PROTECTIVE EFFECTS OF ANISODAMINE ON CONTRAST INDUCED NEPHROPATHY IN PATIENTS WITH ST SEGMENT ELEVATION MYOCARDIAL INFARCTION UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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Objective To investigate anisodamine for the prevention of Contrast Induced Nephropathy (CIN) in patients with ST segment elevation myocardial infarction (STEMI) undergoing primary PCI.

Methods Consecutive patients undergoing primary PCI were randomly assigned to one of two groups: (1) patients in anisodamine group (ANI group) were assigned to receive anisodamine (3–4 ug/kg/min intravenous infusion of anisodamine within 30 min before primary PCI), (2) control group (CON group) to isotonic saline (0.9%) with the same volume. All patients were hydrated with intravenous isotonic saline (0.9%) for 12 h after PCI. The Serum creatinine (SCr) concentrations, estimated glomerular filtration rate (eGFR) and incidence of CIN were measured and compared at admission, 24, 48 and 72 h after PCI between the two groups.

Results A total of 126 consecutive STEMI patients were randomly assigned to receive anisodamine (n=60) or placebo (control, n=66) from admission to 24 h after PCI. The renal function of all patients after PCI underwent a course from injury to recovery. The incidence of CIN was 5.0%, 8.3%, and 6.7% at hour 24, 48 and 72 respectively after primary PCI in ANI group, while in CON group it was 16.7%, 22.7%, and 19.7% respectively. The incidence of CIN in ANI group was lower than that in CON group within 72 h after PCI (all p<0.05). These results indicate that intravenous infusion of anisodamine before and after primary PCI may reduce the occurrence of CIN in STEMI patients undergoing primary PCI, and without serious side effects.
Conclusions Intravenous infusion of anisodamine prior to primary PCI may prevent the incidence of CIN in STEMI patients.