

Abstract Submission No.: A-0919

The Potency of Ascorbic Acid to Prevent Contrast-Induced Nephropathy in Diabetic Foot Patient Undergoing Digital Subtraction Angiography

Gabriela Claudia, Muhamad Ramdani Ibnu Taufik

Department of Faculty of Medicine, Sebelas Maret University, Indonesia

Objectives : Due to the production of reactive oxygen species, contrast agents have the potential to reduce renal function. Some research has demonstrated the antioxidant effects of ascorbic acid on the kidneys. However further study is needed to proof the exact benefits of Ascorbic Acid to prevent contrast-induced nephropathy (CIN). Thus, our goal was to find out whether pretreatment with ascorbic acid can reduce the chance of contrast-induced nephropathy in diabetic foot patients undergo digital subtraction angiography (DSA), who at high risk of experiencing kidney damage.

Methods : This study used a two-group pretest-posttest control-group design in a quasi-experimental approach. It was held from June to July 2021 at Moewardi Hospital in Surakarta. Two groups—the control group and the treatment group—were formed from the data. The related samples Wilcoxon signed-rank test and the paired sample t-test were used to analyze the data.

Results : There was a significant difference in serum creatinine and estimated glomerular filtration rate (e-GFR) in the control group before and after DSA ($p < 0.05$). Meanwhile, we found insignificant difference of serum creatinine and e-GFR in the experimental group before and after DSA ($p > 0.05$). Insignificant difference in serum creatinine and e-GFR suggest a lower incidence of CIN in the treatment group.

Conclusions : Under typical circumstances, ascorbic acid can keep serum creatinine and e-GFR stable. This indicates that ascorbic acid could prevent Contrast-Induced Nephropathy from occurring.