

Module 1. Medicinal prescription. General pharmacology. Pharmacology of drugs influencing nervous system.

A 38-year-old woman developed an attack of bronchial asthma. What bronchial spasmolytic for emergency medical aid is a beta-2-adrenergic agonist?

Salbutamol

Adrenaline

Ipratropium bromide

Platyphyllin

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Due to severe pain syndrome a patient has been prescribed a narcotic analgesic. Specify the prescribed drug:

Morphine

Analgin (Metamizole)

Nimesulid

Dimexid

Indometacin

A patient with dislocated jaw was given a short acting muscle relaxant by a doctor. Name this drug:

Dithylinum (Suxamethonium chloride)

Procaine

Cytitonum (Cytisine)

Papaverine hydrochloride

Pyridostigmine hydrobromide

Due to overdosage of a vasodilator a 58-year-old patient has developed acute vascular insufficiency. What drug would be advisable for termination of this pathological condition?

Mesaton (Phenylephrine)

Euphyllin (Aminophylline)

Dopamine

Cordiamin

Aethimizolum (Methylamide)

A patient with bronchial asthma has developed a bronchial spasm during the visit to a dentist. Name the drug necessary to arrest the spasm:

Salbutamol

Naphthizin

Mesaton (Phenylephrine)

Anaprilin (Propranolol)

Bisoprolol

A patient suffering from ciliary arrhythmia with anamnesis of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is contraindicated in this case?

Anaprilin (Propranolol)

Ajmaline

Verapamil

Nifedipine

Novocainamide (Procainamide)

A patient suffering from acute vascular purpura is prescribed a first-generation antihistamine

with local anaesthetic, antispasmodic, and sedative action. Specify this drug:

Dimedrol (Diphenhydramine)

Diazolin (Mebhydrolin)

Dithylin

Droperidol

Dibazol (Bendazol)

A 45-year-old patient with essential hypertension, who has been taking an antihypertensive drug for 4 days, notes that his blood pressure is normalized; however the patient complains of sleepiness and sluggishness. What drug is the patient taking?

Clophelin (Clonidine)

Prazosin

Captopril

Enalapril

Apressin (Hydralazine)

A patient with symptoms of acute heart failure, namely pallor, acrocyanosis, and rapid shallow breathing, has been delivered to an emergency department. Which of these drugs is indicated in this case?

Corglycon

Digitoxin

Cordiamine

Nitroglycerine

Adrenalin hydrochloride

To treat chronic heart failure a patient takes digoxin. What diuretic can increase digoxin toxicity due to increased excretion of K⁺ ions?

Hydrochlorothiazide

Spironolactone

Panangin

Silibor

Lisinopril

A patient in a grave condition has been delivered to an admission ward. Examination revealed pupil mydriasis, no reaction to the light, considerable reddening and dryness of skin and mucous membranes. What drug could have caused the intoxication symptoms?

Atropine sulphate

Proserin

Adrenalin hydrochloride

Pilocarpine hydrochloride

Dithylinum

In dental practice atropine sulfate is used to decrease salivation. This drug belongs to the following group:

Muscarinic antagonists

α -adrenergic agonists

β -adrenoceptor antagonists

Ganglionic blockers

Muscle relaxants

To perform conduction anesthesia a patient had been administered a drug used in dental surgery. The patient developed the symptoms of poisoning: central nervous system excitation followed by

paralysis and acute cardiovascular insufficiency (collapse). Additionally there were allergic reactions (itching, swelling, erythema). Name this drug:

Lidocaine

Suxamethonium chloride

Thiopental sodium

Tubocurarin chloride

Pipecuronium bromide

A 60-year-old patient has taken a drug to relieve angina pectoris attack; in several minutes the pain felt in the breastbone area abated, but it was followed by feeling of vertigo, headache, tinnitus, and hyperemia of face. What drug has the patient taken?

Nitroglycerine

Nifedipine

Validol

Verapamil

Amiodarone

On the 4th day of treatment with diclofenac sodium a 55-year-old patient has developed gastric hemorrhage due to an ulcer appearing on the gastric mucosa. Ulcerogenic action of this drug is caused by decreased secretion of:

Prostaglandin E2

Cyclic endoperoxides

Thromboxane

Leukotriene

Prostaglandin E1

A 56-year-old woman is registered with a psychoneurologic dispensary due to her suffering from epilepsy, specifically, minor attacks (petit mal). What drug is the most efficient in this case?

Sodium valproate

Phenytoin

Phenobarbital

Trihexyphenidyl

Levodopa

A patient suffering from parkinsonism has been prescribed levodopa, which resulted in rapid improvement of the patient's condition. What mechanism of action is characteristic of this drug?

Stimulation of dopamine synthesis

Stimulation of muscarinic receptors

Block of muscarinic receptors

Anticholinesterase action

Stimulation of dopamine receptors

For relief of hypertensive crisis a doctor has administered a patient a drug that apart from antihypertensive effect has also sedative, spasmolytic and anticonvulsive action. The drug was taken parenterally. When it is taken enterally it acts as a laxative and cholagogue. What drug was administered?

Magnesium sulfate

Reserpine

No-spa

Apressin

Dibazolium

A schizophrenic patient has been prescribed aminazine. What pharmacodynamic action of this drug justifies its prescription in this case?

- Antipsychotic
- Muscle relaxant
- Hypotensive
- Antiemetic
- Hypothermic

A 50-year-old patient with hypertensive crisis had been administered magnesium sulfate, which led to abrupt decrease in blood pressure. The side effects of magnesium sulfate can be prevented if the following drug is administered:

- Calcium chloride
- Potassium chloride
- Trilon B
- Sodium sulfate
- Sodium bromide

A patient is being prepared for a surgery - partial mandibular resection. What drug should be administered to decrease salivation?

