

Learning unit: Nootropics, cognitive enhancers

Impact of the learning unit:

Alzheimer's disease (AD) is a common neurologic disease of old age. The aim is to review drugs with procognitive and nootropic effect highlighting the multiple pharmacological mechanisms that are targeted to achieve enhancement of cognitive brain functions and to slow down progression of the dementia. Knowledge of pharmacology of cognition-enhancing drugs (anti-dementia drugs and nootropics) is necessary for a proper use of these drugs in clinical practice.

Important terms

cognition-enhancers

anti-dementia drugs

reversible cholinesterase inhibitors

donepezil

galantamine

rivastigmine

NMDA antagonists

memantine

nootropics ("smart drugs")

piracetam

pyritinol

vinpocetine

vasodilators of cerebral vessels

cinnarizine

pentoxifylline

naftidrofuryl

Learning outcomes

Student knows basic pharmacological profile (mode of action, unwanted effects, indications and contraindications) of cognition-enhancing drugs and nootropics.

Student lists pathological states treated with nootropics and anti-dementia drugs.

Recommended study materials

Rang & Dale's Pharmacology E - Book, Humphrey Rang, 8th edition, 2016

chapter 48: CNS stimulants and psychotomimetic drugs, pages 594-595;

chapter 40: Neurodegenerative diseases, pages 487-491

Study materials in IS aVLFA0822c and aVLFA08222p.

Exam questions

Special pharmacology: Nootropics, cognitive enhancers.

„Essential“ drugs: rivastigmine