Donepezil: As a pharmacological key drug in declining progression of Alzheimer’s disease

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Elderly patients, over 65 years of age, most commonly suffer from dementia due to Alzheimer’s Disease. In 1907, Alois Alzheimer first described this disease. Alzheimer’s disease, is clinically diagnosed, after ruling out other possible causes of dementia which makes it a diagnosis of exclusion. Its etiology is based on certain genetic, neurobiochemical, and other factors. Radiographically, diffuse atrophy of the brain is seen in patients with AD. Donepezil, a cholinesterase inhibitor, increases the level of acetylcholine by reducing its inactivation hence leads to improvement in memory. To evaluate the effectiveness of Donepezil in declining the progression of Alzheimer’s Disease, A review of literature related to the effects of Donepezil in reducing Alzheimer’s Disease progression was conducted on MEDLINE, PSYCH Info, and PUBMED. Commonly used cholinesterase inhibitors, donepezil, galantamine, and rivastigmine help with the symptoms of Alzheimer’s disease, however, in terms of efficacy, there is no clear evidence of difference among them. According to a research in 2015, its suggested to monitor the serum levels of donepezil for improving its effectiveness, and a serum level of at least 50ng/mL is may be the recommended level for donepezil to produce its maximal clinical effect. A systematic review in 2015, revealed that ChEIs are effective for cognition, although their effects for neuropsychiatric symptoms in patients with mild to moderate AD is controversial. In spite of the fact that the side effects of ACEIs are mild, although they can be serious in advanced cases of AD hence require proper monitoring for the serious side effects, particularly, syncope and bradycardia. Cases relevant to the side effects of donepezil reported increased libido, myoclonus, and cervical dystonia. Interestingly, improved gait in patients of AD with mild nature, was reported by a clinical trial. Beneficial effects of donepezil in memory improvement, seen in patients with Alzheimer’s disease, is revealed by literature review of previous researches. We recommend administering donepezil to patients with Alzheimer's disease thereby improving their memory, and quality of life. We hope that future research in this area will help patients with dementia and improving their ADLs.

Biography

Samreen Ahmed has completed her MBBS from Dow Medical College, Pakistan, and she is currently volunteering as a Research Assistant at University of Illinois at Chicago. She has written 3 case reports as a first author that were published in the IJBCP.