

URINARY ALPHA-GLUTATHIONE S-TRANSFERASE LEVELS (GST) BEFORE AND AFTER RADIOCONTRAST EXPOSURE: EFFECT OF AMLODIPINE ADMINISTRATION

M. Arici, B. Altun, Y. Erdem, U. Yasavul, Ç. Turgan, S. Çağlar, S. Kirazli
Hacettepe University School of Medicine Ankara, TURKEY

Glutathione transferases demonstrate specific distribution in human kidney, with α GST being present only in the proximal tubular system and its urinary levels could be used for diagnostic purposes in various kidney diseases with tubular involvement. In this study we have examined urinary levels of α GST before and after radiocontrast exposure in 24 patients with normal renal function (mean age 54 ± 10 , 15 M, 9 F) undergoing coronary angiography that were randomised to either placebo (N = 14) or Amlodipine (n=10) starting 14 days prior to coronary angiography. In both groups data were evaluated with analysis of variance for repeated measures and expressed as mean \pm standard deviation. Data are shown in table. No significant change was observed between pre-angiography and 24th hour and 7th day post-angiography urinary volumes between groups. Scrc and 24-hour U α GST levels were increased significantly in 24 hours following contrast exposure ($p < 0.017$ and $p < 0.001$, respectively) in both groups but no significant difference was observed in Amlodipine versus placebo group in regard to U α GST or Scrc levels.

	Amlodipine Group (n=10)			Placebo Group (n=14)		
	Basal	24th hour	7th day	Basal	24th hour	7th day
Scrc	0.93 \pm	1.10 \pm	1.05 \pm	0.92 \pm	1.07 \pm	0.86 \pm
(mg/dl)	0.25	0.34	0.34	0.16	0.34	0.20
U α GST	2.16 \pm	14.38 \pm	1.97 \pm	1.49 \pm	9.24 \pm	0.97 \pm
(μ g/L)	1.97	20.08	1.94	2.20	18.52	0.53

In conclusion, after radiocontrast exposure U α GST levels were found to increase significantly, even in patients that exhibited no change in Scrc. As being a predictor of tubular insult, it may sensitively indicate a reversible tubular dysfunction following exposure to contrast media. A 14-day course of Amlodipine administration prior to radiocontrast exposure seems to be ineffective in preventing the contrast induced tubular insult.

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