Procalcitonin (PCT) is a valid marker in sepsis. Our goal in this study is to evaluate its usefulness as a diagnostic marker in detecting CRBSI among hemodialysis patients who present with suspected CRBSI” Hamada Imam and Gamal (2017).

Abstract:

Introduction: Catheter-related bloodstream infection (CRBSI) is a frequent complication among hemodialysis patients who usually are presented with nonspecific signs such as fever, rigors, and hypotension. Blood culture will take up to 5 days and antimicrobials will be started. Procalcitonin (PCT) is a valid marker in sepsis. Our goal in this study is to evaluate its usefulness as a diagnostic marker in detecting CRBSI among hemodialysis patients who present with suspected CRBSI.

Patients and methods: Thirty-one hemodialysis patients with suspected CRBSI were enrolled in this study. PCT level was measured at the time of presentation. Patients were divided into two groups according to blood culture results: positive and negative groups. PCT level and other markers for inflammation: white blood cell count (WBC), C-reactive protein (CRP), and ferritin were compared between the two groups. Statistical analysis of variables was performed using the t-test or Mann-Whitney test together with Spearman correlation test.

Results: Thirty-one patients had median age 44.7 ± 2.1 years. They comprised 16 males (52%) and 15 females (48%). Sixteen patients had a positive blood culture result while in 15 it was negative. PCT level was significantly higher in the positive blood culture group (40.0 ± -21.9) (95% confidence interval [CI] 28.4-51.8) while its level was 1.1 ± 1 (95% CI 0.54-1.8) in the negative blood culture group [t(15) = -7, p<0.001]. In the positive culture group, there was a correlation between CRP and ferritin (r = -0.58, p = 0.01, n = 16), while no correlation between PCT and other markers of inflammation.
Conclusions: PCT is a useful marker for diagnosis of CRBSI among hemodialysis patients.

Reference:


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