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ODESA NATIONAL MEDICAL UNIVERSITY

Faculty: medical №1

Department of propaedeutics of internal diseases and therapy

APPROVED BY.



Deputy rector for scientific and pedagogical work

Eduard BURIACHKIVSKYI

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**METHODOLOGICAL DEVELOPMENT
FOR INDEPENDENT WORK OF HIGHER EDUCATION APPLICANTS
IN THE ACADEMIC DISCIPLINE**

Faculty, course: dentistry, 3

Discipline: Endocrinology

Approved:

Meeting of the Department of Propedeutics of Internal Medicine and Therapy

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Head of the Department _____


Olena YAKYMENKO

Authors:

Head of the department, Doctor in Medicine, Professor Yakimenko Olena

Doctor in Medicine, Associate Professor Sebov Denis

PhD of Medicine, Assistant Professor Oliynyk Dmytro

PhD of Medicine, Assistant Professor Maznichenko Iegor

Assistant Professor Zakrytov Denis

Topic: Comatose states in diabetes. Emergency aid.

Purpose: Due to the fact that in the last 30 years there has been a sharp increase in the prevalence and incidence of diabetes, especially in industrialized countries (5-6% of the population) and in people aged 40 years. According to the WHO, the number of diabetes patients in the world exceeds 200 million. According to an expert assessment, the prevalence of this disease in 2025 will be 500 million people, of which 80-90% will be type 2 diabetes patients. Acute complications of decompensated diabetes (comatose states) lead to mortality.

Basic concepts: Diabetes, coma, glucose, insulin, ketone bodies.

Plan

1. Theoretical questions:

Mechanism of development of hyperglycemic ketoacidotic coma.

Mechanism of development of hyperglycemic hyperosmolar coma.

Mechanism of development of hyperglycemic lactic acid coma.

Mechanism of development of hypoglycemic coma

Clinical manifestations of coma.

Differential diagnosis of com.

First aid for coma.

Questions for self-control:

Causes of comatose states in diabetes.

Classification of comatose states in diabetes.

Symptoms of comatose states in diabetes

Emergency care in comatose states

Indicative tasks for working out the theoretical material

lu:

1. Compile a dictionary of basic concepts on the topic:

Term	Definition
Hyperglycemic ketoacidotic coma	
Hyperglycemic hyperosmolar coma	
Hyperglycemicketoacidotic coma	
Hypoglycemic coma	

2. Practical works (tasks) that will be performed during the lesson:

TASK. Patient V., 18 years old, was brought to the clinic in serious condition. From the anamnesis, it is known that a week ago, after the SARS, the patient's appetite disappeared, thirst, nausea, and vomiting appeared. The condition

worsened sharply on the eve of hospitalization: thirst increased, abdominal pain appeared, and vomiting became more frequent. Objectively: the patient is retarded. Answers questions late. Pronounced weight loss. The skin is dry, the tongue is dry, rough. Heart tones are weakened. Pulse 110 in 1 min., blood pressure 80/50 mm Hg. Loud breathing, 36 in 1 min. The smell of acetone from the mouth. The stomach is soft. The edge of the liver protrudes 4 cm from under the costal arch, painful.

Your previous diagnosis?

A. *Hostria* gastroenteritis.

B. Thyrotoxic crisis.

+S. Diabetes mellitus (discovered for the first time), precomatose state.

D. Diabetes, hyperglycemic coma.

E. Diabetes mellitus, hypoglycemic coma.

3. Test tasks for self-control:

1. A 50-year-old diabetic patient, after the occurrence of furunculosis of the skin and the appointment of antibiotics, canceled glibenclamide. The patient's condition worsened, increased thirst, dryness, diuresis - 4.5 l/day, fainted. Objectively: The skin is dry. Breathing is superficial, accelerated. RS - 100/min, BP - 90/40 mm Hg. Tones of the heart are deaf. The stomach is soft. Liver - +5 cm. Glycemia 43 mmol/l, reaction to acetone in urine is negative, glucose - positive. Determine the nature of the condition.

