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SEDATIVE AND HYPNOTIC ACTIVITY OF Passiflora Incarnata L.

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ABSTRACT: Ethanolic extract of leaves of Passiflora incarnata.L (Passifloraceae) (200 mg/kg, p.o) exhibited significant Hypnotic activity (3.5 mg/kg i.p) being comparable to that of lorazepam (0.5 mg/kg) respectively.
Keywords: Passiflora incarnata; Hypnotic activity.

INTRODUCTION

Passiflora incarnata L. (Passifloraceae) leaves were collected from a cultivated source Udagamandalam (Ooty), and identified with the help of Regional flora (Gamble J.S.,1967). Specimen was further confirmed with reference to Herbarium sheets available in the Rapinat Herbarium, St.Joseph College, Thiruchirappalli.

Uses in traditional medicine and reported activities

Aerial parts of P.incarnata have been used as sedative, anxiolytic, antispasmodic, analgeric, anticonvulsant, and wormicidal (James EF.,1996, Bergner P.,1995, The Wealth of India., 1966, Rawat P.S.,1987) and also in whooping cough, bronchitis, asthma, and other tough coughs (Taylor L.,1996, Raintree Nutrition.,1999, British Herbal pharmacopoia.,1983). The ethanolic extracts of the leaves at 200 mg/kg (Dhavan K et al.,2001) showed significant hypnotic activity in mice.

Previously isolated classes of constituents

Flavonoids(Gavasheli NM et al.,1974, Lutomski J et al.,1981) glycoside(Rahman K et al .,1997), alkaloids(Poethke VW et al.,1970), cyanogenic glycosides(Spencer KCet al.,1984), carbohydratesGavasheli NM et al.,1975), aminoacid(Gavasheli NM et al., 1974), benzopyrones(Aoyagi N et al .,1974), and volatile constituents(Buchbauer G et al .,1992). Tested material Ethanol Soxhlet extracts (yield: 4.10% on dried wt :), obtained and characterized.

Animals

Swiss mice of either sex, weighing (20-25 g) procured from the disease free from Periyar College of Pharmaceutical Sciences, Thiruchirappalli, TamilNadu, India, were allowed standard laboratory feed and water.

MATERIALS AND METHOD

Barbituric narcosis(P.B.Dewas et al.,1953) was used to evaluate the sedative and hypnotic activity. Swiss albino mice (20-25 g) were divided into three groups each of consisting of six animals. Group 2 received test sample 200 mg/kg i.p for 30 min before a hypnotic dose of (35 mg/kg i.p). The parameter quantified was the sleeping time to abolition of the righting reflex when the mice were placed on their back. One group received standard lorazepam 0.5 mg/kg and is group received vehicle normal saline 5 ml/kg i.p

RESULT AND DISCUSSION

Barbituric narcosis(S.S Kadam et al.,2003) was employed to determine the sedative and hypnotic activity of compound and results are shown in Table-1. Test compound induced a significant enhauncing effect on pentobarbital induced narcosis with an increase in sleeping time when compared to the standard drug Lorazepam. Compound produced less significant effect with a slight increase in sleeping time. Test sample had a depressive central effect and hypnotic effect.

Table-1: Effect of extract on Pentobarbitone induced sleeping.

Component	Duration of sleeping min	%increase in sleeping
Control	69.8 ± 5.64	
Test sample	88.14 ± 10.08	26.27
Standard	201.50 ± 22.90	188.68

P<0.001, P Vs Standard
Control: normal Saline 5 ml/kg
Standard: Lorazepam 0.5 mg/kg

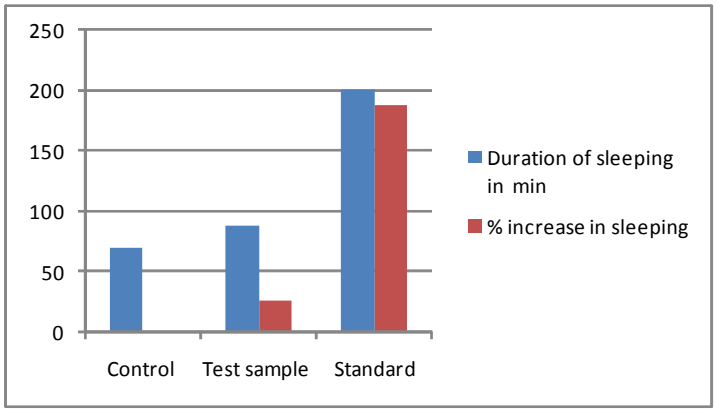

Fig. 1 : Effect of extract on Pentobarbitone induced sleeping.

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