- Atropine sulfate
- Carbacholine
- Armine
- Tubocurarin chloride
- Lobeline

A patient with limb fracture should be prescribed a depolarizing muscle relaxant for brief surgical invasion. Name this drug:

- Dithylinum
- Cytisinum (Cytitonum)
- Azamethonium bromide (Pentaminum)
- Tubocurarin chloride
- Atropine sulfate

A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration the patient developed swelling and hyperemia around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:

- Allergy
- Drug dependence
- Idiosyncrasy
- Tachyphylaxis
- Inflammation

To prevent possible negative effect upon the gastric mucosa a patient with rheumatoid arthritis was administered a nonsteroid anti-inflammatory drug - a COX-2 selective inhibitor. Specify this drug:

- Celecoxib
- Analgine
- Acetylsalicylic acid
- Butadion
- Ibuprofen

A patient with acute cardiac failure has been taking cardiac glycoside drug for a long time. He

has developed the following symptoms: nausea, fatigue, extrasystole. What is the cause of this symptoms?

Material cumulation

Idiosyncrasy

Acquired tolerance

Functional cumulation

Drug addiction

Novocaine acts as an anesthetic by making nerve fibers unable to conduct stimulation. What mechanism of action regarding membrane's permeability to ions does this drug have?

Sodium ion-selective channels blockade

Potassium ion-selective channels blockade

Calcium ion-selective channels blockade

Sodium-potassium pump blockade

Sodium-proton pump blockade

A patient in a collaptoid state has been given an injection of mesatonum for the correction of blood pressure. What is the mechanism of this drug action?

It stimulates α -adrenergic receptors

It stimulates β -adrenergic receptors

It blocks α -adrenergic receptors

It blocks β -adrenergic receptors

It stimulates α - and β -adrenergic receptors

A patient complains about retrosternal pain, dyspnea and palpitation. After examination he was diagnosed with coronary heart disease and prescribed verapamil. What is the mechanism of its action?

It blocks calcium channels

It blocks α -adrenoreceptors

It blocks β -adrenoreceptors

It blocks potassium channels

It blocks sodium channels

A doctor has prescribed clonidine for rapid relief of hypertensive crisis. What group does this drug belong to according to its mechanism of action?

Central α_2 -adrenoceptor agonist

α -adrenergic blocking agent

Nonselective α -adrenoceptor agonist

Selective α_1 -adrenoceptor agonist

Selective β_1 -adrenergic blocking agent

A patient suffering from stenocardia takes 100 mg of acetylsalicylic acid daily. What is the effect of acetylsalicylic acid in this patient?

Inhibition of thrombocyte aggregation

Inhibition of blood coagulation

Dilatation of coronary vessels

Prothrombin rate reduction

Cholesterol rate reduction

A female patient suffering from coronary artery disease has been prescribed amiodarone that has antianginal action. What other action does this drug have?

Antiarrhythmic

Analgesic

Local anaesthetic
Anti-inflammatory
Anti-shock

A 60-year-old patient has taken a drug to relieve angina pectoris attack; in several minutes pain felt in the breastbone area abated, but it was followed by feeling of vertigo, headache, tinnitus, and hyperemia of face. What drug has he taken?

Nitroglycerine
Validol
Nifedipine
Verapamil
Amiodarone

A 42-year-old female patient consulted a doctor about pain in the knee joints. Objectively there is swelling, redness, hyperthermia in the region of these joints. Laboratory testing revealed positive acute phase reactants. What drugs should be used to treat this patient?

Anti-inflammatory drugs
Narcotic analgesics
Antidepressants
Antibiotics
Sulfonamides

A 55-year-old man patient with acute heart failure has been administered a quick-relief cardiac glycoside. Which of the following drugs has been given to the patient?

Strophanthin
Adonisidum
Digitoxin
Celanid
Milrinone

A 60-year-old patient with a history of bronchial asthma has had several attacks during the day. What is the optimal drug to be used for their prevention?

Salbutamol
Isadrinum
Adrenaline hydrochloride
Dobutamine
Methacinum

A patient was taken to a hospital with dizziness, dry mouth, mydriatic pupils, accommodation disorder, tachycardia, difficult urination, intestinal atony. These symptoms might have been caused by overdose of the following drug:

Atropine sulfate
Furosemide
Clonidine
Captopril
Prazosin

A patient is diagnosed with acute morphine hydrochloride poisoning. Choose the oxidant drug to be prescribed for gastric lavage.

Potassium permanganate
Chloramine
Sulfocamphocainum (Procaine + Sulfocamphoric acid)
Cerigel

Chlorhexidine digluconate

A patient with chronic heart failure with edema has increased level of blood aldosterone. What diuretic would be most effective in this case?

Spirolactone

Triamterene

Acetazolamide

Hydrochlorothiazide

Furosemide

During local anesthetization the patient has gone into anaphylactic shock. What drug must be administered to the patient?

Epinephrine hydrochloride

Diazepam

Atropine sulfate

Propranolol

Nitroglycerin

A 63-year-old male patient with bladder atony had been prescribed a medication, which he had been arbitrarily taking at a higher dose. The patient developed hyperhydration, salivation, diarrhea, muscle spasms. The prescribed drug relates to the following group:

Cholinomimetics

Cholinesterase reactivators

Adrenergic blockers

Tocolytics

Ganglionic blockers

What drug will be most appropriate for the patient who has chronic gastritis with increased secretion?

Pirenzepine

Pancreatine

Pepsin

Aprotinin

Chlorphentermine

A patient has arterial hypertension. What long-acting drug from the group of calcium channel blockers should be prescribed?

