Original Paper

Effect of hydro alcoholic extract of Plantago major L. on pentilentetrazol-induced seizures in male mice

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Abstract

Background and Objective: Epilepsy is a common neurological disorder. Plantago major (P.major) is used in traditional medicine due to flavonoids and vitamin C and antioxidant properties. This study was done to evaluate the hydro alcoholic extract of Plantago major L. on pentilentetrazol-induced seizures in male mice.

Methods: In this experimental study, 50 NMRI male mice randomly allocated into control and four experimental groups. Seizures in animals induced by 60 mg/kg/bw of pentilentetrazol (PTZ), interperitoneally. Animals in experimental groups were received 5, 10, 25 and 50 mg/kg/bw of hydro alcoholic extract of Plantago major L. 30 min before each PTZ injection. The animals in control group were received saline, interperitoneally. After treatment, the behavior of animals during 20 minutes and mortality rate were recorded.

Results: Seizure threshold of animals significantly increased in experimental groups which were received 50, 25, 10 mg/kg/bw of P.major extract in comparision with controls (P<0.05). Mortality rate of animals significantly reduced in experimental groups which were received 50, 25, 10 mg/kg/bw of P.major extract in comparision with controls (P<0.05).

Conclusion: The hydro-alcoholic extract of Plantago major L. reduces seizure threshold in pentilentetrazol-induced seizures mice.

Keywords: Plantago major L, Pentylentetrazole, Seizure threshold, Mouse

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