuk mengetahui hubungan antara variabel bebas dengan variabel tergantung dilanjutkan analisis multivariat regresi logistik metode *backward*.

**Hasil:** Sebanyak 42 subjek disertakan dalam penelitian ini. Tujuh belas (40,4%) pasien mengalami pemanjangan waktu penggunaan ventilator dan okupasi ICU. Analisis bivariat menunjukkan gagal jantung NYHA III ( $p=0,043$ ; RR 1,50; IK 95% 1,25-2,01) berisiko mengalami pemanjangan waktu penggunaan ventilator. Analisis bivariat menunjukkan fraksi ejeksi ventrikel kiri, hipertensi pulmonal dan endokarditis aktif berisiko mengalami pemanjangan okupasi ICU, namun hanya fraksi ejeksi ventrikel kiri  $< 55\%$  ( $p=0,043$ ; RR 4,31; IK 95% 1,18-15,70) yang terbukti secara signifikan sebagai faktor prognosis pemanjangan okupasi ICU.

**Kesimpulan:** Gagal jantung NYHA III adalah faktor prognostik morbiditas pemanjangan waktu penggunaan ventilator pada pasien pasca operasi DVR. Fraksi ejeksi ventrikel kiri  $< 55\%$  adalah faktor yang berpengaruh terhadap pemanjangan okupasi ICU pada pasien pasca operasi DVR.

**Kata kunci:** penyakit katup jantung, operasi katup jantung, *double valve replacement*, faktor prognosis, pemanjangan waktu ventilator, okupasi ICU.

**PREOPERATIVE AND INTRAOPERATIVE PROGNOSTIC FACTORS  
MORBIDITY OF PROLONGED VENTILATOR AND LENGTH OF STAY  
INTENSIVE CARE UNIT IN POST OPERATIVE DOUBLE VALVE  
REPLACEMENT IN DR. SARDJITO HOSPITAL**

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**ABSTRACT**

**Background:** Valvular heart disease is a heart disease that requires surgical intervention as definitive management. Double Valve Replacement (DVR) surgery is a complicated surgical procedure with high mortality rate. Early identification of preoperative and intraoperative factors is useful in preventing postoperative morbidity and mortality.

**Objective:** To determine preoperative and intraoperative prognostic factors that influence the morbidity of prolonged ventilator use and length of stay intensive care unit (ICU) after DVR surgery.

**Methods:** A retrospective cohort study was conducted in patient who underwent DVR surgery at Dr. Sardjito General Hospital during January 2013-July 2020. Chi-square, Fisher's exact tests, or Independent T test, followed by multivariate logistic regression analysis with backward method was used to identify factors contributing to morbidity of prolonged ventilator and length of stay ICU.

**Results:** A total of 42 subjects were included in this study. Seventeen (40.4%) patients experienced prolonged duration ventilator and length of stay ICU. Bivariate analysis showed that NYHA III heart failure ( $p=0.043$ ; RR 1.50; CI 95% 1.25-2.01) was at risk for prolonged duration ventilator. Bivariate analysis showed that left ventricular ejection fraction (LVEF), pulmonary hypertension and active endocarditis were prognostic factors of prolonged length of stay ICU, but only the LVEF < 55% ( $p=0,043$ ; RR 4,31; CI 95% 1,18-15,70) were significant prognostic factor for prolonged length of stay ICU by multivariate analysis.

**Conclusion:** NYHA III heart failure is a prognostic factor morbidity of prolonged duration ventilator. Left ventricular ejection fraction <55% were significant prognostic factor of prolonged length of stay ICU in postoperative DVR patients.

**Keywords:** heart valve disease, heart valve surgery, double valve replacement, prognostic factors, prolonged duration ventilator, length of stay ICU.