Amlodipine

Octadine

Pyroxanum

Atenolol

Reserpine

A 68-year-old patient consults a cardiologist, complaining of high arterial blood pressure, pain in the heart region, intermittent pulse. Prescribe the (beta 1-adrenoreceptor blocker for the treatment of the described pathology:

Metoprolol

Morphine hydrochloride

Nootropil

Fenoterol

Benzylpenicilli

A patient has been given atropine sulfate for rapid relief of spastic colon symptoms. The use of this drug is contraindicated during the following disease:

- Glaucoma
- Bronchial asthma
- Bradycardia
- Hypotension
- Gastric ulcer

A patient complaining of rapid pulse, dyspnea and bluish color of mucosa has been admitted to the cardiological department. The objective symptoms are as follows: edema of lower extremities, ascites. Which of the given medicines should be prescribed for intravenous administration to improve the patient's general state?

- Corglyconum
- Cordiamin
- Adrenalin hydrochloride
- Digitoxin
- Drotaverine

A patient who had been taking diclofenac sodium for arthritis of mandibular joint developed an acute condition of gastric ulcer. Such side effect of this medicine is caused by inhibition of the following enzyme:

- Cyclooxygenase-1 (COX-1)
- Cyclooxygenase-2 (COX-2)
- Lipoxygenase
- Phosphodiesterase
- Monoamine oxidase

A 55-year-old male had been delivered to the resuscitation unit unconscious. Relatives reported him to have mistakenly drunk an alcoholic solution of unknown origin. On examination the patient was diagnosed with methanol intoxication. What antidote should be used in this case?

- Ethanol
- Teturamum
- Naloxone
- Protamine sulfate
- Acetylcysteine

During a surgery, the anesthesiologist used a ganglionic blocker for controlled hypotension. What drug was given to the patient in this case?

- Hygronium
- Pirilenum
- Pentaminum
- Pachycarpinum
- Benzohexonium

A patient with chronic heart failure was taking digoxin for several months on an outpatient basis. At a certain stage of treatment, he got symptoms of drug overdose. What effect underlies the development of this complication?

- Material accumulation
- Sensibilization
- Functional cumulation
- Adaptation
- Tachyphylaxis

A patient has the pronounced pain syndrome induced by neuralgia. What drug from the group of nonsteroidal anti-inflammatory drugs will reduce pain sensitivity?

Diclofenac sodium
Droperidol
Codeine phosphate
Lidocaine hydrochloride
Ketamine hydrochloride

A patient with arthritis and varicose veins was taking a nonsteroidal anti-inflammatory drug for a long time, which caused the thrombosis of cutaneous veins. Which of the listed drugs might have caused this complication?

Celecoxib
Ibuprofen
Indomethacin
Phenylbutazone
Aspirin

A 45-year-old female patient has neurosis with irritability, insomnia, amotivational anxiety. What tranquilizer will be able to eliminate all symptoms of the disease?

Diazepam
Paracetamol
Caffeine-sodium benzoate
Piracetam
Levodopa

A patient with chronic heart failure was taking digitoxin for several months, during digitalization the following symptoms developed: headache, nausea, diarrhea, loss of appetite, impaired color vision, bradycardia. What antidote should be administered to reduce the intoxication symptoms?

Unithiol
Naloxone
Atropine sulfate
Adrenalin hydrochloride
Prednisolone

A patient with a severe maxillofacial trauma has been delivered to the emergency department. What drug should be given to this patient to relieve pain shock?

Promedol
Ibuprofen
Pantogam
Mydocalm
Sydnocarb

A patient with acute heart failure refractory to cardiac glycosides was given an injection of dobutamine. What is the mechanism of action of this drug?

Stimulation beta-1-adrenergic receptors
Inhibition of phosphodiesterase activity
Complexation with membrane phospholipids
Inhibition of K⁺, Na⁺-ATPase
Increase of n.vagus tonus

A patient with a malignant neoplasm on the upper jaw had been administered morphine hydrochloride for analgesia. The injection induced respiratory depression, pupil constriction,

cyanosis, hypothermia, loss of consciousness. What antidote must be used?

Naloxone

Promedol

Droperidol

Adrenalin hydrochloride

Atropine sulfate

The neurological department received a patient complaining of memory deterioration and loss of mental work capacity that developed after a head trauma. Recommend him a medicine for improvement in cerebral metabolism:

Piracetam (Nootropil)

Analgin (Metamizole)

Meridil (Methylphenidate)

Sydnocarb (Mesocarb)

Caffeine

A patient with inoperable lung cancer accompanied by unbearable pain was prescribed an analgesic. Against the background of analgesic therapy the patient developed signs of intestinal obstruction. What analgesic could have caused this complication?

Morphine

Fentanyl

Promedol (Trimeperidine)

Analgin (Metamizole)

Omnopon (Papaveretum)

During gastric resection the patient received mixed anesthesia with tubocurarin chloride muscle relaxant; to restore spontaneous respiration the patient received proserin. What pharmacological group does this drug belong to?

Cholinesterase inhibitors

Angiotensin-converting-enzyme inhibitors

Muscarinic antagonists

Calcium channel blockers

Muscarinic agonists

A patient has elevated blood pressure due to increased vascular tone. To lower the blood pressure in this case it is necessary to prescribe the blockers of:

α -adrenoceptors

β -adrenoceptors

Histamine H1-receptors

Muscarinic acetylcholine receptors

α - and β -adrenoceptors

A 45-year-old woman has an attack of cardiac fibrillation. She suffers from stage II essential hypertension. What is the drug of choice for stopping this attack?

Lidocaine

Potassium chloride

Strophanthin

Sustac forte (Nitroglycerin)

Anaprilin (Propranolol)

A patient with arrhythmia was hospitalized into the cardiology unit. What antiarrhythmic drug should be prescribed?

