

Poster presentation

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Intracerebroventricular administration of Pasipay, the hydroalcoholic extract of *Passiflora incarnata*, suppresses epileptic seizures in rats

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Background

Passion flower (*Passiflora incarnata*) is used in traditional medicine of Europe and South America to treat anxiety, insomnia and seizure; its hydroalcoholic extract, Pasipay has been established in treating the physical symptoms of opioid withdrawal in human, anxiety disorders and ADHD [1-3]. Recently, it has shown anticonvulsant effects in mice [4].

Materials and methods

Adult male rats were cannulated into intracerebroventricular (i.c.v). The anticonvulsant effects of rutin were investigated using the pentylenetetrazole (PTZ)-induced seizure model. The animals were placed individually in plastic boxes and observed immediately after PTZ injection for a period of 30 min. Pasipay, diazepam and normal saline were injected i.c.v. at the doses (0.125, 0.25, 0.55, 1.1 mg/kg), (10 ml/kg) and (5 mg/kg) respectively 30 minutes before PTZ (90 mg/kg, i.p). The latency to minimal clonic seizure (MCS), generalized tonic-clonic seizure (GTCS) and percent of mortality protection were recorded, as well as the percentages of protection against the mortality.

Also, for investigating the mechanism of Pasipay, flumazenil (5 mg/kg) and naloxone (10 mg/kg) were also injected 5 minutes before rutin.

Results

In this study, in PTZ-induced epileptic seizures, the i.c.v. injection of Pasipay at doses of 1.1 mg/kg prolonged the time MCS and reduced the GTCS latency. The protective effect of rutin against lethality was 30%. In this study, flumazenil (5 mg/kg, i.c.v.) reversed the anticonvulsant activity of rutin. Also, pretreatment with naloxone (10 mg/kg, i.c.v.) antagonized the prolongation of tonic-clonic seizure latency as well as the reduction in seizure duration induced by Pasipay (200 mg/kg, i.c.v.).

Conclusions

These results indicate that Pasipay could be useful for treatment absence seizure and these effects may be related to effect of it on GABAergic and opioid systems. More studies are needed in order to investigate its exact mechanism.

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