



# HIGH DOSE ROSUVASTATIN REDUCED RISK OF CONTRAST-INDUCED ACUTE KIDNEY INJURY IN PATIENTS WITH DELAYED PERCUTANEOUS CORONARY INTERVENTION

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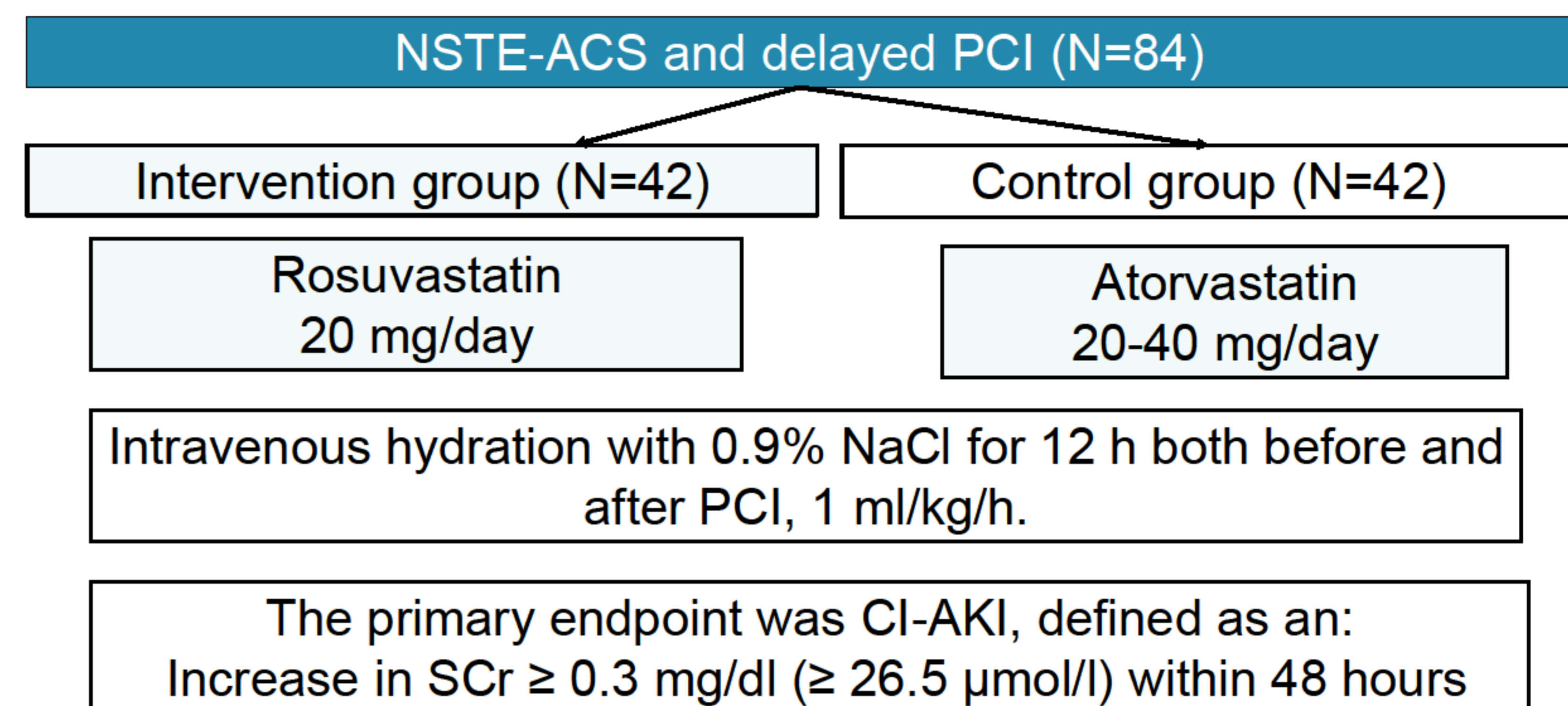
## Background and Objective

- Contrast-induced acute kidney injury (CI-AKI) is a common complication of intra-arterial administration of iodinated radiographic contrast medium that may prolong hospitalization, increase costs, short- and long-term morbidity and mortality.
- Despite the obvious progress in modern interventional cardiology and angiology the question of effective prevention of CI-AKI remains relevant.
- We performed a single-centre prospective study to determine the effect of addition of rosuvastatin to routine preventive measures on the incidence of CI-AKI in patients with non-ST-elevation acute coronary syndrome (NSTEMI-ACS) and delayed percutaneous coronary intervention (PCI).

