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PROTECTION OF N-ACETYLCYSTEINE FOR PATIENTS WITH CONTRAST INDUCED NEPHROPATHY AFTER PERCUTANEOUS CORONARY INTERVENTION TREATMENT

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Objectives This paper aims to explore whether there is a preventive and protective effect of N-acetylcysteine for patients with contrast induced nephropathy after percutaneous coronary intervention treatment.

Methods We divided the 230 patients, who have undergone elective coronary angiography or intervention on cardiovascular in the cath lab during the period of March 2010 to December 2010, into control group and NAC group. The control group which received the intravenous infusion at rate 3 ml/kg h before Coronary angiography and rate 1 ml/kg h for 6 h in surgery and after coronary angiography of 0.9% sodium chloride solution (n=114). On the basis of normal hydration, the NAC group will be given oral NAC 600 mg 1 h before the coronary angiography one time and oral NAC 600 mg 1 day and 2 days after coronary angiography twice a day. All the patients were using non-ionic permeability contrast agent iopamidol 370. We research the question by contrasting the following statistics between the two groups before using contrast medium and 24 h, 48 h after using contrast medium, which are serum creatinine (SCR) level, endogenous creatinine clearance rate (CRCL), estimated glomerular filtration rate (GFR), blood urea nitrogen (BUN), serum retinol binding protein (RBP) and the incidence of CIN.

Results Before using contrast medium, there are no significant differences between the two groups, such as age, sex, weight, rate of cases of myocardial infarction, high blood pressure cases, the ratio of cases of diabetes ratio, ratio of cases of hyperlipidaemia cases of cerebral vascular ratio, blood lipids, Scr and Ccr, GFR, BUN, RBP and other parameters. No significant differences between the amounts of contrast agent in the two groups of patients in surgery. No significant difference between the amounts of fluid infused the same day and 1 day, 2 days later of using contrast medium. When applying the contrast agent 24 h and 48 h after the contrast medium, the NAC group of renal function (Scr and Ccr, GFR, BUN and, RBP) was significantly better than control group. There are six cases (5%) of CIN in the NAC group, while there are 12 cases (12%) in the control group. The incidence of CIN between the two groups is statistically significant ($p<0.05$).

Conclusions N-acetylcysteine has a certain preventive and protective effect with contrast induced nephropathy after percutaneous coronary intervention treatment.