

Comment on Cisplatin-Induced Renal Impairment

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Dear editor

With great interest, we have recently read the published article by Beladi Mousavi et al. entitled “The protective effect of hydration with Isotonic Saline, KCl and MgSO₄ on Cisplatin nephrotoxicity” in your most valuable journal (1).

The author evaluated the possible effect of hydration with isotonic saline, KCl and MgSO₄ on prevention of cisplatin nephrotoxicity among patients with various malignancies who received cisplatin at a dosage of at least 50 mg/m² combined with other chemotherapy agents. According to the results of the study, the prevalence of cisplatin-induced renal impairment has decreased and hydration with isotonic saline has a protective effect against cisplatin nephrotoxicity (1).

Cisplatin is a potent antineoplastic agent which is currently used in the treatment of broad spectrum of malignancies. However, the use of cisplatin is limited because of cisplatin nephrotoxicity which can be progressive in a significant percent of patients (2,3).

The most important clinical manifestation of cisplatin nephrotoxicity is acute and chronic renal impairment which can be associated with significant morbidity and mortality among these patients (4-10).

Hypomagnesaemia, hypokalemia, salt wasting, Falconry syndrome and thrombotic microangiopathy with features of the hemolytic-uremic syndrome or thrombotic thrombocytopenic purpura are other manifestations of cisplatin nephrotoxicity which have also occurred in a significant percent of cases (11).

Therefore, measures for prevention of cisplatin-induced renal impairment must be used in all of the patients who are candidates for cisplatin administration (11,12).

The results of Beladi Mousavi et al. are interesting. According to the results of the study, the prevalence of acute renal failure resulting from this drug among patients, who were well hydrated with isotonic saline before and after the cisplatin injection, is 6.6 percent which is significantly less than the reported prevalence of cisplatin nephrotoxicity among the patients who are not hydrated (1). However, the results of the study are limited due to short duration and small number of patients enrolled in the study. In addition, the study didn't have a control group and; therefore, in order to gain a better evaluation of preventive effect of isotonic saline, a multicenter clinical trial with long duration, large number

of patients and control groups is required.

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