Amiodarone
Furacilin (Nitrofuril)
Acetylsalicylic acid
Diclofenac sodium
Drotaverine hydrochloride

A 3-year-old child with elevated body temperature has taken aspirin and developed increased hemolysis of erythrocytes. In this case hemolytic anemia can be caused by congenital deficiency of the following enzyme:

Glucose 6-phosphate dehydrogenase
Gamma-glutamyl transferase
Glycerol- phosphate dehydrogenase
Glycogen phosphorylase
Glucose 6-phosphatase

A 64-year-old man presents with a tremor in his legs and arms. He says he has had a tremor for "many years" but it has worsened in the last year. The tremor is more prominent at rest and nearly disappears on movement. His daughter mentions that his movements have become slower. The patient is afebrile and vital signs are within normal limits. On physical examination, the patient is hunched over and his face is expressionless throughout examination. There is a "pill-rolling" resting tremor that is accentuated when the patient is asked to clench the contralateral hand and alleviated by finger nose testing. When asked to walk across the room, the patient has difficulty taking the first step, has a stooped posture and takes short rapid shuffling steps. A doctor initiates pharmacotherapy and the drug of first line, levodopa, is prescribed. Which of the following is the most likely mechanism of action of this drug?

Stimulation of dopamine production
Inhibition of M2-cholinergic receptors
-
Activation of M2-cholinergic receptors
Cholinesterase inhibition

A patient was administered a certain drug for relief of cardiac rhythm disturbance. This drug can be used as a local anesthetic as well. Name this drug:

Lidocaine hydrochloride
Cocaine hydrochloride
Dicain (Tetracaine)
Diphenine (Phenytoin)
Anaesthesin (Benzocaine)

A patient with essential hypertension was prescribed a drug that inhibits angiotensin-converting enzyme (ACE). What drug is it?

Lisinopril
Losartan
Colestyramine
Carvedilol
Nifedipine

For a surgery in the maxillofacial area, cholinergic agents are used to decrease salivation. What drug of those listed below would you recommend for this purpose?

Atropine sulfate
Adrenaline hydrochloride
Lobeline hydrochloride

Proserin
Dithylinum (Suxamethonium chloride)

A patient has arrhythmia. What medicine needs to be prescribed in this case?

Amiodarone
Nitroglycerine
Imizine (Imipramine)
Cavinton (Vinpocetine)
Euphyllin (Aminophylline)

What nitrate drug would you recommend to a patient with ischemic heart disease for prevention of angina pectoris attacks?

Nitroglycerine
Isosorbide mononitrate
Lisinopril
Lovastatin
Menthol

During a dental manipulation, the patient developed an angina pectoris attack. What group of drugs needs to be prescribed for the emergency aid in this case?

Antianginal drugs
Cardiotonics
Respiratory stimulants
Antiarrhythmic drugs
Antihypertensive drugs

A patient with a severe toothache that lasted for several days made no appointment with a doctor and engaged in self-treatment instead. As a result, his tooth needs to be extracted. What analgesic increases the probability of a hemorrhage developing after the tooth is extracted?

Analgin (Metamizole)
Codeine phosphate
Dimedrol (Diphenhydramine)
Paracetamol
Acetylsalicylic acid

A patient was delivered into the admission room. He has the signs of acute heart failure: pallor, acrocyanosis, frequent and shallow respirations. What medicine of those listed below is indicated in this case?

Corglycon (Convallatoxin)
Digitoxin
Adrenaline hydrochloride
Nitroglycerine
Cordiamin (Nikethamide)

A patient has developed the symptoms of an anaphylactic shock after he was administered the local anesthetic for the anesthesia. What medicine is preferable as a primary drug in this case?

Adrenaline
Promethazine
Phenylephrine
Mebhydrolin
Diphenhydramine

A certain drug with potent natriuretic action is usually prescribed for dehydration therapy of cerebral and pulmonary edemas. Name this drug:

Furosemide
Theophylline
Etacrynic acid
Spironolactone
Mannitol

During an appointment with the dentist, a patient developed a bronchial asthma attack. What does this patient need to be prescribed to terminate the bronchospasm?

Salbutamol
Droperidol
Methacin (Metocinium iodide)
Anaprilin (Propranolol)
Benzohexonium (Hexamethonium bromide)

A patient has peptic ulcer of the stomach. What medicine can decrease the secretion of hydrochloric acid and pepsin by blocking the H₂ receptors?

Famotidine
Phthalazol (Phthalylsulfathiazole)
Fluvoxamine
Phenobarbital
Physostigmine

Module 2. Pharmacology of the drugs influencing function of the effector organs and systems. Pharmacology of chemotherapeutical medicinal drugs. Antidotes.

A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration the patient developed swelling and hyperemia around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:

Allergy
Idiosyncrasy
Tachyphylaxis
Drug dependence
Inflammation

A 26-year-old woman presents with skin rashes and itching after eating citrus fruits. Prescribe her a drug that is an H₁-histamine receptor antagonist:

Dimedrol (Diphenhydramine)
Acetyl salicylic acid
Menadione (Vicasolum)
Analgin (Metamizole)
Paracetamol

A patient with acne is prescribed doxycycline hydrochloride. What should the patient be warned against, regarding administration of this drug?

Avoid prolonged exposure to the sun
Take with large amount of liquid, preferably milk
Take before eating
Course of treatment should not exceed 1 day
Do not take with vitamin preparations

A patient with megaloblastic anemia was taking a water-soluble vitamin. Name this substance:

Cyanocobalamin
Thiamine chloride
Tocopherol acetate
Ascorbic acid
Pyridoxine

Due to severe pain syndrome a patient has been prescribed a narcotic analgesic. Specify the prescribed drug:

Morphine
Analgin (Metamizole)
Nimesulid
Dimexid
Indometacin

A patient with dislocated jaw was given a short acting muscle relaxant by a doctor. Name this drug:

Dithylinum (Suxamethonium chloride)
Procaine
Cytitonum (Cytisine)
Papaverine hydrochloride
Pyridostigmine hydrobromide

A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:

Hydrogen peroxide
Boric acid
Salicylic acid
Phenol
Brilliant green

To treat osteomyelitis, a patient was prescribed an antibiotic that easily penetrates into bone tissue. Name this drug:

