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Memory-enhancing activity of *Anacyclus pyrethrum* in albino Wistar rats

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Abstract

Objective

To explore the potential effect of ethanolic extract of *Anacyclus pyrethrum* (*A. pyrethrum*) in memory dysfunction.

Methods

Memory impairment was produced by administration of scopolamine (1mg/kg *i. p*) in rats. Passive avoidance paradigms, elevated plus maze and social learning task was used to assess learning and memory.

Results

A. pyrethrum extract treated group decreased transfer latency in elevated plus maze model paradigm which is an indicative of cognition improvement. In case of passive avoidance paradigm extract treated group exhibited prounced effect in reversal of scopolamine induced amnesia which was revealed by increase in step down latency. Social learning task also revealed the memory enhancing activity of *A. pyrethrum* extract.

Conclusion

Ethanolic extract of *A. pyrethrum* has been demonstrated to improve cognitive processes by enhancing memory in different experimental paradigms such as passive avoidance paradigms, elevated plus maze and social learning task when administered orallyBrain cholinesterase level was measured to assess central cholinergic activity. The treatment with drugs, which increase cholinergic neurotransmission, causes an improvement in cognitive deficits. The present study suggest that ethanolic extract of *A. pyrethrum* increased brain cholinesterase level and hence it possess memory enhancing activity in scopolamine induced amnesia model by enhancing central cholinergic neurotransmission.

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