

Losartan risk for female in cisplatin-induced nephrotoxicity

Sir,

Blood pressure alteration and angiotensin receptor blocker treatment may influence cisplatin-induced nephrotoxicity. Komaki *et al.*^[1] in their cohort study concluded that "Lower blood pressure and the use of renin-angiotensin system inhibitors were associated with the incidence of cisplatin nephrotoxicity" while Liu *et al.*^[2] in their study mentioned that "Angiotensin-converting enzyme inhibitor/angiotensin receptor blocker usage and administration of a single application of cisplatin were independent risk factors for cisplatin-induced acute kidney injury in the elderly."

Losartan, an angiotensin II Type 1 receptor antagonist is an antihypertensive drug which is also produced antioxidant effects. According to laboratory findings, one of the benefits of losartan is the prevention of cisplatin-induced nephrotoxicity,^[3,4] but, the role of gender in the effectiveness of this drug is less pronounced while the cisplatin-induced nephrotoxicity is gender related.^[5] The *in vivo* studies indicated that angiotensin II Type 1 receptor antagonist protected the kidney against cisplatin-induced nephrotoxicity in male gender; however, this protective role was failed in female gender.^[5] The unpublished data in our laboratory, as well as our previous findings,^[5] showed that losartan not only does not have a positive effect on the prevention of cisplatin-induced nephrotoxicity but also it does increase the kidney damage. The mechanism is not fully understood and needs to be defined.

Now, there is a clinical comment or suggestion. With the widespread use of angiotensin receptor blockers in female hypertensive patients; however, some of them have cancer at the same time, and they are candidate for cisplatin therapy. Therefore to prevent/to decrease the cisplatin-induced nephrotoxicity, discontinuation of angiotensin receptor blockers before cisplatin therapy in female might be recommended. In other nephrotoxic agents such as contrast, angiotensin receptor blockers have been known as an agent that increase nephrotoxicity, and in these situations, discontinuation of angiotensin receptor blockers 24–48 h before contrast administration is recommended.^[1,6] As a conclusion, it seems that in the condition of losartan and cisplatin treatments simultaneously, females are more at risk.

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Conflicts of interest

There are no conflicts of interest.

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