Lincomycin hydrochloride
Streptomycin sulfate
Cefazolin
Polymyxin B
Amphotericin B

A patient with bronchial asthma has developed a bronchial spasm during the visit to a dentist. Name the drug necessary to arrest the spasm:

Salbutamol
Naphthizin
Mesaton (Phenylephrine)
Anaprilin (Propranolol)
Bisoprolol

To treat peptic ulcer disease of the stomach a patient has been prescribed famotidine. Specify the mechanism of action of this drug:

H2 histamine receptors block
Effect on ion channels of cell membranes

Antienzyme action
Physicochemical interaction
Effect on cell membrane transport system

A patient suffering from acute vascular purpura is prescribed a first-generation antihistamine with local anaesthetic, antispasmodic, and sedative action. Specify this drug:

Dimedrol (Diphenhydramine)
Diazolin (Mebhydrolin)
Dithylin
Droperidol
Dibazol (Bendazol)

A patient suffering from arthritis is prescribed a COX2 selective inhibitor with anti-inflammatory action. Specify this drug:

Celecoxib
Butadion (Phenylbutazone)
Dimexid
Indometacin
Analgin (Metamizole)

To prevent wound infection associated with surgical procedures a patient was given a synthetic antiprotozoan drug demonstrating high activity against Helicobacter pylori. Specify this drug:

Metronidazole
Doxycycline hydrochloride
Chingamin
Acyclovir
Isoniazid

A patient is in the state of hypoglycemic coma. What hormone can cause this condition if overdosed?

Insulin
Progesterone
Cortisol
Somatotropin
Corticotropin

A patient with autoimmune thyroiditis has been prescribed a peptide hormonal agent. Specify this agent:

L-thyroxin
Trimethoprim
Triamcinolone
Triquilar
Tamoxifen

A woman, who had undergone mastectomy due to breast cancer, was prescribed a course of radiation therapy. What vitamin preparation has marked antiradiation effect due to its antioxidant activity?

Tocopherol acetate
Ergocalciferol
Riboflavin
Cyanocobalamin
Folic acid

In order to prevent wound infection associated with surgical procedures a patient was given a synthetic antiprotozoan drug with a high activity against *Helicobacter pylori*. Specify this drug:

Metronidazole

Chingamin

Doxycycline hydrochloride

Isoniazid

Acyclovir

On the 4th day of treatment with diclofenac sodium a 55-year-old patient has developed gastric hemorrhage due to an ulcer appearing on the gastric mucosa. Ulcerogenic action of this drug is caused by decreased secretion of:

Prostaglandin E2

Cyclic endoperoxides

Thromboxane

Leukotriene

Prostaglandin E1

A 50-year-old man addressed a hospital with complaints of memory disorders, painful sensations along the nerve trunks, decreased mental ability, circulatory disorders and dyspepsia. Anamnesis states excessive alcohol consumption. What vitamin deficiency can result in such signs?

Thiamine

Retinol

Niacin

Riboflavin

Calciferol

A child with signs of rickets has been prescribed a certain liposoluble vitamin drug by pediatrician and dentist. This drug affects the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentine. If its content in the body is insufficient, there develop disruptions of ossification process, dental structure and occlusion.

Name this drug:

Ergocalciferol.

Retinol acetate

Thyroidin

Menadione (Vicasolum)

Tocopherol acetate

A patient has a slowly healing fracture. What medicine can be used to accelerate formation of connective tissue matrix?

Methyluracil

Cyclophosphan

Methotrexate

Prednisolone

Cyclosporine

A 13-year-old girl has been prescribed a certain drug for treatment of megaloblastic anemia. This drug stimulates a transfer from megaloblastic haemopoiesis to normoblastic, participates in synthesis of purine and pyrimidine bases, activates protein and methionine synthesis. What drug does the patient take?

Cyanocobalamin

Ferric sulfate

Haemostimulinum
Erythropoietin
Rosehip tea

A 32-year-old patient has B2 hypovitaminosis. The specific symptoms such as epithelial, mucosal, skin and corneal lesions are the most likely to be caused by the deficiency of:

Flavin coenzymes
Cytochrome b
Cytochrome c
Cytochrome a1
Cytochrome oxidase

A 30-year-old patient after a case of viral hepatitis type B has developed complaints of continuous nasal hemorrhages. What drug would be the most advisable for treatment of this condition?

Menadione (Vicasolum)
Folic acid
Dipiridamol
Asparcam
Nadroparin calcium (Fraxiparine)

To prevent possible negative effect upon the gastric mucus a patient with rheumatoid arthritis was administered a nonsteroid anti-inflammatory drug - a COX-2 selective inhibitor. Specify this drug:

Celecoxib
Analgin
Acetylsalicylic acid
Butadion
Ibuprofen

A patient is diagnosed with seborrheic dermatitis caused by vitamin H (biotin) deficiency. Observed is activity disruption of the following enzyme:

Acetyl-CoA carboxylase
Pyruvate decarboxylase
Alcohol dehydrogenase
Aminotransferases
Carbamoyl phosphate synthetase

A patient with hypoparathyroidism has multiple carious lesions of teeth. This pathology is caused by insufficiency of the following hormone:

Calcitonin
Thyroxine
Triiodothyronine
Thyroid-stimulating hormone
Somatotropin

A 30-year-old driver complains of allergic rhinitis that usually exacerbates in spring. He has been administered an anti-histamine drug with a slight sedative effect and 24-hour period of action. Which of the listed drugs has been administered?

Loratadine
Dimedrol
Heparin

Vicasol
Oxytocin

An oncological patient had been administered methotrexate. With time target cells of the tumour lost sensitivity to this drug. At the same time the change in gene expression of the following enzyme is observed:

Dehydropholate reductase
Thiaminase
Deaminase
Pholate oxidase
Pholate decarboxylase

A patient complains about retrosternal pain, dyspnea and palpitation. After examination he was diagnosed with coronary heart disease and prescribed verapamil. What is the mechanism of its action?