## Methods

- Inclusion criteria: Patients hospitalized with NSTEMI-ACS and delayed PCI
- Detection and classification of acute kidney injury (AKI):
  - ✓ KDIGO Guidelines 2012<sup>1</sup>
  - ✓ Mann-Whitney test was performed.  $P < 0.05$  was considered statistically significant.
- Non-ionic low osmolar contrast agent iodaxol (Omnipaque 350) was used. We use transradial access for PCI in 98% of patients.
- Both groups were comparable in age (63 ± 13 and 66 ± 12 years), comorbidity (hypertension 91 and 94%, chronic kidney disease 12 and 14%, diabetes mellitus 21 and 18%) and therapy.

<sup>1</sup> KDIGO Clinical practice guideline for acute kidney injury. *Kidney Int.* 2012; 2(1): 1–141



## Results

- The incidence of CI-AKI in intervention group was significantly lower than in the control group (4,8 and 19%,  $p < 0.05$ ) (Fig. 1).
- The 6-month cardiovascular rehospitalizations was significantly lower in the statin than in the control group (31 and 52%,  $p < 0.05$ ). Patients in the statin group presented a significantly lower rate of persistent renal damage (24 and 45%,  $p < 0.05$ ) than patients in the control group (Fig. 2).

Figure 1. Prevalence of CI-AKI

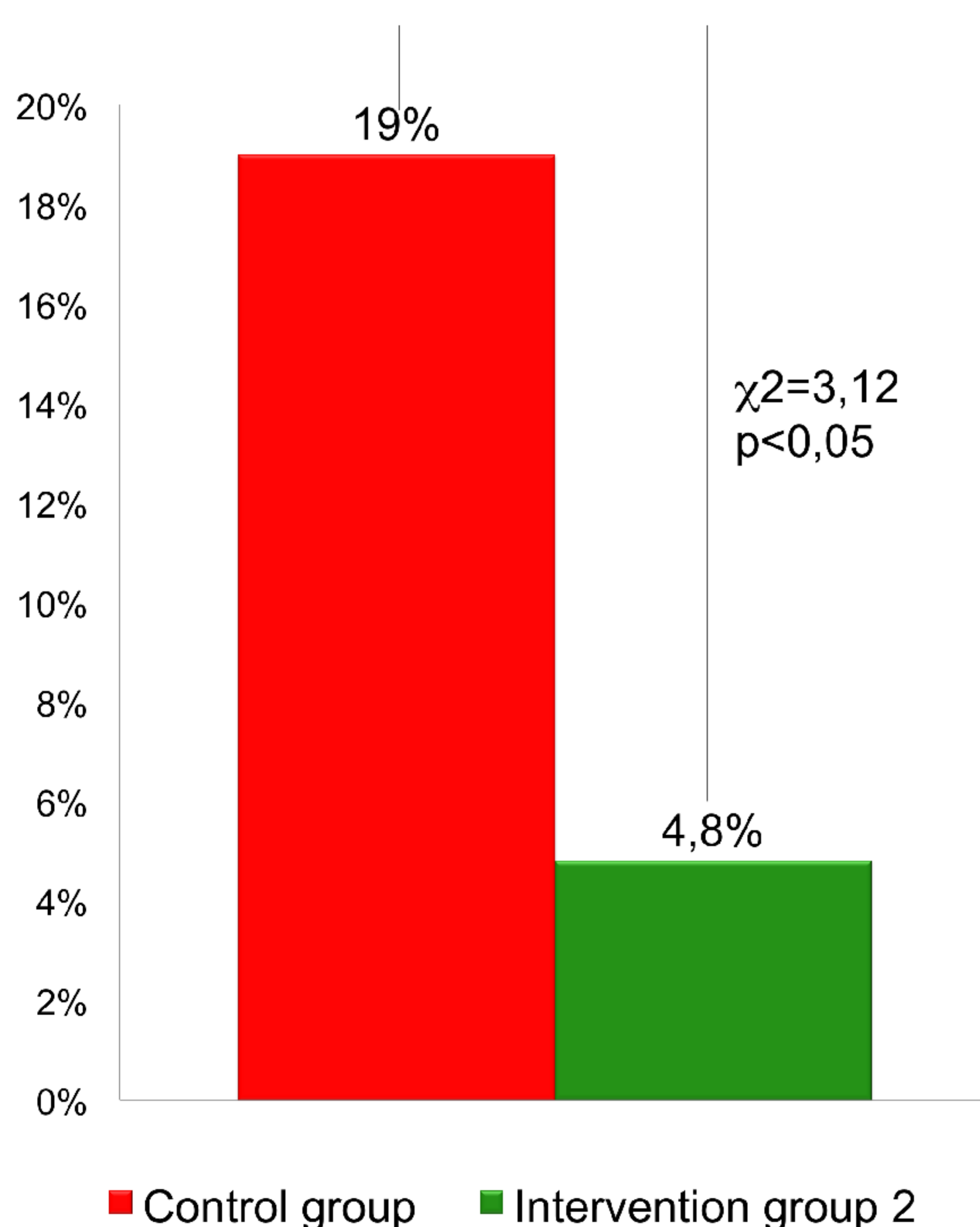
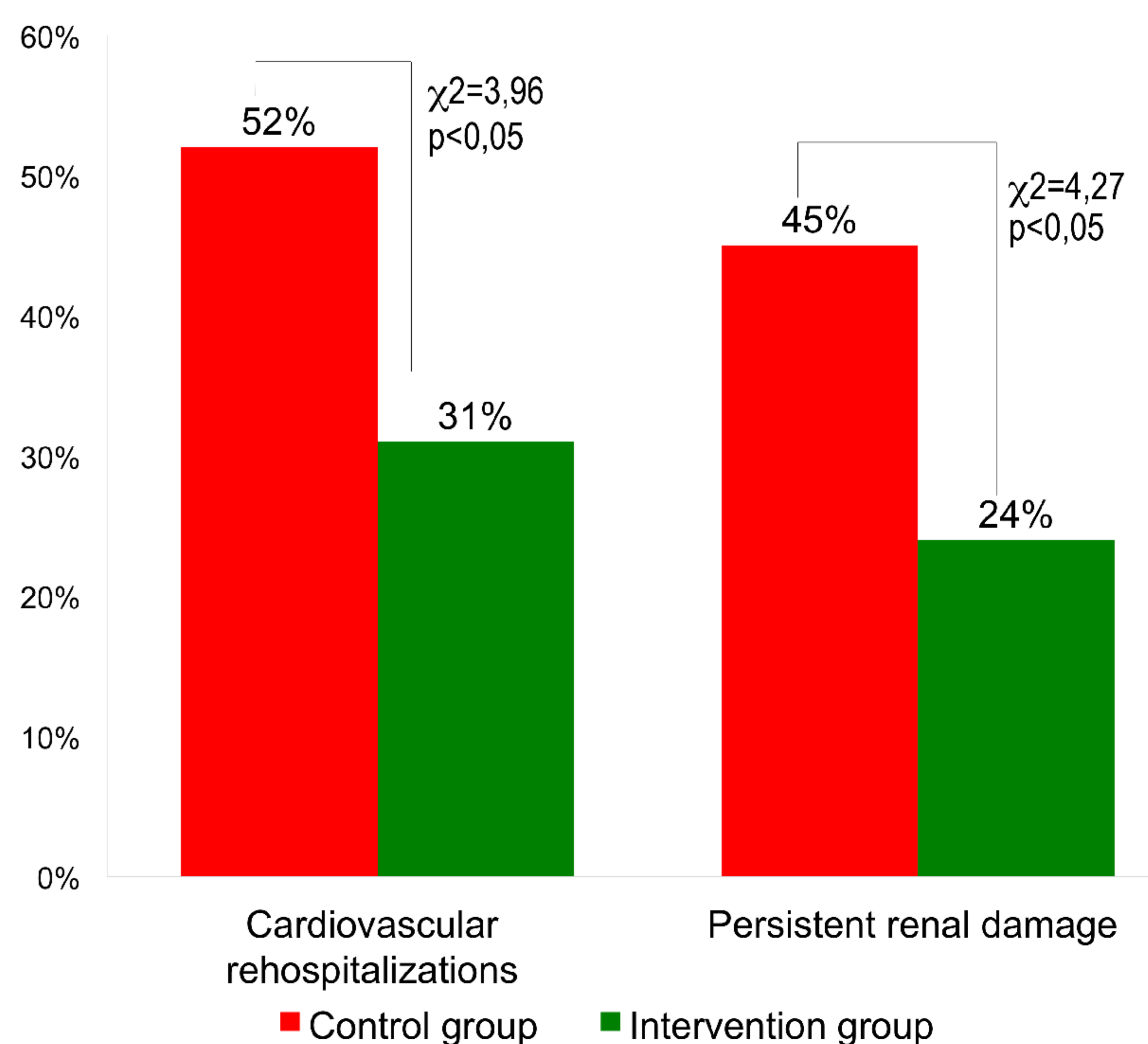


Figure 2. Adverse Clinical Events at 6-month



## Conclusions

- ✓ High-dose rosuvastatin significantly reduced the risk of CI-AKI in patients with NSTEMI-ACS and delayed PCI and improved short-term clinical outcome.

Disclosure: none