

CLINICAL PHARMACOLOGY OF ANTIANGINAL DRUGS

A. Actuality:

Ischemic heart disease is the most common heart disease in elderly patients. In the last decades essential progress has been made both in the knowing of the etiopathogenesis of this disease and in its treatment. The accesses of angina represent a state of emergency that requires a quick and efficient jugulation to prevent the development of acute myocardial infarction, a pathological condition with fatal consequences. For these reasons, a thorough knowledge of the pharmacokinetics and pharmacodynamics of antianginal drugs is required.

B. Purpose of training:

Acquiring the ability to apply the principles of clinical pharmacokinetics and pharmacodynamics to the individualization and optimization of the administration of antianginal drugs.

C. Teaching purposes:

The student must have the ability to:

- a) apply the minimum necessary complex of investigations, in order to assess the pharmacodynamic effect of the antianginal drugs;
- b) elucidate the mechanisms of action, the pharmacodynamic and pharmacokinetic particularities of the groups of remedies used in ischemic heart disease;
- c) establish the principles of individualization, dosage of antianginal drugs, depending on the particularities of the disease;
- d) prognosis of possible adverse reactions of the drugs used depending on dosage regimen;
- e) apply contemporary methods of pharmacological correction of possible adverse reactions to antianginal administration;
- f) draw up the personal form (P-medications).

D. Knowledge from the subjects studied previously and those of tangency

Medical-biological disciplines. Cardiac anatomy and features of myocardial vascularization. The role of the sympathetic system in regulating heart function and system hemodynamics. Morphological features of atherosclerosis.

Clinical disciplines. Etiopathogenesis, clinical features of ischemic heart disease. Classification of ischemic heart disease. Electrocardiographic changes characteristic of chronic coronary insufficiency, myocardial infarction.

Pharmacology. Antianginal classification. Mechanisms of action, effects and adverse reactions of antianginals.

E. Questions for self-training:

I. Clinico-pharmacological characteristic of the drugs used in the diseases of the cardiovascular system.

I. The clinico-pharmacological characteristic of the drugs used to modify the tone of the regional and peripheral vessels.

1. Classification of antianginal drugs according to the mechanism of action.
2. The clinical pharmacology of nitrates and molsidomine: the particularities of the mechanism of action and the antianginal effect, the indications and principles of use, the adverse reactions and their prevention, the pharmacokinetics and the particularities of the drug forms.

3. Beta-adrenoblockers used as antianginal: classification, particularities of mechanism of action and antianginal effect, indications and principles of use, adverse reactions and their prevention, pharmacokinetics.
4. Clinical pharmacology of calcium channel blockers, used as antianginals: classification, particularities of mechanism of action and antianginal effect, indications and principles of use, adverse reactions and their prevention, pharmacokinetics.
5. Medications with other mechanisms of action, used as antianginal: potassium channel activators; bradycardizing preparations. Particularities of the mechanism of action, pharmacological effects, indications and principles of use.
6. Coronary vasodilator drugs. The mechanism of action. Pharmacodynamic and pharmacokinetic peculiarities. Administration tactics.
7. Medications with metabolic action (anabolics, anti hypoxant drugs, vitamins, antioxidants), used in the complex treatment of ischemic heart disease. Pharmacological and administration particularities.
8. Particularities of antianginal medication in patients with associated pathology (high blood pressure, cardiac arrhythmias, heart failure, bronchial asthma).
9. The medications used in jugular access of angina, treatment of acute coronary syndrome and acute myocardial infarction: the particularities of action and use.

II. Selection and clinico-pharmacological use of SM in some clinical conditions

- The treatment principles of acute coronary syndrome and acute myocardial infarction.

F. Individual work:

1. Short characterization of the main preparations.

Vertically. Name of the preparation (Romanian).

Horizontally. Synonyms, forms of delivery, mode of administration, doses (therapeutic, maximum), indications, contraindications, adverse reactions.

Propranolol, atenolol, bisoprolol, nebivolol, diltiazem, verapamil, amlodipine, felodipine, nitroglycerin, isosorbide mononitrate, nicorandil, molsidomine, nicardipine, dipyridamol, trimetazidine, isosorbide dinitrate, ivabradine, levocromocalime.

1. Medical prescription exercises.

2. Propranolol, atenolol, bisoprolol, nebivolol, diltiazem, verapamil, amlodipine, felodipine, nitroglycerin, isosorbide mononitrate, nicorandil, molsidomine, nicardipine, dipyridamole, trimetazidine, isosorbide dinitrate, ivabradine levocromocalim.

3. Indicate the medications used in (for):

Angina attacks; prevention of angina attacks; stable angina pectoris; vasospastic angina pectoris; unstable angina; acute myocardial infarction; acute myocardial infarction with algal syndrome, acute myocardial infarction with ventricular arrhythmias, acute myocardial infarction with hypercoagulability, ischemic heart disease with arrhythmias; ischemic heart disease with hypertension; ischemic heart disease in patients with obstructive pulmonary disease; acute coronary syndrome.

4. Tests (Clinical Pharmacology (self-assessment tests). Chisinau, 2000 p. 116;

5. Клиническая Фармакология „ Тесты для самоподготовки ”, Кишинэу, 2014, стр. 39-51.

5. Clinical cases Ghid cazuri clinice. Chisinau, 2017, pp. 66-99;

6. Virtual situations „Îndrumar pentru lucrări de laborator la farmacologie”. Chisinau, 2016, page 178.

7. Selection of antianginal, vasodilatory, cerebral and peripheral drugs according to the criteria of effectiveness, harmlessness, acceptability and cost, for inclusion in the personal form (P drugs).