

Title of the learning unit: Drugs affecting hemostasis

Impact of the learning unit:

Gaining knowledge about the possibilities how to pharmacologically interfere with the process of hemostasis, what pharmacotherapeutic targets and the possible side effects for each drug classes expected.

Important terms

anticoagulants

interfering directly with the process of hemocoagulation

heparin and its derivatives

unfractionated heparin (UFH)

low molecular weight heparin (LMWH)

dalteparin

enoxaparin

nadroparin

protamine sulfate

HIT

aPTT

thrombin inhibitors

dabigatran

idarucizumab

direct factor Xa inhibitors

rivaroxaban

apixaban

edoxaban

vitamin K antagonists

warfarin

INR

fibrinolytics / thrombolytics

alteplase

reteplase

tenekteplase

antifibrinolytics

tranexamic acid

aminomethylbenzoic acid

antiplatelet agents

COX inhibitors

ASA

indobufen

drugs increasing the level of cAMP by inhibiting phosphodiesterase

dipyridamole

cilostazol

pentoxifyline

drugs inhibiting the formation of fibrinogen bridges between platelets

by blocking P2Y₁₂ purinergic receptor for ADP

thienopyridines

ticlopidine

clopidogrel

prasugrel

non-thienopyridines

ticagrelor

cangrelor

by blocking glycoprotein IIb / IIIa receptor for fibrinogen

eptifibatide

abciximab

thrombin receptor PAR-1 antagonists

vorapaxar

hemostatics

with vasoconstrictor effect

etamsylate

terlipresin

without vasoconstrictor effect

carboxycellulose

fibrin sealant

bi-component tissue adhesives (fibrinogen + aprotinin with thrombin)

gelatin, gelatin sponge

antianemics

iron

orally - iron salts

injection-iron salts

vitamin B₁₂

folic acid

haemopoietic growth factors

erythropoietin

epoetin

darbepoetin

Learning outcomes

Student knows to name the various drug groups affecting hemostasis.

Student knows the basic pharmacological profile (mechanism of action, side effects, indications and contraindications) of anticoagulants.

Student knows the basic pharmacological profile (mechanism of action, side effects, indications and contraindications) of antiplatelet agents

Student knows the basic pharmacological profile (mechanism of action, side effects, indications and contraindications) of fibrinolytics and antifibrinolytics.

Student knows the basic pharmacological profile (mechanism of action, side effects, indications and contraindications) of hemostatics and antianemics.

Study literature

Rang & Dale's Pharmacology E - Book, Humphrey Rang 8th edition, 2016, chapter 24, str. 293

Study materials to subjects aVLFA0822c and aVLFA0822p.

Exam questions

Special pharmacology: 38. Antiplatelet drugs, 39. Fibrinolytics and antifibrinolytics, 40.

Anticoagulants, 41. Antianemics, hemostatics

“Essential” drugs: 88. warfarin, 89. enoxaparin, 90. clopidogrel, 91. dabigatran, 92. rivaroxaban, 93. alteplase