KSN 2016 Abstract Submission

CKD & associated complications

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Preprocedural Administration of Statins for Prevention of Contrast-Induced Nephropathy: A Meta-Analysis of Randomized Controlled Trials

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Background: Several interventions have been proposed for the prevention of Contrast-Induced Nephropathy (CIN). The use of statins as an intervention has yield different results regarding the effectiveness for prevention of CIN. The objective of this meta-analysis is to evaluate several published studies regarding the efficacy of statins in preventing the development of CIN.

Methods: Several published searches for randomized controlled trials (RCTs) of statin intervention for the prevention of CIN were done using MEDLINE, EMBASE, and Cochrane Database of Systemic Reviews from inception to October 2015. The primary outcome was the incidence of CIN.

Results: Five prospective RCTs were included in our analysis. Of the 4247 patients with contrast exposures, 192 patients (4.5%) developed CIN. Patients, who were enrolled in the statin group had a total of 2.9% incidence while patients, who were enrolled in the control group had a total of 6.1%. There was a significant effect of preprocedural statins on the prevention of CIN compared to the control group.

Conclusion: Our study yielded a statistically significant effect of statins on the prevention of CIN in patients undergoing contrast-mediated procedures. This study recommends the use of statins in the prevention of CIN in patients undergoing contrast-mediated procedures.

Keywords: acute kidney injury, contrast induced nephropathy, statins