A Hypermolar coma

B Ketoacidotic coma

C Infectious-toxic shock

D Diabetic ketoacidosis

E Lactoacidotic coma

2. The patient is 67 years old and has been suffering from diabetes for 3 years.

Receives glibenclamide in a dose of 10 mg per day. As a result of the accident, she received 2-3 degree burns. on 40% of the body surface. In the intensive care unit, the patient was troubled by weakness that worsened every day, periodic spasms of the muscles of the limbs. On the 10th day, frequent shallow breathing appeared.

The skin and mucous membranes are dry, turgor is sharply reduced. Blood pressure - 50/10 mm Hg. Pulse - 130 beats/min. The liver is enlarged by 4.0 cm. 2 pathological tendon reflexes are determined. Oliguria. There is no ketonuria. What clinical signs of coma are depicted in the problem?

A Hyperosmolar diabetic coma

B Hypoglycemic coma

C Lactate-acidotic diabetic coma

D Ketoacidotic diabetic coma

E Hepatic coma

3. The patient is 57 years old, with a diagnosis of type 2 diabetes mellitus. As a result of food poisoning, he discontinued hypoglycemic therapy. Abdominal pain persists, thirst increases. At the time of examination, glycemia was 45 mmol/l, glucosuria 50 g/l. On examination: responds to questions, significant dehydration, dry skin, shallow, frequent breathing, tachycardia. Blood pressure - 80/60 mm Hg. Urine reaction to acetone is negative. Establish a preliminary diagnosis?

A Hyperosmolar coma

B Lactacidemic coma

Ketoacidotic coma

D Cerebral coma

E Infectious-toxic shock

4. Patient A., 54 years old, was brought unconscious to the hospital by an ambulance crew. On examination: facial features are sharpened, eyeballs are soft, skin and mucous membranes are very dry, skin temperature is slightly elevated, hypotonia of skeletal muscles, heart rate - 110 bpm, blood pressure - 70/40 mm Hg, obtained through catheter 50 ml of urine. Seizures occur periodically. In additional studies: blood sugar - 60.7 mmol/l, sodium level - 168 mmol/l, glucosuria, absence of acetone in urine, blood osmolarity - 480 mosm/l. Establish a diagnosis.

A *Hyperosmolar coma

B Hyperacidotic coma

C Hyperlactacidemic coma

D Hyperketonemic precoma

E Hypopituitary coma

5. A 70-year-old man is in a comatose state. He has been suffering from diabetes for 15 years, does not follow a diet, does not take antidiabetic drugs. Objectively. Breathing is frequent, shallow. Blood pressure - 70/30 mm Hg. The pulse is filiform. Pronounced dryness of the skin and mucous membranes, a sharp decrease in skin turgor and tone of the eyeballs. Body temperature is 38°C. Bilateral nystagmus. Tendon reflexes are absent. The smell of acetone from the mouth is not

felt. Blood glucose 19 mmol/l, plasma osmolarity 320 mosm/l What changes in the biochemical blood analysis accompany such a condition?

- A *Azotemia
- B Hypoproteinemia
- C Hyperbilirubinemia
- D Hyperlactacidemia
- E Ketonemia

List of recommended literature (main, additional, electronic information resources):

Topic: Endemic goiter. Etiology. Clinic. Diagnostics. Addison's disease. Reasons. Diagnostics. Adrenal coma. Emergency aid.

Objective: Endemic goiter and Addison's disease are now relatively rare endocrine diseases, but the dentist should have an idea of the main causes, symptomatology and methods of treatment of these diseases, as well as emergency conditions against the background of these diseases.

Basic concepts: Hormone, goiter, thyroid gland, adrenal glands.

