ABSTRACT

Association Between Duration of Mechanical Ventilation and Ventilator-Associated Pneumonia

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**Background:** Ventilator-Associated Pneumonia (VAP) is one of the leading cause of Hospital-Acquired Pneumonia (HAP) with high mortality rate. The objective of this study was to know the association between duration of mechanical ventilation and the diagnosis of VAP in ICU patients as one of the risk factor in developing VAP.

**Method:** This retrospective cross-sectional study involved 34 patients who had been attached to mechanical ventilator during January to December 2016. The sample numbers that fulfilled the inclusive criteria and become chosen subjects for this research were 30 patients. The others were excluded due to incomplete medical records. The data collected using medical records and analyzed using chi-square test with p-value (p) < 0.05 and confidence interval (CI) 95%.

**Result:** There was no significant association between indication of mechanical ventilation with the diagnosis of VAP (p=0.509). There was no significant association between prior hospitalization and the diagnosis of VAP (p=1.000) and no significant association between reintubation within 72 hours after extubation and the diagnosis of VAP (p=0.557). There is significant association between duration of mechanical ventilation and the diagnosis of VAP (p=0.46).

**Conclusion:** There was association between duration of mechanical ventilation and diagnosis of VAP, thus physician should always be aware of longer duration would increase the probability of patient developing VAP. Further research is needed to find the association of other risk factors.

**Keywords:** pneumonia, mechanical ventilator, duration, VAP