24th Global Nephrology, Urology and Kidney Failure Congress

April 19-20, 2023

Rome, Italy

Effect of PCSK9 inhibitor on contrast-induced acute kidney injury in patients with acute myocardial Infarction undergoing intervention therapy

Yu Ma MD
Tian Jin chest Hospital, China

Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors have been shown to inhibit pyroptosis and apoptosis, which play important roles in the development and progression of contrast-induced acute kidney injury (CI-AKI). However, to the best of our knowledge, no studies have investigated the potential effect of PCSK9 inhibitors on the prevalence of CI-AKI after percutaneous coronary intervention (PCI). This study aimed to determine whether PCSK9 inhibitors are associated with the prevalence of CI-AKI. The medical records of 309 (mean age, 63.35 years; 71.84% male) patients with acute myocardial infarction who underwent PCI at our institution were retrospectively analyzed. Overall, 149 and 160 patients were assigned to the evolocumab and control groups, respectively. Serum creatinine levels were examined preoperatively and 24–72 h postoperatively and compared between groups. Data were grouped according to the occurrence of CI-AKI, and a univariate analysis was conducted to exclude suspected influencing factors that led to CI-AKI occurrence. After adjusting for confounding factors, a logistic regression analysis was performed to assess the association between evolocumab administration (independent variable) and CI-AKI occurrence (dependent variable). The prevalence of CI-AKI was significantly lower in the evolocumab group (6.7%) than in the control group (20.0%; $p<0.01$).We further evaluated the correlation between exposure factor and outcome. The relative risk(RR) between the use of evolocumab and the occurrence of CI-AKI was 0.34.This result indicate a significant association between the use of evolocumab and a reduction in the incidence of CI-AKI. The logistic regression analysis results revealed that evolocumab was significantly associated with CI-AKI. The use of PCSK9 inhibitors, hydration therapy, and statin administration appears promising for preventing CI-AKI in patients with acute myocardial infarction undergoing PCI.

Received: March 16, 2023; **Accepted**: March 18, 2023; **Published**: April 19, 2023