Theoretical questions:

- Analyze complaints, medical history, data of an objective examination of a patient with endemic goiter.
- Explain the mechanism of symptoms in endemic goiter.
- Draw up a treatment plan for patients with endemic goiter.
- Analyze complaints, medical history, objective research data of a patient with Addison's disease.
- Explain the mechanism of symptoms in Addison's disease.
- Make a treatment plan for patients with Addison's disease.
- To propose an algorithm for providing emergency care in adrenal coma.

Questions for self-control:

1. Specify the possible causes of endemic goiter.
2. List the clinical manifestations of endemic goiter.
3. List the data of laboratory studies in endemic goiter.
4. Symptomatology of Addison's disease.
5. Methods of diagnosis of Addison's disease.
6. Methods of treatment of Addison's disease.
7. Indicate the principles of emergency care for adrenal coma.

Indicative tasks for working out the theoretical material

lu:

1. Compile a dictionary of basic concepts on the topic:

Term	Definition
Endemic goiter	
Addison's disease	
Adrenal coma	

2. Practical works (tasks) that will be performed during the lesson:

No. 1. Patient V., 44 years old, complains of increased fatigue, general weakness, swelling of the face, and an increase in the size of the neck. Objectively: the condition is relatively satisfactory. The face is pasty, the skin is dry, the hair is thin. Pulse 58 in min, blood pressure 125/75 mm Hg. Heart tones are muffled. The abdomen is soft, painless on palpation. The chair is prone to constipation. The thyroid gland is uniformly enlarged, mobile, painless. Peripheral lymph nodes are not enlarged.

1. What syndrome does the patient have?

- 1.1 Hypothyroidism.

- 1.2 Hyperthyroidism.

- 1.3 Hypoparathyroidism.

- 1.4 Hyperparathyroidism.

- 1.5 Edema.

2. What studies should the patient conduct first of all to clarify the diagnosis?

- 2.1 Ultrasound of the thyroid gland, study of the main metabolism.

- 2.2 Thyroid scan, blood sugar.

- 2.3 Neck thermography.

- 2.4 The level of TSH in the blood, Ro-graphy of the Turkish saddle.

- 2.5 Ultrasound and thyroid scan, level of T3, T4, TSH in the blood.

Patient N., 34 years old, complains of weakness, lack of appetite, nausea, and weight loss. Sick for about a year. During the examination, hyperpigmentation of the skin in the area of the nipples, the back surface of the fingers, elbow and knee bends, as well as areas of hyperpigmentation on the mucous membrane of the oral cavity is noted. Malnourished patient (height 174 cm, weight 63 kg). Single dry rales in the lungs. Heart tones are muffled. Pulse 82 per minute, rhythmic. Blood pressure 90/50 mm Hg. Body temperature is 37.1C. There are no swellings.

1. Which of the complaints and objective examination data is characteristic of Addison's disease?

- 1.1 Hyperpigmentation of the skin and mucous membranes, weakness, lack of appetite,

nausea, weight loss, low blood pressure.

1.2 Weakness, nausea, weight loss, hyperpigmentation of the skin and mucous membranes.

1.3 Lack of appetite, nausea, hyperpigmentation of the skin and mucous membranes, low

NAME.

1.4 Lack of appetite, nausea, hyperpigmentation of the skin and mucous membranes, dry

wheezing, low blood pressure.

1.5 Weakness, nausea, weight loss, skin hyperpigmentation and mucous, dry wheezing.

2. What examinations must be carried out to confirm the diagnosis?

2.1 Electrolytes, blood creatinine and urea, ECG, Lidl's small test.

2.2 Electrolytes and blood glucose, content of 17-ketosteroids in daily urine, Thorn's test.

2.3 Blood THG and cortisol, ACTH test, ultrasound of the adrenal glands.

2.4 Robinson-Power-Kepler water test, ACTH level in the blood.

2.5 Study of basic metabolism, electrolytes and blood glucose.

3. Test tasks for self-control:

A 25-year-old woman was found to have an enlarged thyroid gland during a professional examination. Permanently lives in Lviv region. No abnormalities were recorded on the part of the internal organs. The thyroid gland is diffusely enlarged to 2 degrees, soft-elastic, smooth, not painful. The level of thyroid hormones is within normal limits. Ultrasound: the thyroid gland is enlarged due to all departments, echogenicity is not changed. It will indicate the most likely diagnosis.

