

Learning unit: Antidepressants

Impact of the learning unit

Depression, also called major depressive disorder, is a serious and life-threatening mood disorder that causes a persistent feeling of sadness and loss of interest leading to a variety of emotional, behavioural and physical health problems. Worldwide, depressive illness is one of the most common causes of disability and premature death. The monoamine hypothesis of depression predicts that the underlying pathophysiologic basis of depression is a depletion in the levels of serotonin, noradrenaline, and/or dopamine in the central nervous system. Antidepressants elevate the levels of these neurotransmitters in the brain resulting in a cascade of processes leading to alleviation of depressive symptoms. Depression may require long-term maintenance treatment to help prevent a relapse of symptoms. Knowledge of pharmacology of individual antidepressants is necessary for the proper use of these drugs in clinical practice.

Important terms

monoamine reuptake inhibitors

tricyclic antidepressants

amitriptyline

imipramine

dosulepin (dothiepin)

clomipramine

selective serotonin reuptake inhibitors

SSRIs

fluoxetine

citalopram

escitalopram

paroxetine

SNRIs

venlafaxine

duloxetine

monoamine oxidase inhibitors

non-selective irreversible MAOIs

tranylcypromine

MAO-A selective inhibitors

moclobemide

other antidepressants

drugs with mainly noradrenergic activity

reboxetine (NARI)

bupropion (NDRI)

drugs with mainly serotonergic activity

trazodone (NARI)

vortioxetine (SMS)

drugs with mixed and other mode of action

mirtazapine (NASSA)

agomelatine (MASSA)

drugs used in bipolar disorder

lithium

Learning outcomes

Student knows basic pharmacological profile (mode of action, unwanted effects, indications and contraindications) of antidepressants.

Student reviews indications of single groups of antidepressants.

Student is able to select a suitable antidepressant agent with regard to its side/adverse effects.

Recommended study materials

Rang & Dale's Pharmacology, 8th edition, 2016 – chapter 47, Antidepressant drugs, pp. 570-588

Study materials in IS aVLFA0822c and aVLFA08222p.

Exam questions

Special pharmacology: 23. Antidepressants - iMAO+SSRI+NDRI, 24. Antidepressants – tricyclic, NASSA, MASSA, SARI, SNRI, NARI, SMS

„Essential“ drugs: 63. escitalopram, 64. amitriptyline , 65. mirtazapine, 66. lithium