

PHARMACOLOGY AND PHARMACOTHERAPY FINAL QUESTIONS (ENGLISH MEDICINE)
2018/2019. 2nd semester

A

1. Pharmacodynamics I (Molecular targets of drugs. Drug receptors. Receptor theory.)
2. Pharmacodynamics II (relation between drug dose and clinical response, therapeutic index, tolerance, pharmacodynamic drug interactions). The process of drug development.
3. Drug absorption, distribution and bioavailability. Membrane transport mechanisms.
4. Drug biotransformation, linear and non-linear kinetics. Enzyme inhibition and induction. Clearance, half-life, loading and maintenance dose. Elimination. Pharmacokinetic drug interactions
5. Cholinergic transmission and its presynaptic modification.
6. Adrenergic transmission and its presynaptic modification
7. Cholinomimetics
8. Muscarinic receptor blocking drugs
9. Catecholamines
10. Indirect sympathomimetics. Selective α_2 -agonists and drugs acting on the imidazoline receptors
11. α -receptor antagonists
12. β -receptor antagonists
13. Centrally acting skeletal muscle relaxants (spasmolytics). Dantrolene. Botulinum toxin
14. Skeletal muscle relaxants acting on the neuromuscular junction
15. Selective β_2 -stimulants and other bronchodilators. Pharmacotherapy of bronchial asthma and COPD.
16. Antiinflammatory agents used in bronchial asthma. Antitussive agents and expectorants
17. Smooth muscle relaxants used for relief GI and UG spasms. Drugs influencing uterus functions.
18. Drugs used for the treatment of peripheral vascular diseases. Therapy of migraine
19. Drugs used for treatment of heart failure I: Drugs decreasing the load on the heart. Drugs of acute cardiac failure. Pharmacotherapy of chronic heart failure.
20. Drugs used for treatment of heart failure II: Positive inotropic agents. Pharmacotherapy of acute heart failure.
21. Antiarrhythmic agents
22. Drugs used for the treatment of hypertension I: Classification of antihypertensive agents and their mechanisms of action. Pharmacotherapy of hypertension.
23. Drugs used for the treatment of hypertension II: Ca^{++} -channel blockers and other vasodilators
24. Drugs used for the treatment of hypertension III: Drugs acting on the renin-angiotensin-aldosterone system
25. Drugs used for treatment of angina pectoris. Pharmacotherapy of ischemic heart disease.
26. Agents used in dyslipidaemias.
27. Potassium excreting (wasting) diuretics
28. Potassium sparing diuretics, ADH antagonists, osmotic diuretics
29. Drugs used in coagulation disorders I: Antiplatelet agents
30. Drugs used in coagulation disorders II: Anticoagulant drugs
31. Drugs used in coagulation disorders III: Fibrinolytic drugs. Drugs used in bleeding disorders
32. Antiemetic drugs. Prokinetic agents. Drugs for irritable bowel disease (IBS).
33. Drugs used in constipation (laxatives) and diarrhea. Drugs promoting digestion. Pharmacology of liver and biliary tract
34. Drugs used in peptic ulcer diseases. Pharmacotherapy of peptic ulcer diseases.

B

1. Inhalational anesthetics
2. Intravenous anesthetics. Perioperative medication
3. Benzodiazepines
4. Non benzodiazepine anxiolytics and non-benzodiazepine hypnotics. Pharmacotherapy of anxiety disorders.
5. 1st generation (“typical”) antipsychotic agents
6. 2nd generation (“atypical”) antipsychotic agents
7. Tricyclic, tetracyclic and unicyclic antidepressants. MAO-inhibitors
8. Selective serotonin and/or norepinephrine reuptake inhibitors.
9. Norepinephrine and serotonin receptor antagonist antidepressants. Agomelatine. Tianeptine. Agents used for treatment of manic phase of bipolar disorders. Pharmacotherapy of affective disorders.
10. Antiepileptics used in partial seizures and generalized tonic-clonic seizures except for the “broad spectrum” agents.
11. Antiepileptics used in absence seizures. “Broad spectrum” antiepileptic drugs. Drugs used for treatment of status epilepticus
12. Drugs used for treatment of neurodegenerative disorders. Nootropic drugs
13. Local anesthetics
14. Histamine and H₁-blockers
15. Natural opiates, opioid receptors
16. Semisynthetic and synthetic opiates
17. General properties of NSAIDs. Acetylsalicylic acid.
18. NSAIDs, except acetylsalicylic acid. Non-opioid and adjuvant analgesics. Drugs used for treatment of gout. Treatment strategy of pain.
19. Glucocorticoids for oral and parenteral use
20. Mineralocorticoids. Topically applied glucocorticoids
21. Androgens, anabolic steroids, antiandrogens. Agents affecting the sexual activity
22. Estrogens and antiestrogens
23. Progestins and antiprogestins
24. Contraceptives
25. Thyroid and antithyroid drugs. Hypothalamic and pituitary hormones
26. Pancreatic hormones and parenterally applied antidiabetic drugs. Pharmacotherapy of IDDM.
27. Oral antidiabetics. Pharmacotherapy of non-insulin dependent diabetes mellitus.
28. Agents affecting bone mineral homeostasis (calcium, vitamin D, parathyroid hormone, calcitonin, etc.). Pharmacotherapy of osteoporosis.
29. Agents used in anemias
30. Immunopharmacology I. (cytotoxic agents, retinoids). Pharmacotherapy of autoimmune diseases.
31. Immunopharmacology II. (Inhibitors of cytokine gene expression, 5-ASA derivatives)
32. Immunopharmacology III. (Antibodies and fusion proteins)
33. Cancer chemotherapy I (antimetabolites)
34. Cancer chemotherapy II (alkylating agents)
35. Cancer chemotherapy III (Topoisomerase inhibitors. Inhibitors of mitotic spindle)
36. Cancer chemotherapy IV. (Hormonal agents)
37. Cancer chemotherapy V. (Small molecule signal transduction inhibitors)
38. Cancer chemotherapy VI. (Large molecule signal transduction inhibitors).

C

1. General considerations of antimicrobial therapy.
Disinfectants and antiseptics
2. Antimycobacterial drugs
3. Antiprotozoal and antihelminthic drugs.
4. Antifungal agents
5. Agents to treat Herpes simplex (HSV), varicella-zoster (VZV) virus, cytomegalovirus (CMV) and respiratory syncytial virus (RSV) infection.
Anti-influenza agents
6. Antiretroviral agents.
7. Agents against hepatitis viruses
8. Penicillins
9. Cephalosporins
10. Carbapenems. Monobactams. Beta-lactamase inhibitors. Pharmacotherapy of respiratory infections.
11. Chloramphenicol. Polymyxins. Antifolate drugs
12. Tetracyclines and glycylcyclines
13. Aminoglycosides
14. Quinolones and fluoroquinolones
15. Macrolides. Ketolides
16. Clindamycin. Streptogramins. Oxazolidinones
17. Glycopeptides. Fusidans. Lipopeptides. Bacitracin. Mupirocin. Pharmacotherapy of skin and soft tissue infections.
18. Metronidazole. Fidaxomicin. Rifaximin. Pharmacotherapy of abdominal infections.
19. Nitrofurantoin. Fosfomycin. Pharmacotherapy of urinary tract infections.