A *Endemic diffuse euthyroid goiter

B Autoimmune thyroiditis without functional impairment

C Sporadic diffuse euthyroid goiter.

D Nodular goiter

AND Diffuse toxic goiter

Patient K., 52 years old, complains of weight gain, weakness, constipation, memory impairment. These symptoms have been slowly increasing over the past

1.5 years. Objectively: dry skin, moderate swelling of the face and limbs, the borders of the heart are expanded, the tones are muffled, the pulse is 66 per 1 minute. Blood pressure - 110/70 mm Hg. Thyroid gland is not palpable. The ELISA method revealed antibodies to thyroglobulin (+) and microsomal antigen (+++); TSH level – 15.2 mO/l. Ultrasound: a gland of reduced size, heterogeneous structure. Make a diagnosis.

- A** *Autoimmune thyroiditis, hypothyroidism
- B** Autoimmune thyroiditis without functional impairment
- C** Endemic goiter
- D** Subacute thyroiditis
- AND** Diffuse toxic goiter

No. 2. Patient L., 28 years old, complains of severe general weakness, tearfulness, irritability, palpitations, insomnia, stabbing pains in the heart region, weight loss. Objectively: height 168 cm, weight 45 kg. The skin is wet. Pulse 128 in 1 min. Blood pressure -150/60 mm Hg. The limits of cardiac dullness have not changed. Heart sounds are increased, systolic murmur at the apex. The thyroid gland is visible when swallowing, when palpating both parts of it are soft and elastic. Pronounced tremor of the fingers. Basic Exchange +40%. On the ECG - sinus tachycardia.

Your previous diagnosis?

- A. Myocarditis.
- +V. Thyrotoxicosis.
- C. Hypothyroidism.
- D. Diabetes.
- E. Nodular goiter.

No. 3. Patient P., 40 years old, came in with complaints of low-grade fever, pronounced general weakness, trembling of the whole body, increased appetite, frequent loose stools. Objectively: malnourished, fussy. The language is hasty, fast. Exophthalmos. The thyroid gland is enlarged. Cardiac activity is arrhythmic, tones are increased. What additional studies should be conducted?

- A. Ultrasound of the thyroid gland.
- B. Determination of the content of T3, T4 in the blood.
- C. Determination of cholesterol and glucose content in blood.
- D. Determination of TSH content in blood.
- +E. All the listed studies.

No. 4. Patient V., 18 years old, was brought to the clinic in serious condition. From the anamnesis, it is known that a week ago, after the SARS, the patient's appetite disappeared, thirst, nausea, and vomiting appeared. In the anamnesis - pulmonary tuberculosis. The condition worsened sharply on the eve of hospitalization: thirst increased, abdominal pain appeared, and vomiting became more frequent. Objectively: the patient is inhibited. Answers questions late. Pronounced weight

loss. The skin is dry, the tongue is dry, rough. Heart tones are weakened. Pulse 110 in 1 min., blood pressure 80/50 mm Hg.

Your previous diagnosis?

A. *Hostria* gastroenteritis.

B. Thyrotoxic crisis.

C. Diabetes mellitus (discovered for the first time), precomatose state.

+D. Adrenal coma.

E. Diabetes mellitus, hypoglycemic coma.

Topic: Emergency care for parathyroid insufficiency, thyrotoxic crisis.

