

## Effect of *Rosa Damascena* extracts on pentylenetetrazole-induced seizures in mice

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### Abstract

**Introduction:** Analgesic, anti-inflammatory and hypnotic effects of *Rosa damascena* has been widely investigated. In the present study the effects of aqueous, ethanolic and chloroformic extracts of *Rosa damascena* on PTZ-induced seizures were investigated in mice.

**Methods:** The animals were divided into following groups: (1) Saline, (2) Diazepam, (3-5) Aqueous extract (Aqu. Ext; 100, 500 and 1000 mg/ kg), (6-8) Ethanolic extract (Eth. Ext; 100, 500 and 1000 mg/ kg) and (9-11) Chloroformic extract (Cho. Ext; 100, 500 and 1000 mg/kg). The extracts, saline or diazepam were injected intraperitoneally 30 minutes before PTZ injection. Latency to the first minimal clonic seizure (MCS) and generalized tonic-clonic seizures (GTCS) and the percent of mortality was recorded.

**Results:** A significant increase in both MCS and GTCS latencies was observed in all 3 Aqu. Ext groups in comparison with Saline group ( $p < 0.05$ ,  $p < 0.01$  and  $p < 0.001$ , respectively). The MCS latency in Eth. Ext 1000 and GTCS latencies in both Eth. Ext 500 and 1000 groups were higher than Saline group ( $p < 0.05$  and  $p < 0.001$ ). There was no significant difference in MCS and GTCS latencies between chloroformic groups in comparison with Saline group. No significant differences were seen in mortality rate following PTZ administration between different extract treated animals in comparison with control group.

**Conclusion:** The results of present study showed that *Rosa damascena* has anticonvulsant activity in PTZ- induced seizures model in mice but the exact mechanism(s) of this effect should be clarified in further studies.

**Key words:** *Rosa damascena*, Pentylenetetrazole, Seizures, Mice