INCIDENCE AND RISK FACTORS FOR NOSOCOMIAL PNEUMONIA AMONG INTUBATED PATIENTS IN A PROVINCIAL HOSPITAL, EASTERN THAILAND

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Abstract. The present study was conducted to determine the incidence and risk factors for nosocomial pneumonia (NP) among intubated patients in a provincial hospital, eastern Thailand. Three hundred five intubated patients who voluntarily participated and signed informed consent were observed and medical records were collected. The respiratory secretion specimens from NP patients, diagnosed by doctors under the definition of the International Statistical Classification of Disease and Related Health Problems Tenth Revision (ICD-10), were collected for bacterial culture. Data from patients with and without NP were analyzed to identify risk factors. The results revealed that the incidence of NP was 38.4% (117/305 cases). Of 117 NP patients, 35% were positive on bacterial culture. The most frequently isolated bacteria were *Klebsiella pneumoniae* and *Klebsiella* spp (32%), and the incidence of methicillin resistant *Stapylococcus aureus* (MRSA) was 6%. Risk factors for NP from univariate analysis were (a) age more than 60 years (OR=9.2, p<0.001), (b) admitted to the ICU (OR=1.7, p=0.042), (c) comatose (OR=12.2, p<0.001), (d) chronic pulmonary disease (OR=5.3, p<0.001), tuberculosis (OR=14.3, p<0.001), (e) smoking (OR=7.1, p<0.001), and (f) duration of intubation greater than 5 days (OR=8.8, p<0.001). After controlling for confounders using multivariate analysis, the significant risk factors were (a) age greater than 60 years (OR=9.9, p<0.001), (b) comatose (OR=9.4, p=0.031), (c) chronic pulmonary disease (OR=5.2, p<0.001), tuberculosis (OR=11.4, p=0.003), (d) smoking (OR=3.6, p<0.001), and (e) duration of intubation more than 5 days (OR=18.9, p<0.001). When an intubated patient has these risk factors, they should be considered a potential risk for NP and preventive measures should be taken to reduce the risk.

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