

Ipidacrine and Cholinergic Pharmacotherapy: Are we Getting Closer to the Miracle Drug?

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Abstract

One of the major achievements in the modern era of neurophysiology has been the discovery of acetylcholine as the first ever detected and synthesized neurotransmitter. Soon after, the interest of pharmacology and therapeutics has wide opened the gates of research and cholinergic drugs, along with anticholinesterase principles, have been continuously studied and applied in revolutionary, pioneering experimental work. Famous names such as Henry Dale and Otto Loewi contributed essentially. The spectrum of cholinergic deficiencies with clinical importance has meanwhile been enlarged from central nervous system disorders (dementia above all) to periphery (mainly polyneuropathy and myasthenia). The paper will discuss briefly the history of anticholinesterase drugs since the first findings

with the tropical plant of *Physostigma venenosum*, with actual up-to-date and new formulations (such as rivastigmine, donepezil, ipidacrine) that have enriched substantially in the therapeutic armamentarium of a diversity of medical conditions.

Keywords: cholinergic system; anticholinesterase; tacrine; ipidacrine; dementia; polyneuropathy.