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Pharmaceutical effect of *Murraya Koenigii* on Alzheimers disease - A review

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Alzheimer's disease (AD) is a disease which is being characterized by signs of major oxidative stress, the loss of cholinergic cells, depletion of Acetylcholine enzyme and the excessive activity of acetylcholinesterase enzyme.In this present review we are trying to investigate the role of the total alkaloidal extract and its predomidant carbazole alkaloid Mahanimbine from *Murraya koenigii* (MKA) leaves on age related oxidative stress, free radical scavenging activity and its effect in cholinergic pathway. The MKA helps to improve the level of protective antioxidants for free radicals scavenging activity such as glutathione peroxidase (GPx), reduced glutathione (GSH), glutathione such as reductase (GRD), superoxide dismutase (SOD) and catalase (CAT) in brain tissues. Interestingly a significant progress can be found with the addition of *Murraya koenigii* leaf extract,in improving the acetylcholine (ACh) level and reducing the acetylcholinesterase (AChE) activity in Alzheimer's diseased mouse brain. On the other hand in several studies it was found that a carbazole alkaloid of *Murraya koenigii* which is known as mahanimbine [3, 5-dimethyl-3-(4- methylpent-3-enyl)-11H-pyrano [5, 6-a] carbazole], can Inhibit AChE activity which was being proved by Ellman's method .A review on AChE inhibitory activity of this carbazole alkaloid has not been reported so far, and this review will help to study this activity of carbazole alkaloid mahanimbine, isolated from *Murraya koenigii* in preventing Alzheimer's disease.

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