ABSTRAK

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Judul : Analisis Faktor – Faktor yang Berhubungan dengan Kegagaan Ekstubasi di Ruang ICU RSUD Majalaya

Kegagalan ekstubasi berdampak serius terhadap peningkatan morbiditas dan mortalitas, perpanjangan durasi ventilasi mekanik dan lama perawatan ICU, peningkatan kebutuhan trakeostomi, serta bertambahnya beban biaya perawatan. Berbagai faktor dapat meningkatkan risiko kegagalan tersebut, sehingga penilaian kesiapan ekstubasi dan pelaksanaan yang tepat menjadi sangat penting. Tujuan penelitian ini Menganalisis faktor – faktor yang berhubungan dengan kegagalan ekstubasi di ruang ICU. Jenis penelitian kuantitatif analitik non-eksperimental dengan pendekatan retrospektif dan desain cross-sectional. Populasi penelitian adalah seluruh pasien yang menjalani ekstubasi selama periode Oktober 2024 hingga Oktober 2025 di ruang ICU RSUD Majalaya, sebanyak 49 pasien. Analisis data dilakukan menggunakan uji *chi-square*, serta regresi logistik biner untuk mengidentifikasi faktor-faktor yang berpengaruh terhadap kejadian kegagalan ekstubasi. Dari total pasien berjumlah 49, angka kegagalan ekstubasi sebesar 20,4%. Faktor-faktor yang berhubungan signifikan dengan kegagalan ekstubasi meliputi usia (p=0,014), penyakit paru-paru (p=0,008), penyakit jantung (p=0,009), denyut jantung (p=0,028), keseimbangan cairan (p=0,023), durasi penggunaan ventilasi mekanik (p=0,012), serta kadar hemoglobin (p=0,009). Sementara itu, status nutrisi tidak menunjukkan hubungan yang signifikan dengan kegagalan ekstubasi (p=0,953). Kadar hemoglobin merupakan faktor yang paling berpengaruh terhadap kegagalan ekstubasi. Kadar hemoglobin yang rendah menurunkan kemampuan darah mengangkut oksigen, sehingga jaringan mengalami kekurangan oksigen. Kondisi ini meningkatkan beban kerja jantung dan usaha pernapasan untuk memenuhi kebutuhan oksigen tubuh.

Kata kunci : **Hemoglobin, ICU, kegagalan ekstubasi, ventilasi mekanik**

ABSTRAK

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Title : *Analysis of factors associated with ektubation failure in the ICU of RSUD Majalaya*

Extubation failure has serious consequences, including increased morbidity and mortality, prolonged duration of mechanical ventilation and ICU stay, increased need for tracheostomy, and higher healthcare costs. Various factors may increase the risk of extubation failure; therefore, careful assessment of extubation readiness and proper implementation are essential, The purpose of this study is to analyze the factors associated with extubation failure in the ICU. This study used a quantitative analytical non-experimental design with a retrospective approach and a cross-sectional method. The study population consisted of all patients who underwent extubation during the period of October 2024 to October 2025 in the ICU of RSUD Majalaya, totaling 50 patients. Based on the established criteria, the final sample analyzed included 49 respondents. Data analysis was performed using the chi-square test to determine the association between variables, and binary logistic regression to identify factors influencing extubation failure. From the total sample, the extubation failure rate was 20.4%. Factors significantly associated with extubation failure included age (p=0.014), pulmonary disease (p=0.008), heart disease (p=0.009), heart rate (p=0.028), fluid balance (p=0.023), duration of mechanical ventilation (p=0.012), and hemoglobin levels (p=0.009). Meanwhile, nutritional status was not significantly associated with extubation failure (p=0.953). Hemoglobin level was identified as the most influential factor in extubation failure. Low hemoglobin levels reduce the blood's oxygen-carrying capacity, leading to tissue hypoxia. This condition increases cardiac workload and respiratory effort to meet the body's oxygen demands.

Keywords: Hemoglobin, ICU, extubation failure, mechanical ventilation