

POSTER ABSTRACTS

172. Can Procalcitonin (PCT) Be Used as an Early Marker of Sepsis in Patients with Intracranial Hemorrhage (ICH)?

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Session: 39. Antibiotic Stewardship
Thursday, October 9, 2014: 12:30 PM

Background. To assess whether PCT can be used as a reliable early marker of sepsis in patients with ICH.

Methods. In this prospective observational study we enrolled 73 patients with ICH (defined as subarachnoid hemorrhage, subdural hematoma, epidural hematoma, intraventricular hemorrhage, intraparenchymal hemorrhage) who were febrile above

38.3 C at anytime during hospitalization. Serum PCT was measured on day one (PCT 1) and 48-72 h later (PCT2). Patients were determined to have an infection (pneumonia (PNA), urinary tract infection (UTI) or blood stream infection) based on cultures, imaging and clinical impression of the treating team and were assigned a score of 1 based on the presence of an infection that was microbiologically proven. The clinical impression regarding the cause of the fever was also noted (infection vs central fever).

Results. There was no statistically significant difference between the mean PCT1 of patients with no infection (M = 0.22 ng/ml, SD = .40) as compared to those with microbiologically proven infection (M = .45, SD = .55), p = .063. There was no statistically significant difference between the mean PCT2 among those with no infection (M = 0.21, SD = .37) as compared to those with microbiologically proven infection (M = .56, SD = .73), p = .084. However, at PCT1, those with infection based on clinical impression (M = 0.18, SD = .17) had significantly lower PCT scores as compared to those with central fever (M = 0.44, SD = .69), F(1, 72) = 6.33, p = .014. This difference did not remain significant at PCT2 (M = .22, SD = .41; M = .41, SD = .61, p = .302).

PCT1 levels were not significantly different in patients with PNA (M = 0.22, SD = .39) vs central fever (M = 0.50, SD = .67), p = .06. Similarly, PCT2 levels were not significantly different in patients with PNA (M = 0.21, SD = .38) vs central fever (M = 0.56, SD = .73), p = .09. PCT1 levels were also not different in patients with a UTI diagnosis (M = .27, SD = .46) vs central fever (M = .31, SD = .38), p = .85. There was only 1 patient with a central fever at PCT2, so we could not examine that association.

Conclusion. The results of our study indicate that serum PCT is not a reliable marker in differentiating between early sepsis and central fever in patients with ICH.

Disclosures. All authors: No reported disclosures.