

عنوان مقاله:

Potentiating effects of Perovskia abrotanoides on pentobarbital-induced sleep

محل انتشار:

مجله گیاهان دارویی ابن سینا، دوره 7، شماره 3 (سال: 1396)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

Objective: Sleeplessness is the most common sleep disorder. In this study the hypnotic effect of the hydro-alcoholic extract (HAE) of *Perovskia abrotanoides* and its water fraction (WF), ethyl acetate fraction (EAF) and n-butanol fraction (NBF) were studied in mice. **Materials and Methods:** The test compounds were administered intraperitoneally to mice 30 min before the administration of sodium pentobarbital (30 mg/kg.). Moreover, the influence of flumazenil on the hypnotic effect of the extracts was evaluated. Besides, 30 min after administration of HAE, motor coordination (rota-rod test) was assessed. Additionally, LD50 for HAE was determined and the possible neurotoxicity of the extract was tested in neural PC12 cells. **Results:** The HAE and NBF decreased the latency of sleep ($p < 0.05$), and significantly increased the duration of sleep ($p < 0.05$) induced by pentobarbital. These effects of *P. abrotanoides* were reversed by flumazenil. HAE did not affect the animals' performance on the rota-rod test. The LD50 value for HAE was found to be 4.8 g/kg. HAE and its fractions did not show neurotoxic effects in cultured PC12 cell line. **Conclusion:** The results showed that *P. abrotanoides* significantly potentiated pentobarbital hypnosis without toxic effect. Probably, its effects are related to its non-polar constituents.

کلمات کلیدی:

Perovskia abrotanoides, Diazepam, Sleep, PC12

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