It blocks calcium channels
It blocks α -adrenoreceptors
It blocks β -adrenoreceptors
It blocks potassium channels
It blocks sodium channels

A doctor has prescribed clonidine for rapid relief of hypertensive crisis. What group does this drug belong to according to its mechanism of action?

Central α_2 -adrenoceptor agonist
 α -adrenergic blocking agent
Nonselective α -adrenoceptor agonist
Selective α_1 -adrenoceptor agonist
Selective β_1 -adrenergic blocking agent

A patient suffering from stenocardia takes 100 mg of acetylsalicylic acid daily. What is the effect of acetylsalicylic acid in this patient?

Inhibition of thrombocyte aggregation
Inhibition of blood coagulation
Dilatation of coronary vessels
Prothrombin rate reduction
Cholesterol rate reduction

A 55-year-old male patient with acute heart failure has been administered a quick-relief cardiac glycoside. Which of the following drugs has been given to the patient?

Strophanthin
Adonisidum
Digitoxin
Celanid
Milrinone

A 60-year-old patient with a history of bronchial asthma has had several attacks during the day. What is the optimal drug to be used for their prevention?

Salbutamol
Isadrinum
Adrenaline hydrochloride
Dobutamine
Methacinum

A patient being treated for tuberculosis is suffering from hearing deterioration. What drug causes this complication?

Streptomycin
Isonicotinic acid hydrazide (Isoniazid)
Kanamycin sulphate
Ethionamide
Rifampicin

A patient has been diagnosed with bacillary dysentery. What drug of those listed below should be prescribed?

Amoxicillin
Benzylpenicillin sodium salt
Isonicotinic acid hydrazide (Isoniazid)
Itraconazole
Acyclovir

A 46-year-old patient consulted a doctor about pustular rash on the skin of the limbs. What antiseptic should be administered to the patient?

Alcohol solution of iodine
Insulin
Prednisolone
Sibazon
Heparin

A dentist has detected symptoms of parodontosis in a patient. What antiprotozoal drug should be prescribed?

Metronidazole
Levamisole
Griseofulvin
Mykoseptin
Furazolidone

A patient complains of photoreception disorder and frequent acute viral diseases. He has been prescribed a vitamin that affects photoreception processes by producing rhodopsin, the photosensitive pigment. What vitamin is it?

Retinol acetate
Tocopherol acetate
Pyridoxine hydrochloride
Cyanocobalamin
Thiamine

A 60-year-old male patient has type II diabetes. A doctor has prescribed him synthetic hypoglycemic long-acting drug that is sulfonylurea derivative. What drug is it?

Glibenclamide
Butamide
Metformin
Actrapid (soluble insulin)
Acarbose

What drug will be most appropriate for the patient who has chronic gastritis with increased secretion?

Pirenzepine
Pancreatine

Pepsin
Aprotinin
Chlorphentermine

In cancer patients who have been continuously receiving methotrexate, the target cells of tumor with time become insensitive to this drug. In this case, gene amplification of the following enzyme is observed:

Dihydrofolate reductase
Thiaminase
Deaminase
Thioredoxin reductase
—

A child patient has dry cough. What non-narcotic antitussive drug will relieve the patient's condition?

Glaucine hydrochloride
Codeine phosphate
Morphine hydrochloride
Potassium iodide
Althaea officinalis root extract

A pneumonia patient has been administered acetylcysteine as a part of complex therapy. What principle of therapy has been taken into consideration when applying this drug?

Pathogenetic
Symptomatic
Etiotropic
Antimicrobial
Immunomodulatory

A patient who had been taking diclofenac sodium for arthritis of mandibular joint developed an acute condition of gastric ulcer. Such side effect of this medicine is caused by inhibition of the following enzyme:

Cyclooxygenase-1 (COX-1)
Cyclooxygenase-2 (COX-2)
Lipoxygenase
Phosphodiesterase
Monoamine oxidase

A 55-year-old male had been delivered to the resuscitation unit unconscious. Relatives reported him to have mistakenly drunk an alcoholic solution of unknown origin. On examination the patient was diagnosed with methanol intoxication. What antidote should be used in this case?

Ethanol
Tetramum
Naloxone
Protamine sulfate
Acetylcysteine

A 35-year-old female patient has been hospitalised with acute intoxication caused by salts of high-density metals (lead, most probably). As a part of complex therapy the antidote that contains two active sulfhydryl groups has been prescribed. Specify this antidote:

Dimercaprol
Metamizole

Mannitol
Nalorphine hydrochloride
Calcium chloride

A 26-year-old female patient with bronchitis has been administered a broad spectrum antibiotic as a causal treatment drug. Specify this drug:

Doxycycline
Interferon
BCG vaccine
Ambroxol
Dexamethasone

Ascarid eggs have been detected during stool analysis. What drug should be prescribed?

Mebendazole
Nystatin
Chloramphenicol
Tetracycline
Furazolidone

A patient has enamel erosion. What vitamin should be administered for its treatment?

D3
C
B1
PP
K

In the framework of complex treatment of gingivitis a patient has been administered a drug that stimulates leucopoiesis, accelerates wound healing, enhances the growth and proliferation of cells, has the anti-inflammatory effect. It is applied for treatment of leukopenias of different genesis, in the dental practice it is used for treatment of inflammatory diseases of the oral mucosa. Identify the drug:

Pentoxylum
Cyanocobalamin
Methotrexate
Mercaptopurine
Coamide

A patient has herpetic conjunctivitis. What etiotropic drug should be administered?

Acyclovir
Ampicillin
Methisazonum
Tetracycline
Furagin

Certain infections caused by bacteria are treated with sulphanilamides that block the synthesis of bacterial growth factor. What is the mechanism of these drugs action?

