

Inflammatory milieu in contrast-induced nephropathy: a prospective single-center s

Authors: Ashraf O Owais, Sameeha A. Alshelleh, Ammar K. Daoud, Mahmoud M. Smadi, Karem H Alzoubi

Abstract: Background: Acute kidney injury (AKI) caused by contrast exposure is a common problem, which may cause a significant increase in patients in-hospital stay and therefore the cost of treatment. This study was conducted to evaluate the role of inflammation, inflammatory markers in predicting contrast induced nephropathy (CIN). This is a prospective study that was carried out in a major tertiary referral hospital in Jordan. Methods: Clinical data, blood and urine samples were collected from all patients admitted to the cardiology unit. All patients who agreed to participate in the study had creatinine level analysis 48-72 hours after the procedure. The CIN was defined as an increase in serum creatinine by 25% or 44 μ mol/L from the baseline within 48-72 hours after the contrast administration. Patients with stage 4, 5 renal failure, patients on dialysis, and patients with recent intravenous contrast use, active infection or cancer were excluded from the study. Results: Of the total 202 patients, 30 (14.8%) developed CIN. The incidence rate was 21.1% among females and 12.4% among males. In the multivariate analysis, beside eGFR, diuretics, and alkaline phosphatase, IL-33 was significantly associated with CIN, while the other cytokines did not to show this an association. Conclusion: Serum level of IL-33 was a significant predictor for development of CIN. Good clinical judgment and high serum levels of IL-33 may stratify patients into low and high risk for CIN.