Review of: "Scintigraphic and histopathologic evaluation of the protective effect of L-carnitine on the development of radiation-induced kidney damage in infant rats"

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Potential competing interests: No potential competing interests to declare.

The research is related to radiation induced renal toxicity and possible protective role of L-Carnitine treatment in infant rats. The authors have been applied 8 Gy one dose of radiation to area of the left kidney. L-carnitine (300 mg/kg) i.p. have been given to infant rats 30 minutes before the radiation. After third months, the scintigrapy was used for Tc99m DMSA static kidney imaging fort the evalutaion of the renal toxicity. The authors have been found the damage related changes induced by radiation treatment by using sintigrapy and histopathologic examintion for the renal tissue. In this study, degree of glomerular damage and tubular degeneration decreased when L-Carnitine was administered before RT.

In the literature one 3-month adult related animal study results almost have same as this study scintigraphic and histopathological findings of this experimental study (Caloglu M, 2009). This study does not give us any new data or mechanimsm for possible protective effect of L-carnitine on radiaton induced damage in renal tissue. In this study only one dose of L-carnitine has been used fort he preventive effect of radiation induced tissue damage in infants of the rats. This study have some limitations and does not give any data about the possible protective mechanism of L-carnitine in infant rats. So that this study results can not acceptable for the publication.

Caloglu M, Yurut-Caloglu V, Durmus-Altun G, Oz-Puyan F, Ustun F, Cosar-Alas R, Saynak M, Parlar S, Turan FN, Uzal C. Histopathological and scintigraphic comparisons of the protective effects of L-carnitine and amifostine against radiation-induced late renal toxicity in rats. Clin Exp Pharmacol Physiol. 2009 May;36(5-6):523-30. doi: 10.1111/j.1440-1681.2008.05103.x. E