Purpose: Thyroid hormones have a multifaceted effect on all organs and systems, on all types of metabolism. They stimulate heat generation, increase oxidizing processes in the body, increase tissue absorption of oxygen, affect cell growth and differentiation. One of the life-threatening conditions of the patient is a thyrotoxic crisis, which can occur with previously undiagnosed toxic goiter. Therefore, it is necessary to know the clinical manifestations of a thyrotoxic crisis and the methods of providing emergency care for it.

Parathyroid hormone affects all the main links of calcium metabolism - bone tissue, kidneys and intestines. It increases the concentration of calcium in blood serum, promotes its removal from bones and reabsorption in the kidneys. In addition, it activates the secretion of vitamin D in the kidneys, which stimulates more intense absorption of calcium and phosphorus from food in the intestines. With a low level of parathyroid hormone in the blood, hypofunction of the thyroid gland, various convulsive conditions occur. Therefore, it is necessary to know the clinical manifestations of hypoparathyroidism and the methods of providing emergency care in case of a hypoparathyroid crisis. An attack of tetany (hypocalcemia crisis) is an urgent condition and requires immediate assistance, as it can be accompanied by laryngo- and bronchospasm, which leads to asphyxiation. In addition, during a hypocalcemic crisis, prolonged and intense coronary spasm is possible, which can lead to severe violations of coronary blood circulation.

Basic concepts: thyrotoxic crisis, hormone, parathyroid glands.

Theoretical questions:

- Analyze complaints, medical history, data of an objective examination in a patient suspected of insufficiency of a pair of thyroid glands.
- To explain the mechanism of symptoms of parathyroid insufficiency.
- To propose an algorithm for the provision of emergency care in case of insufficiency of a pair of thyroid glands.

- Classify the convulsive syndrome in case of parathyroid insufficiency.
- Analyze complaints, medical history, objective research data in a patient with thyroid pathology and suspected thyrotoxic crisis.
- Explain the mechanism of thyrotoxic crisis symptoms.
- Compile an algorithm for providing emergency care in thyrotoxic crisis.
- Classify the symptoms of thyrotoxic crisis.

Questions for self-control:

Causes and symptoms of acute insufficiency of parathyroid glands.

Emergency care for acute insufficiency of a pair of thyroid glands (tetany).

Causes and symptoms of thyrotoxic crisis.

Algorithm for providing emergency care in thyrotoxic crisis.

Identify thyroid disease syndromes.

Make a preliminary diagnosis.

Carry out differential diagnosis of hyperthermic condition, acute cardiovascular and liver failure and thyrotoxic crisis. Formulate the final diagnosis.

Justify and draw up a treatment plan for a patient with a thyrotoxic crisis.

Make a table of differential diagnosis of the convulsive syndrome.

Check patients for Trousseau and Khvostek symptoms.

Name the causes of acute insufficiency of a pair of thyroid glands and its symptoms.

To draw up and substantiate a plan of care for acute hypoparathyroidism.

Indicative tasks for working out the theoretical material

lu:

2. Compile a dictionary of basic concepts on the topic:

Term	Definition
insufficiency of the parathyroid glands	
thyrotoxic crisis	
Trousseau and Chvostek's sign	

2. Practical works (tasks) that will be performed during the lesson:

A 23-year-old woman with complaints of convulsions, headache, and decreased vision has been ill for two years. The onset of the disease is associated with surgery on the thyroid gland. The first symptoms were paresthesias in the limbs and infrequent seizures (1-2 times a year). She received treatment with calcium preparations not systematically. Recently, the condition has worsened, frequent seizures (1-2 times a day) are disturbing. The examination revealed positive

Trousseau and Khvostek symptoms. General analysis of blood and urine without changes. Ionized calcium 0.51 mmol/l (N=1.17-1.29 mmol/l), parathyroid hormone 3.7 pg/ml (N=10-62 pg/ml).

