Final topics of Pharmacology and pharmacotherapy (AOK-OAK291)

I.

1. Classification of drug-receptors.
2. Dose-response relations: affinity, intrinsic activity.
3. Practical use of elimination half life, volume of distribution, and clearance.
4. Absorption of drugs.
5. Distribution of drugs in the body.
6. Excretion of drugs.
7. Biotransformation of drugs.
8. Drug interactions: pharmacokinetic interactions.
9. Drug interactions: pharmacodynamic interactions.
10. Influence of age, diet and diseases on the effectiveness of drugs.
11. Drug allergy.
12. Pharmacogenomics.
13. Cumulation, tolerance and tachyphylaxis. Drug dependence.
14. Development of new drugs.

II.

1. Parasympathomimetics.
2. Parasympatholytics.
3. Sympathomimetics.
4. Sympatholytics.
5. Smooth muscle relaxants, uterotonics, tocolytics.
6. Peripheral muscle relaxants.
7. Local anesthetics.
8. Pharmacotherapy of asthma bronchiale.
9. Expectorants, antitussives.
10. Antihistamines.
11. Nonsteroidal anti-inflammatory drugs, paracetamol.
12. Steroidal anti-inflammatory drugs.
13. Sulfonamides, DNA-gyrase inhibitors (quinolones). Antituberculotic drugs.
14. Inhibitors of bacterial cell wall synthesis.
15. Inhibitors of bacterial protein synthesis.
16. Antiviral agents.
17. Antifungal drugs.
18. Antihelmintic drugs. Agents against ectoparasites. Antiprotozoal drugs.

III.

1. Inhalational anesthetics.
2. Intravenous anesthetics. Premedication, postmedication of general anesthesia.
3. Drugs acting on opioid receptors.
4. Sedatohypnotic and anxiolytic drugs.
5. Antiepileptic drugs.
6. Antipsychotic drugs.
7. Centrally acting muscle relaxants.
8. Pharmacotherapy of neurodegenerative disorders (Parkinson's, Alzheimer's disease).
9. Antidepressant drugs.
10. Pharmacology of male and female sexual hormones. Contraceptives.
11. Pharmacotherapy of infertility and erectile dysfunction.
12. Drugs affecting bone metabolism.
13. Pharmacology of hypothalamic, pituitary and thyroid hormones.
14. Immunosuppressive therapy.
15. Drugs used in the chemotherapy of neoplastic diseases: cytotoxic agents.
16. Drugs used in the chemotherapy of neoplastic diseases: cytostatic agents, supportive and palliative therapy.

IV.

1. Drugs acting on the renin-angiotensin system.
2. Positive inotropic agents in the treatment of heart failure.
3. Non-positive inotropic agents in the treatment of heart failure.
4. Antiarrhythmic drugs.
5. Pharmacotherapy of acute and chronic coronary syndrome.
6. Pharmacotherapy of hyperlipidemias.
7. Pharmacotherapy of migraine.
8. Pharmacology of diuretics.
9. Pharmacology of antihypertensive agents.
10. Treatment of bleeding disorders, fibrinolytics. Pharmacological approaches to anaemia.
11. Anticoagulants.
12. Inhibitors of platelet aggregation.
13. Pharmacotherapy of diabetes mellitus: peptide derivative agents.
14. Pharmacotherapy of diabetes mellitus: non-peptide derivative agents.
15. Treatment of hyperacidity and peptic ulcer.
16. Digestive agents. Drugs acting on the liver.
17. Emetics and antiemetics.
18. Laxatives and antidiarrheal agents.

V.

1. Poisoning with acids. Alkaline poisoning.
2. Methanol, ethanol and ethylene glycol intoxication.
3. Carbon monoxide poisoning.
4. Poisoning with nitrites and nitrates.
5. Acute and chronic arsenic poisoning.
6. Lead poisoning. Iron poisoning.
7. Cyanide poisoning.
8. Poisoning with mushrooms.
9. Atropine poisoning.
10. Poisoning with cholinesterase inhibitors.
11. Poisoning with salicylates and paracetamol.
12. Poisoning with benzodiazepines.
13. Poisoning with antidepressants.
14. Poisoning with cocaine and amphetamine.
15. Poisoning with digitalis.
16. Poisoning with morphine.
17. Poisoning with anticoagulants.