They are antivitamins of p-aminobenzoic acid
They are allosteric enzyme inhibitors
They are involved in redox processes
They are allosteric enzymes
They inhibit the folic acid absorption

A patient with chronic heart failure has been taking digoxin for several months on an outpatient basis. At a certain stage of treatment, he got symptoms of drug overdose. What effect underlies

the development of this complication?

Material accumulation
Sensibilization
Functional cumulation
Adaptation
Tachyphylaxis

A patient has the pronounced pain syndrome induced by neuralgia. What drug from the group of nonsteroidal anti-inflammatory drugs will reduce pain sensitivity?

Diclofenac sodium
Droperidol
Codeine phosphate
Lidocaine hydrochloride
Ketamine hydrochloride

A patient has been diagnosed with sepsis. It was decided to treat him with a drug from the fluoroquinolone group. Specify this drug:

Ciprofloxacin
Cephalexin
Cefpirome
Ampicillin
Metronidazole

Mother of a 10-year-old boy with purulent gingivitis consulted a dentist about the possibility of gingivitis treatment with fluoroquinolone drugs. The doctor gave a negative answer explaining it by the fact that fluoroquinolones:

Damage the cartilage tissue in children
Have cauterizing effect on the mucous membranes
Provoke gingival haemorrhage
Provoke loss of calcium from bones and teeth
Damage dentin

A patient with arthritis and varicose veins has been taking a nonsteroidal anti-inflammatory drug for a long time, which caused the thrombosis of cutaneous veins. Which of the listed drugs might have caused this complication?

Celecoxib
Ibuprofen
Indomethacin
Phenylbutazone
Aspirin

A patient with mandibular osteomyelitis has been administered an antibiotic from the tetracycline group. Specify this drug:

Doxycycline hydrochloride
Oxacillin
Rifampicin
Amikacin
Streptomycin

A patient has acute laryngotracheitis with nonproductive cough that is very exhaustive. Prescribe an antitussive drug:

Glaucine
Mucaltin

Ambroxol
Herba Thermopsisidis
Acetylcystein

A 30-year-old patient with pneumonia has been administered a 3-day course of an antibiotic from the group of azalides that has bactericidal effect, prolonged action, the ability to bind to phagocytic cells and accumulate in the infection foci. What drug has been administered?

Azithromycin
Isoniazid
Ciprofloxacin
Erythromycin
Benzylpenicillin sodium salt

A patient with rheumatoid arthritis has been given hydrocortisone for a long time. He has developed hyperglycemia, polyuria, glycosuria, thirst. These complications of treatment result from the activation of the following process:

Gluconeogenesis
Glycolysis
Glycogenesis
Lipolysis
Glycogenolysis

A patient with periodontitis has been administered a glucocorticoid drug in form of an ointment. Specify this ointment:

Prednisolone
Ampicillin
Decamine
Tetracycline
Erythromycin

A 26-year-old woman at 40 weeks' gestation was admitted to the maternity ward. Examination revealed that the cervix was open, but uterine contractions were absent. The doctor gave her a hormonal drug to induce labor. Specify this drug:

Hydrocortisone
Testosterone
ACTH
Estrone
Oxytocin

A patient with hypochromic anemia was prescribed an iron-containing drug for intravenous administration only. Name this drug:

Fercoven
Dichlothiazide (Hydrochlorothiazide)
Mannitol
Furosemide
Etacrynic acid

Various substances can be used as anti-coagulants. Among them there is a certain naturally derived polysaccharide. Name this polysaccharide:

Heparin
Dextran

Hyaluronic acid
Dermatan sulfate
Chondroitin sulfate

A child with signs of rickets has been prescribed a certain soluble in lipids vitamin drug by the pediatrician and dentist. This drug affected the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentin. If its content in the body is insufficient, a person develops disorders of ossification process, dental structure, and occlusion. Name this drug:

Ergocalciferol
Thyreoidin
Tocopherol acetate
Retinol acetate
Menadione (Vikasolum)

25-year-old young man complains of general weakness, rapid fatigability, irritability, reduced working ability, and bleeding of gums. What vitamin deficiency is the most likely cause of this condition?

Ascorbic acid
Retinol
Riboflavin
Thiamine
Folic acid

A 26 year-old woman presents with skin rashes and itching after eating citrus fruits. Prescribe for treatment of this patient drug that is an H1-histamine receptor antagonist:

Dimedrol (Diphenhydramine)
Menadione (Vikasolum)
Acetylsalicylic acid
Paracetamol
Analgin (Metamizole)

A 30-year-old patient after a case of viral hepatitis type B has developed complaints of continuous nasal haemorrhages. What drug would be the most advisable for treatment of this condition?

Menadione (Vikasolum)
Asparcam
Dipiridamol
Nadroparin calcium (Fraxiparine)
Folic acid

A patient with peptic ulcer disease of the stomach is prescribed a drug that blocks histamine H2-receptors. Select this drug from this list:

Famotidine
Bisacodyl
Atropine sulfate
Omeprazole
Dithylin (Suxamethonium)

An ophthalmologist has detected increased time of darkness adaptation in the patient's eye. What vitamin deficiency can cause this sign?

A

K
D
C
E

A woman was diagnosed with peptic ulcer of the stomach. She has a long history of rheumatoid arthritis. What drugs are the likely causes of this disease in the patient?

Glucocorticoids

Antibiotics

Antihypertensive drugs

Antihistamines

H₂-blocker agents

A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:

Hydrogen peroxide

Boric acid

Salicylic acid

Brilliant green

Phenol

A molecular-level process of spontaneous passive transport of water-soluble molecules across a cell membrane is modelled. The molecules move across cell membranes from an area of higher concentration toward an area of lower concentration via specific trans-membrane integral proteins. This transport does not directly require chemical energy from ATP hydrolysis. Which of the following transport mechanisms is most likely mentioned?