- 1) Formulate a diagnosis. Explain on the basis of which features it is established.
- 2) What additional examinations should be carried out?
- 3) Make a treatment plan.
- 4) Describe changes in ionized blood calcium in hypo- and hyperparathyroidism.
- 5) To characterize the changes in the teeth and jaw bones in diseases of the parathyroid glands.

3. Test tasks for self-control:

It will determine the concentration of which substance in the blood regulates the function of the parathyroid glands:

- A. Calcium
- B. Phosphorus
- V. Kaliya
- G. Thyrotropin
- D. Calcitonin

What method can be used to determine the volume of the parathyroid glands:

- A. X-ray research
- B. Ultrasound research
- V. Palpatory research
- G. Reflexometry
- D. Rheovasography

Determine the condition that can be the cause of a convulsive syndrome:

- A. Hypocalcemia
- B. Hypophosphatemia
- V. Hyperglycemia
- G. Hyperchloremia
- D. Hypermagnesemia

In the complex treatment of thyrotoxic crisis, the following drugs are prescribed, except:

- Propranolol.
- Lugol's solution.

adrenaline Cordiamine.
40% glucose solution.

Which of the following signs are characteristic of a thyrotoxic crisis?

Hypothermia.

A decrease in the level of thyroid hormones.

Pretibial myxedema.

An increase in the level of cortisol in the blood.

Tachycardia.

A decrease in the concentration of calcium in the blood.

Which of these drugs has the property of inhibiting the conversion of thyroxine into triiodothyronine in the treatment of thyrotoxic crisis?

Propranolol.

Norepinephrine.

Thiamazole.

Prednisone

Potassium iodide.

A 37-year-old patient was taken to the intensive care unit. According to relatives, he had been taking thiamazole for a year (with the exception of the last two months). The general condition is very serious. Sharp psychomotor excitement. The skin is hot, moist, hyperemic, body temperature is 39.40 C, breathing is shallow. Pulse 180 bpm, atrial fibrillation, blood pressure 100/40 mm. mercury Art., preprandial glycemia 5.6 mmol/l, acetone in urine. What is the previous diagnosis?

Thyrotoxic crisis.

Hyperosmolar coma.

Hypoglycemic coma.

Hyperlactacidemic coma.

Ketoacidotic coma.

Topic: Acromegaly. Etiology. Clinic. Diagnostics. Dental manifestations

Purpose: Acromegaly is a rare endocrine disease, the main visual manifestation of which is the growth of cysts of the facial skeleton and jaw. A dentist should have an idea of the main causes, symptomatology and methods of treatment of these diseases, as well as emergency conditions against the background of these diseases.

Basic concepts: Pituitary gland, growth hormone.

Theoretical questions:

- Analyze complaints, medical history, data of an objective examination in a patient with suspected acromegaly.

- Explain the mechanism of symptoms of acromegaly.
- Analyze complaints, medical history, objective research data in a patient with acromegaly.
- Methods of treatment of acromegaly.

Questions for self-control:

Causes and symptoms of acromegaly.

Proiesti differential diagnosis of acromegaly.

Formulate the final diagnosis.

Justify and draw up a treatment plan for acromegaly.

changes in the oral cavity in acromegaly.

Indicative tasks for working out the theoretical material

lu:

3. Compile a dictionary of basic concepts on the topic:

Term	Definition
Acromegaly	
Hormones of the anterior lobe of the pituitary gland	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

TASK 2.

Patient V., 45 years old, complains of headache, visual impairment, and increase in shoe size. From the anamnesis data, it is known that during the last two years he was ill with pneumonia three times. Objectively: the condition is relatively satisfactory, an increase in the size of the nose, eyebrow arches, auricles, hands, feet. The skin is pigmented, thickened. The chest is barrel-shaped, the intercostal spaces are widened. Pulmonary sound with a boxy tone on the lungs, auscultatory - vesicular breathing. The activity of the heart is rhythmic, tones are muffled, systolic noise at the apex. Heart rate 80 per minute, blood pressure 160/90 mm Hg. The tongue is enlarged. The abdomen is soft, painless on palpation. The liver protrudes 3 cm from under the edge of the costal arch. There is no peripheral edema.

