Identifikasi Faktor Risiko *Ventilator Associated Pneumonia* (VAP) pada Pasien Post Operasi di ICU RSUP Dr. Kariadi Semarang Tahun 2022

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ABSTRAK

Latar belakang: *Ventilator Associated Pneumonia* (VAP) merupakan kondisi pneumonia yang terjadi dalam kurun waktu 48 jam atau segera setelah dilakukannya intubasi endotrakeal. Di ICU, infeksi nosocomial erat kaitannya dengan ventilasi mekanik invasif yang termasuk di dalamnya intubasi ulang, trakeostomi, dan operasi lainnya. Pasien dengan VAP memperpanjang durasi rawat inap di rumah sakit dan peningkatan pengeluaran biaya selama di rumah sakit.

Tujuan: Mengetahui faktor resiko *Ventilator Associated Pneumonia* (VAP) pada Pasien Post Operasi di ICU RSUP Dr. Kariadi Semarang Tahun 2022

Metode: Penelitian ini adalah penelitian observasional dengan pendekatan *case-control* retrosprospektif. Subjek merupakan pasien dengan ventilasi mekanik yang menjalani perawatan di ICU RSUP Dr. Kariadi per bulan Januari sampai Desember 2022. Data didapatkan dari rekam medik, meliputi data demografi pasien, riwayat merokok, ARDS, DM, durasi ventilator, dan luaran kejadian VAP. Data kemudian diolah dengan SPSS menggunakan analisis uji bivariat (Uji *Chi Square*) dilanjutkan dengan regresi logistik multivariabel.

Hasil: Dari 272 subjek penelitian yang memenuhi kriteria inklusi dan eksklusi, didapatkan subjek VAP 162 orang dan kontrol 110 orang. Beberapa faktor yang berkaitan dengan peningkatan risiko terjadinya VAP di ICU RSUP Dr. Kariadi yakni usia $\geq$ 60 tahun, riwayat merokok, riwayat ARDS, dan penggunaan ventilator $\geq$ 5 hari. Analisis regresi logistic menemukan bahwa penggunaan ventilator $\geq$ 5 hari merupakan faktor yang paling berpengaruh terhadap VAP.

Kesimpulan: Faktor yang berpengaruh yakni usia, riwayat merokok, riwayat ARDS, dan durasi penggunaan ventilator $\geq$ 5 hari.

Kata kunci: ARDS, ICU, Merokok, Ventilator Associated Pneumonia, Ventilator Mekanik

Identification of Ventilator Associated Pneumonia (VAP) Risk Factors in Postoperative Patients in ICU Dr. Kariadi Semarang in 2022

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ABSTRACT

Background: Ventilator Associated Pneumonia (VAP) is a condition of pneumonia that occurs within 48 hours or immediately after endotracheal intubation. In the ICU, nosocomial infections are closely related to invasive mechanical ventilation which includes re-intubation, tracheostomy, and other surgeries. Patients with VAP prolong the duration of hospital stay and increase costs while in hospital.

Objective: To know the risk factor of Ventilator Associated Pneumonia (VAP) in Postoperative Patients in the ICU and the Risk Factors in RSUP Dr. Kariadi Semarang in 2022

Methods: This study is an observational study with a retrospective case-control approach. Subjects are mechanically ventilated patients undergoing treatment in the ICU of RSUP Dr. Kariadi from January to December 2022. Data were obtained from medical records, including patient demographic data, smoking history, ARDS, DM, ventilator duration, and VAP event outcomes. The data were then processed with SPSS using bivariate test analysis (Chi Square Test) followed by multivariable logistic regression.

Results: The were 272 research subjects who met the inclusion and exclusion criteria, which consisted of 162 VAP subjects and 110 control subjects. Several factors are associated with an increased risk of VAP events in the ICU of RSUP Dr. Kariadi namely age $\geq$ 60 years, history of smoking, history of ARDS, and use of a ventilator $\geq$ 5 days. Logistic regression analysis found that the use of a ventilator $\geq$ 5 days was the most influential factor on the incidence of VAP.

Conclusion: Factors that have a significant effect, namely age, history of smoking, history of ARDS, and duration of use of a ventilator $\geq$ 5 days.

Keywords: ARDS, ICU, Mechanical Ventilator, Smoking, Ventilator Associated Pneumonia