عنوان مقاله:

Allopurinol prophylactic therapy and the prevention of contrast-induced nephropathy in high-risk patients undergoing coronary angiography: A prospective randomized controlled trial

محل انتشار:

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نویسندگان:

Leili Iranirad - *Assistant Professor, Department of Cardiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Mohammad Saleh Sadeghi - *Student Research Committee, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Ahmadreza Bagheri - *Assistant Professor, Department of Cardiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Kobra Doostali - *Assistant Professor, Department of Cardiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Samieh Norouzi - *Assistant Professor, Department of Cardiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Seyed Fakhreddin Hejazi - *Assistant Professor, Department of Cardiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Hossein Saghafi - *Associate Professor, Department of Internal Medicine, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Sakineh Roshani-Mobaraki - *Nursing Research Center AND School of Medicine, Qom University of Medical Sciences, Qom, Iran*

خلاصه مقاله:

BACKGROUND: Contrast-induced nephropathy (CIN) is considered to be a possibly severe complication of radiography and thus, remains to be the main cause of acute kidney injury (AKI) for inpatients. A clinical trial was executed to measure the preventive effect of allopurinol against CIN in high-risk patients undertaking coronary angiography. METHODS: Through randomized controlled trial, ۱۴۰ patients with at minimum two risk factors of CIN, undertaking coronary angiography, were randomly allocated to the allopurinol (n = ۷۰) or control group (n = ۷۰). Those in the allopurinol group received allopurinol (۳۰۰ mg) a day before their coronary angiography and intravenous hydration for ۱۲ hours before and after their procedure, while members of the control group only received intravenous hydration. Serum creatinine (SCr), blood urea nitrogen (BUN) and uric acid were measured before and ۴۸ hours after the procedure. CIN was defined by a ۲۵% increase in SCr or the concentration of > ۰.۵ mg/dl, ۴۸ hours after coronary

angiography. RESULTS: CIN was observed in ۸ (۱۱.۴%) patients in the allopurinol group and ۱۱ (۱۵.۷%) patients in the control group. There was no significant difference in the incidence of CIN between the two groups at ۴۸ hours after coronary angiography (P = ۰.۴۵۹). In the allopurinol group, the median SCr concentration decreased non-significantly from ۱.۱۶ mg/dl to ۱.۱۳ mg/dl, ۴۸ hours after coronary angiography (P = ۰.۱۸۹). In the control group, the median SCr concentration increased significantly from ۱.۱۱ mg/dl to ۱.۲ mg/dl, ۴۸ hours after coronary angiography (P < ۰.۰۰۱). CONCLUSION: Allopurinol presents no considerable effectiveness over the hydration protocol for development of CIN in high-risk patients.

کلمات کلیدی:
Contrast Media, Allopurinol, Coronary Angiography