

The Predictive Role of new Markers in Early Diagnosis of Acute Kidney Injury in Patients with Acute Pancreatitis

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Abstract

Objective: Acute Kidney Injury (AKI) is a serious early complication that significantly increases the mortality rate in patients with acute pancreatitis (AP). AKI can improve with an early diagnosis and appropriate treatment protocols. We aimed to evaluate the role of IL-6, IL-18, NGAL, IL-1 β , TNF- α , Cys-C and KIM-1 in serum and IL-18 in urine in the early detection of AKI in patients with AP.

Materials and Methods: Fifty-six patients, who were diagnosed with AP and underwent standard treatment, between July 2011 and December 2013, were included in the study. Patients were sampled for markers at admission and discharge, or when the patients died. Patients were grouped by presence or absence of AKI.

Results: The mean age of the cases was 56.41 ± 20.23

(17 - 91), of which 21 (37.5%) of the cases were male and 35 (62.5%) were female. AKI was detected in 13 (23.2%) patients. The Cys-C level was significantly higher in AKI patients (at hospitalization $p < 0.01$). Cys-C levels at hospitalization were significantly higher than discharge levels ($p < 0.05$). Serum KIM-1 level of patients with AKI was higher than the patients without AKI during admission ($p < 0.05$). There was a positive correlation between serum KIM-1 and creatinine, but a negative correlation between GFR and spot urine amylase/creatinine ratio during AKI patients' admission (respectively; $p < 0.05$, $p < 0.05$, $p < 0.05$).

Conclusion: In this study, Cys-C and KIM-1 proved to be statistically significant to predict AKI in patients with AP. However further studies are required to support these conclusions.

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