

## Zingiberofficinale Potential Effect on Nephtrin mRNA Expression in Cisplatin Induced Nephrotoxicity

**Authors :** Nadia A. Mohamed, Mehreva M. Abdel-Moniem

**Abstract :** Zingiber officinale (ginger) has been cultivated for medicinal purposes due to their various properties both in vitro and in vivo, so we designed to evaluate the ginger's potential effect on nephtrin mRNA expression in cisplatin-induced nephrotoxic rats. Method: Forty male albino rats were divided into group I was injected (IP) with one ml saline, group II(cisplatin) injected (IP) with a single dose of 12 mg/kg cisplatin, group III (ginger) received (PO) 310 mg/kg for 30 successive days, and group IV(cisplatin and ginger) rats received ginger extract (310 mg/kg) daily for 20 successive days (PO), and then on day 20 of ginger extract administration each rat was injected(IP) with a single dose of 12 mg/kg cisplatin. The blood was sampled to assess urea, creatinine (SC), while the levels of malondialdehyde (MDA), nitric oxide (NO) and paraoxonase (PON1) were measured in kidney tissue homogenate. Expression of urinary nephtrin gene (nephtrin mRNA) was detected using qRT-PCR. Results: Treatment with ginger significantly decreased the levels of kidney function parameters as well as MDA and NO elevated by cisplatin injection, while PON1 was significantly reduced in the cisplatin group. However, the protection of male rats with ginger significantly increased the levels of nephtrin gene expression and PON1 compared with the cisplatin-treated group. Our results generated a proposal on the ameliorating effect of ginger on nephtrin mRNA gene expression reduction in cisplatin-induced nephrotoxicity.

**Keywords :** nephtrin mRNA, ginger, cisplatin, nephrotoxicity

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