Facilitated diffusion

Pinocytosis

—

Active transport

Osmosis

A 35-year-old woman is brought to the physician because of a 4-month history of progressive weakness of both lower limbs. She notes difficulty climbing stairs and complains of lethargy and loss of muscle bulk. Her diet consists primarily of “polished rice”. A diagnosis of dry beriberi is suspected. Deficiency of which of the following vitamins is most likely to be detected in her blood?

Vit. B₁ (thiamine)

Vit. C (ascorbic acid)

Vit. B₃ (niacin)

Vit. B₂ (riboflavine)

Vit. B₆ (pyridoxine)

A 58-year-old male patient visited his dentist with the chief complaint of itching and burning sensation in his mouth. During intraoral examination, diffuse white patches were seen on his tongue, right and left buccal mucosa, as well as on his hard palate and soft palatal region. The potassium hydroxide (KOH) preparation of the specimen revealed non-pigmented septate hyphae. Administration of which of the following drugs is the most appropriate initial step in treatment of this patient?

Nystatin

Tetracycline

—

Gentamycin
Penicillin

A certain drug with potent natrium-ureic action is usually prescribed for dehydration therapy of cerebral and pulmonary edemas. Name this drug:

Furosemide
Mannitol
Etacrynic acid
Theophylline
Spironolactone

A child presents with dry cough. What non-narcotic anti-tussive drug can relieve the patient condition?

Glaucine hydrochloride
Codeine phosphate
Morphine hydrochloride
Potassium iodine
Althea officinalis roots

Complex therapy of a patient with bronchopneumonia accompanied by exhausting dry cough includes a certain mucolytic agent that depolymerizes mucoproteins. Name this drug:

Acetylcysteine
Neodicumarin
Codeine
Strophantin
Atenolol

A patient is diagnosed with stomatitis caused by herpes simplex virus, type 1 and 2. What medicine that is an analogue of nucleosides and is converted by thymidine kinase can provide highly effective selective antiviral therapy?

Acyclovir
Acetylcysteine
Rimantadine
Laferon (recombinant human interferon alpha-2b)
Oxolin (Dioxotetrahydroxytetrahydro- naphthalene)

An acute blood loss has caused a decrease in the systemic blood pressure. This situation can be stabilized with the intensified secretion of a certain hormone. Name this hormone:

Renin
Testosterone
Glucagon
Insulin
Gastrin

A patient with peptic ulcer disease of the stomach is prescribed a drug that blocks histamine H2 receptors. Select this drug from the list:

Famotidine
Bisacodyl
Dithylin (Suxamethonium)
Atropine sulfate
Omeprazole

A patient with streptococcal pneumonia was prescribed an antimicrobial agent that disrupts the formation of microbial membranes. Name this drug:

- Benzylpenicillin sodium salt
- Doxycycline hydrochloride
- Erythromycin
- Gentamicin sulfate
- Azithromycin

To improve tooth mineralization, dentists prescribe Ca^{2+} preparations. This substance HAS NO EFFECT on the following processes in an organism:

- Development of myocardial depolarization
- Oncotic pressure generation
- Synaptic transmission of excitation
- Muscle contraction
- Hemostasis

A dentist used a solution of potassium permanganate as an antiseptic. This preparation has a bactericidal effect because of:

- Atomic oxygen
- Manganese oxide
- Potassium
- Potassium hydroxide
- Potassium oxide

Specify the concentration of ethyl alcohol that has the most active antimicrobial action in a protein-containing medium:

- 70%
- 60%
- 40%
- 96%
- 15%

A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:

- Hydrogen peroxide
- Brilliant green
- Salicylic acid
- Boric acid
- Phenol

After a glucose-lowering therapy, a patient with diabetes mellitus developed hypoglycemia. What hormone, taken in excess, could have caused this hypoglycemic condition?

- Insulin
- Adrenaline
- Thyroxine
- Glucagon
- Cortisol

A patient is diagnosed with pneumonia of mycoplasmal etiology. What antibiotics, based on their mechanism of action, SHOULD NOT be used in the course of the treatment?

- Antibiotics that inhibit the synthesis of cell wall components
- Antibiotics that disturb the synthesis of nucleic acids

Antibiotics that disturb the protein synthesis
Antibiotics that disturb oxidative phosphorylation processes
Antibiotics that disturb the permeability of cytoplasmic membrane

A 60-year-old man with diabetes mellitus was prescribed insulin. What type of pharmacological therapy is it?

Replacement
Symptomatic
Pathogenetic
Etiotropic
Preventive

A sample of the patient's blood was taken for analysis in the presence of heparin. By its chemical structure, this anticoagulant belongs to:

Glycosaminoglycans
Triacylglycerols
Phospholipids
Hemeproteins
Simple proteins

A 58-year-old man visited his dentist with the chief complaint of itching and burning sensation in his mouth. On intraoral examination, diffuse white patches were detected on his tongue, right and left buccal mucosa, as well as in the region of his hard and soft palate. The potassium hydroxide (KOH) preparation of the specimen revealed non-pigmented septate hyphae. Administration of which of the following is the most appropriate initial step in the treatment of this patient?

Nystatin
Penicillin
Gentamicin
-
Tetracycline Piperacillin

A patient with mechanical jaundice and disturbed intestinal absorption undergoes a surgery that was complicated by a hemorrhage. It is caused by the deficiency of the following vitamin:

Vitamin K
Vitamin B6
Folic acid
Vitamin C
Vitamin B12

A patient has peptic ulcer of the stomach. What medicine can decrease the secretion of hydrochloric acid and pepsin by blocking the H₂ receptors?

Famotidine
Phthalazol (Phthalylsulfathiazole)
Fluvoxamine
Phenobarbital
Physostigmine

A 38-year-old woman developed an attack of bronchial asthma. What bronchial spasmolytic for emergency medical aid is a beta-2-adrenergic agonist?

Salbutamol
Adrenaline

Ipratropium bromide
Platyphyllin

—