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RESEARCH PAPER

An Apple a Day Keeps Parkinsonism Away

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ABSTRACT : Parkinson's disease is a progressive neurological disorder characterized by tremors, rigidity, shuffling gait and hypokinesia. Deficiency of Dopamine in substantia nigra pars compacta is the main cause of the disease. Bromocriptine can be used as an alternate to levodopa because this drug is a direct agonist of striatal dopamine receptors. Therefore, in the present study Bromocriptine served as a standard drug. The main phytoconstituents of Apple fruit are vitamin B₃, Vitamin B₆, flavanoids and phenolic compounds such as polyphenol oxidase. Niacin is also reported to improve cognitive as well as motor function by stimulating the production of neurotransmitters. Therefore, anti-parkinsonian potential of Apple juice was investigated in the present study. Apple juice (0.5 ml and 1ml/100g p.o.) reduced the severity of tremors evoked by oxotremorine (0.5 mg/kg, i. p.). Apple juice diminished rigidity induced by Reserpine and restored the mobility impaired by Reserpine (5mg/kg, i. p.) in rodents. Apple juice appears to produce its anti-parkinsonian activity mediated via enhanced dopamine and nor-epinephrine synthesis, increased cerebral blood flow through stimulation of NO production, antioxidant activity and neuroprotective action.

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