



Effects of *Berberis vulgaris* fractions on PTZ Induced seizure in male rats

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Background and objectives: *Berberis vulgaris* L (Berberidaceae) is a medicinal plant that is distributed in different parts of Iran; it is grown as a wild or cultivated plant. It has different pharmacological activities such as antioxidant, anti-inflammatory, anti-arrhythmic, sedative and anti-malaria effects. In this study, the anti-seizure activity of different fractions of this plant was evaluated. **Methods:** Seventy two rats were randomly divided in to nine groups (n=8 in each group). (1): negative control group (normal saline 10mL/kg), (2): positive control group (sodium valproate 1 mg/kg), (3, 4, 5): hydroalcoholic extract-treated groups (100, 200, 400 mg/kg), (6, 7): methanol fraction-treated groups (100 and 200 mg/kg) and (8, 9): chloroform fraction-treated group (100 and 200 mg/kg). Thirty minute after peritoneal injection of different doses of extract, fractions, saline and gavage of sodium valproate, PTZ (45 mg/kg) was injected and they were immediately transferred to a special cage, and the seizure parameters were evaluated for 30 min. **Result:** The injection of different doses of hydroalcoholic extract and different fractions had a dose-dependent effect on prolongation of latency to the onset of seizures. The effective dose was 400 mg/kg of hydroalcoholic extract and 200 mg/kg of methanol fraction. They decreased the rate of mortality and the number of suddenly seizures jumping significantly. **Conclusion:** The present study demonstrated that the hydroalcoholic extract and methanol fraction of *B. vulgaris* showed anticonvulsant activity in PTZ-induced seizures in mice. Therefore, this plant may be more useful in petit mal epilepsy.

Keywords: *Berberis vulgaris*, anti-seizures effects, pentylenetetrazole