

POSTER PRESENTATION

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C-reactive protein as an early marker of healthcare-associated pneumonia outcome in cancer patients

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Introduction

Healthcare-associated pneumonia is associated with high mortality rates in critically ill especially those with multidrug-resistant pathogens.

Objectives

The aim of the present study is to evaluate the value of C-reactive protein (CRP) ratio in the outcome of ICU cancer patients with healthcare-associated pneumonia (HCAP).

Methods

This was a secondary analysis of a prospective cohort of cancer patients admitted to three ICUs with healthcare-associated pneumonia. CRP was sampled every other day from D0 to D6 of antibiotic prescription. CRP-ratio was calculated in relation to D0 CRP concentration. Comparison between survivors and non-survivors was performed.

Results

137 patients were included in the study (median age: 65 years; solid tumors 69%; neutropenia 13%). Good performance status was observed in 61% of all patients. The median Charlson comorbidity index was 3 points. Septic shock at ICU admission was present in 74% of patients and invasive mechanical ventilation was used in 73% while 27% used dialysis. 30-day and hospital mortality rates were 54% and 65% respectively.

The course of CRP from D0 to D6 as well as CRP-ratio were significantly different in survivors and non-survivors ($p = 0.017$ and $p = 0.03$, respectively). After 48h of antibiotic

therapy CRP concentration was significantly lower in survivors ($p = 0.042$). By D4, both CPR and CRP-ratio of survivors were significantly lower ($p < 0.001$ and $p = 0.004$, respectively). The AUC of CRP and CRP-ratio by D4 in the identification of patients with poor outcome were 0.717 and 0.662, respectively.

Conclusions

The rate of CRP decrease, assessed either by absolute as well as relative changes, after antibiotic prescription in cancer patients with HCAP was markedly associated with mortality and may be used as an early predictor of outcome.

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