

Constipation (advanced pharmacology)

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The commonly used drugs available in the market for the treatment of dementia include: Donepezil (Aricept), Galantamine (Razadyne ER), Memantine (Namenda), Rivastigmine (Exelon). Tacrine which is also an acetylcholinesterase inhibitor and which was used for treating mild to moderate dementia, has been linked to hepatotoxicity in several cases with increased elevations of serum aminotransferases. Owing to the availability of other effective drugs tacrine was withdrawn from use in 2013. Donepezil (Aricept) is generally given to patients diagnosed with mild to moderate dementia. It is given in a low dose initially and later increased to the maximum dose for effectiveness. However, in cases where the individual does not respond to Aricept and the dementia worsens, doctors begin prescription with Namenda which has been approved for the treatment of advanced forms of the disease. In some cases both the drugs are also given in combination. Screening of dementia in a primary care setting initially utilizes a rapid screening tool for memory loss such as the Mini-Cog or Family Questionnaire which are easy and can be administered by nurses or a medical assistant. If these initial tools are indicative of memory loss the patient is then subjected to a second cognitive assessment using tools such as Mini Mental State Examination which also take about 10-15 minutes to administer. Based on the scores the person is referred to a dementia specialist. The pharmacokinetic and pharmacodynamics properties of the four drugs used in dementia are different. Donepezil selectively inhibits acetylcholinesterase with a half-life of 70 h, Galantamine is also a selective inhibitor of acetylcholinesterase but also has a modulating effect on presynaptic nicotinic receptors and has a half-life of 6-8 h. both these drugs

are metabolized by specific cytochrome oxidases in the liver. Rivastigmine is an irreversible inhibitor of both acetyl- and butyrylcholinesterase with a short half-life of 1-2 h. It is metabolized by esterases in the liver and intestine.

Memantine is a low-affinity antagonist of NMDA class of receptors and has a half-life of 70 h. It is mainly eliminated unchanged via the kidneys. The most common adverse effects of acetylcholinesterase are nausea, vomiting, diarrhea, muscle cramps, fatigue, headache, pain, common cold, and urinary incontinence. Rare side effects include bradycardia and sinoatrial and atrioventricular blocks. In case of Memantine, drug hypersensitivity, dizziness, hypertension, constipation and headache are common. The uncommon effects include fungal infections, hallucinations, cardiac failure, vomiting and fatigue. Common effects of drug-drug interactions include gastric irritation and bleeding. The National Institute for Health and Clinical Excellence recommends drugs for dementia based on their efficacy, value for money and the stage of dementia. In addition holistic approaches should be used to determine the severity of a person's dementia and the treatment should be initiated by a physician specializing in dementia.

Reference

Alzheimer's Society (n. d). Drug Treatments for Alzheimer's disease.

Alzheimers. org. Retrieved April 1, 2014, from http://www.alzheimers.org.uk/site/scripts/documents_info.php?documentID=147