Your previous diagnosis?

A. +Acromegaly

- B. Itsenko-Cushing's disease
- C. Hypertensive disease
- D. Chronic persistent hepatitis
- E. Hypothyroidism

Hyperproduction of somatotrophic hormone is observed in pituitary adenoma. What term characterizes the growth of spongy bone tissue in late life?

- A** *Acromegaly
- B** Splenomegaly
- C** Hepatomegaly
- D** Cataract
- AND** Giantism

Topic: Secondary osteoporosis. Dental manifestations.

Purpose: In general, the diagnosis of osteoporosis is at a low level, mainly because its first clinical manifestation is a fragility fracture. the importance of this disease in dental practice is increasing every year, so understanding the causes of this disease is relevant

Basic concepts: bone mineral density, osteoporosis, fragility fracture.

Theoretical questions:

Definition of osteoporosis

Secondary osteoporosis. Definition.

Bone mineral density. Definition.

Risk factors of secondary osteoporosis.

Methods of diagnosing osteoporosis.

Methods of treatment of osteoporosis.

Methods of prevention of osteoporosis.

Dental manifestations of osteoporosis.

Questions for self-control:

Definition of osteoporosis

Secondary osteoporosis. Definition.

Bone mineral density. Definition.

Risk factors of secondary osteoporosis.

Methods of diagnosing osteoporosis.

Methods of treatment of osteoporosis.

Methods of prevention of osteoporosis.
Dental manifestations of osteoporosis.

Indicative tasks for working out the theoretical material
lu:

4. Compile a dictionary of basic concepts on the topic:

Term	Definition
Osteoporosis	
Secondary osteoporosis	
Bone mineral density	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

A 40-year-old woman underwent a bilateral adnexectomy 5 years ago. Complains of weakness, fatigue, absence of menstruation, lower back pain, memory loss, does not remember recent events. During the examination, the presence of obesity, osteoporosis and hypercholesterolemia. What syndrome is observed in the patient?

- A. Postcastration syndrome
- B. Androgenital syndrome
- C. Adiposogenital dystrophy
- D. Psychoneurotic syndrome
- E. Climacteric syndrome

A 49-year-old woman complains of pain in the shoulder joints that worsens during movements, limitation of mobility, and short-term morning stiffness. The patient has been ill for several years. In the past, she was engaged in sports gymnastics. On the x-ray of the shoulder joints - narrowing of the joint space, subchondral osteosclerosis, osteophytes in the lower inner part of the head of the humerus. What is the basis of the pathogenesis of joint damage in the patient?

- A. Violation of cartilage metabolism
- B. Deposition of immune complexes in the synovial membrane
- C. Violation of uric acid metabolism
- D. Deposits of calcium pyrophosphate in the joints
- E. Damage to the synovial membrane by an infectious agent

A 35-year-old patient, after a festive feast the day before, was hospitalized with complaints of severe pain in the 1st metatarsal-phalangeal joint of the right foot, which appeared suddenly at night, difficulty walking. Objectively: the metatarsal-phalangeal joint is swollen, hyperedematous, hot to the touch, painful during movements. Blood: erythrocytes - $5.1 \cdot 10^{12}/l$, Hb - 155 g/l, leukocytes - $13.0 \cdot 10^9/l$, erythrocyte sedimentation rate - 50 mm/h, CRP - 46 mg/dL, uric acid - $720 \mu\text{mol} / l$. Ro-graphy of the joints of the feet: osteoporosis, narrowing of inter-articular spaces, multiple erosions (punctures). Make a preliminary diagnosis:

- A. Gout
- B. Osteoarthritis
- C. Reactive arthritis
- D. Rheumatoid arthritis
- E. Psoriatic arthritis