Nosocomial pneumonia

see also Ventilator-associated pneumonia

Hospital-acquired pneumonia (HAP) or nosocomial pneumonia refers to any pneumonia contracted by a patient in a hospital at least 48–72 hours after being admitted. It is thus distinguished from community-acquired pneumonia. It is usually caused by a bacterial infection, rather than a virus.

HAP is the second most common nosocomial infection (after urinary tract infections) and accounts for 15–20% of the total.

It is the most common cause of death among nosocomial infections and is the primary cause of death in intensive care units.

HAP typically lengthens a hospital stay by 1–2 weeks.

Predictors

LDH might be a helpful predictor of postoperative pneumonia (POP) occurrence in aneurysmal subarachnoid hemorrhage patients [1].

Outcome

Chen et al. collected data on ventilator-associated pneumonia (VAP) and hospital-acquired pneumonia (HAP) induced by Stenotrophomonas maltophilia (SM) and Klebsiella pneumoniae (KP) and compared differences between two bacteria in mortality, duration of ventilator use, length of hospital stay, and risk factors for infection.

Objectives: This study aimed to evaluate the prognosis and to find risk factors of SM-HAP/VAP versus KP-HAP/VAP in the intensive care unit (ICU).

Methods: This retrospective cohort study included patients admitted to the ICU between June 2019 and June 2021 and diagnosed with SM-HAP/VAP or KP-HAP/VAP. The primary outcome was 28-day mortality.

Results: Ninety-two HAP/VAP patients (48 with SM-HAP/VAP and 44 with KP-HAP/VAP) were included. The 28-day mortality was 16.7% (8/48 patients) in SM-HAP/VAP and 15.9% (7/44 patients) in KP-HAP/VAP (P = 0.922). After adjustment for potential confounders, the hazard ratios for 28-day mortality in SM-HAP/VAP were 1.3 (95% CI:0.5-3.7), 1.0 (95% CI:0.4-3.0), 1.4 (95% CI:0.5-4.0), and 1.1 (95% CI:0.4-3.4), respectively.

Conclusion: SM-HAP/VAP and KP-HAP/VAP patients in ICU might have a similar prognosis in mortality, the total duration of the artificial airway and ventilator use, the total length of ICU stay, and hospital stay. The risk factors of SM-HAP/VAP versus KP-HAP/VAP might be the artificial airway, ventilator use, gastric tube placement, acid suppressant and antibiotics (especially carbapenem) [2].

1)

Ding CY, Peng L, Lin YX, Yu LH, Wang DL, Kang DZ. Elevated lactic dehydrogenase level predicts postoperative pneumonia of patients with aneurysmal subarachnoid hemorrhage. World Neurosurg. 2019 Jun 13. pii: S1878-8750(19)31582-7. doi: 10.1016/j.wneu.2019.06.041. [Epub ahead of print] PubMed PMID: 31203058.

2)

Chen S, Zou D. Prognosis of hospital-acquired pneumonia/ventilator-associated pneumonia with Stenotrophomonas maltophilia versus Klebsiella pneumoniae in intensive care unit: A retrospective cohort study. Clin Respir J. 2022 Aug 31. doi: 10.1111/crj.13537. Epub ahead of print. PMID: 36045483.