

## **List of skills for OSCE-1 Discipline “Pharmacology”**

### **BE ABLE TO:**

- Determine the group affiliation of medicines according to modern classifications;
- Provide pharmacological characteristics (including group affiliation of the drug, its mechanism of action, pharmacological effects (main, side), indications and contraindications for use) of drugs, logical associate the mechanism of action with pharmacodynamics, pharmacodynamics with indications, and side effects with contraindications to them application;
- Predict the effects of drug interactions upon their combined administration, drugs and food components, drugs and alcohol;
- Assess the benefit / risk ratio of the use of drugs;
- To make judgments about the possibility of adverse reactions of drugs in order to prevent them;
- To determine the manifestations of possible adverse reactions of drugs, the symptoms of an overdose of potent and toxic drugs, methods of their prevention and treatment principles;
- Create an algorithm for helping patients with acute drug poisoning using antidotes in each case;
- Conduct analysis of pharmacological information in modern directories, scientific and professional periodicals;
- Provide a comparative description of the drugs in terms of efficacy, safety, mechanism of action, indications for use and the like.

### **KNOW:**

- The main ways of pharmacological correction of diseases, dysfunctions of organs and systems;
- The nomenclature and classification of drugs;
- Pharmacological characteristics (group affiliation of the drug, its mechanism of action, pharmacological effects (major, side), indications and contraindications for use) of the main drugs;
- Indications and contraindications for the use of drugs;
- Manifestations of possible adverse reactions of drugs, symptoms of an overdose of potent and toxic drugs, methods for their prevention and treatment principles.

### **A LIST OF EXAM QUESTIONS FOR SUCCESSFUL SOLUTION OF PHARMACOLOGICAL TASKS**

1. M- and N-cholinemimetic agents. Classification. Mechanisms of action. Indications for using. Adverse effects. Treatment of the poisoning by anticholinesterases.
2. M-cholineblockers. Classification. Pharmacodynamics. Indications. Toxic actions. Treatment of atropine poisoning.
3.  $\alpha$ -,  $\beta$ -adrenomimetics. Classification. Pharmacodynamics. Indications. Adverse effects.

4. Drugs, stimulating predominantly  $\beta$ -adrenoreceptors. Classification. Pharmacodynamics. Indications for using. Unfavorable actions.
5.  $\beta$ -adrenoblockers.  $\alpha$ -adrenoblockers. Classification. Pharmacodynamics. Indications for using. Unfavorable actions.
6. NSAIDs – derivatives of salicylic acid. Pharmacodynamics. Unfavorable effects. Using in clinics.
7. Narcotic analgesics. Pharmacodynamics of opioids. Indications. Acute poisoning and its treatment.
8. Neuroleptics. Classification. Pharmacodynamics. Indications for using. Unfavorable effects. Conception of neuroleptanalgesia.
9. Tranquilizers. Classification. Pharmacodynamics. Indications for using. Unfavorable effects.
10. Antidepressants. Classification. Pharmacodynamics. Indications for using. Unfavorable effects.
11. Psychostimulating agents and analeptics. Classification. Pharmacodynamics. Indications for using. Unfavorable effects.
12. Cardiac glycosides: classification, pharmacodynamics, adverse effects. Treatment of the intoxication by cardiac glycosides.
13. Antiarrhythmics for tachyarrhythmia treatment. Mechanisms and peculiarities of basic groups action. Unfavorable effects.
14. Calcium channel blockers: classification, mechanism of action, indications for application, adverse effects.
15. Hypotensive agents: diuretics and agents acting on renin-angiotensin system. Adverse effects.
16. Synthetic anti-diabetic preparations. Classification. Mechanism of action. Indications for using. Adverse effects.
17. Anticoagulants of indirect action. Pharmacodynamics. Indications. Unfavorable effects.
18. Agents for treatment of hyperchromic and hypochromic anemia. Pharmacodynamics. Uses. Adverse effects.
19. Antiallergic agents.  $H_1$ -histamine blockers. Classification. Pharmacodynamics. Indications. Unfavorable effects.
20. Glucocorticoids. Pharmacodynamics. Indications for using. Adverse effects.
21. Classifications of antibiotics by the antimicrobial spectrum and mechanism of antimicrobial action. Penicillins. Classification. Mechanism of action. Characteristics of separate groups. Adverse effects.
22. Antituberculosis drugs. Classification. Basic principles of tuberculosis treatment. Adverse effects of separate groups.
23. Anti-amoebal agents. Classification. Comparative characteristics of drugs. Adverse effects.
24. Antiviral agents. Classification. Mechanisms of action. Uses. Adverse effects.
25. Drugs, that increase and decrease the secretion of gastric glands. Classification. Pharmacodynamics. Indications for using. Conception of gastroprotectors.