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## Evaluation of effect of alcoholic extract of *Tinospora cardifolia* on learning and memory in alprazolam induced amnesia in albino mice

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**Background:** Learning is defined as the acquisition of information and skills and subsequent retention of that information is called memory. Learning and memory can be a psychological process as well as a change in synaptic neural connectivity. Memory is the most common cognitive ability lost with dementia.

**Aim:** The study was undertaken to evaluate the learning and memory effect of alcoholic extract of *Tinospora cardifolia* in alprazolam induced amnesic mice.

**Materials & Methods:** The study was carried out on albino mice, divided into 4 groups of 6 animals each (3-4 months of age, weight 25-30 g). Amnesia was induced by administering alprazolam (2 mg/kg body wt for 14 days) in all 4 groups for 14 days from 1st to 14th day. Group-1 would be given memory impairing dose of alprazolam (2 mg/kg/p.o.) alone for 14 days. Group-2 would be given piracetam (400 mg/kg p.o.) from 8<sup>th</sup> to 15<sup>th</sup> day. Group-3 would be given alcoholic extract of *Tinospora cordifolia* 140 mg/kg, p.o. from 1<sup>st</sup> to 15<sup>th</sup> day. Group-4 would be given alcoholic extract of *Tinospora cordifolia* 280 mg/kg, p.o. from 1st to 15th day. The learning and memory of the animals was assessed by employing elevated plus maze [Transfer Latency (TL)] and step-down type passive avoidance model [Step Down Latency (SDL)]. The measured parameters TL & SDL were compared with standard drug piracetam.

**Results:** In both EPM & SDA model results were comparable with the standard.

**Conclusion:** *Tinospora cardifolia*, Indian medicinal plant useful for treatment of various ailments like diabetes, rheumatoid arthritis, gout, viral hepatitis, gonorrhoea, syphilis and anemia can also be a useful alternative for treating dementia and associated diseases like Alzheimer's disease.

### Biography

Shashikala G has completed her MBBS from JJM Medical College, Davngere, Rajiv Gandhi University of Health Sciences, Bangalore. Currently, she is pursuing Postgraduate in MD Pharmacology from the same academic institution and she is involved in various curricular activities.

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