Ministry of Health of Ukraine

Zaporizhzhya State Medical University

Department of Internal Diseases -1

CASE HISTORY IN THE THERAPEUTIC CLINIC

Educational-methodical textbook

Zaporizhzhya - 2017

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The Methodical Recommendations were confirmed at the Central Methodological Council sitting in Zaporozhye State Medical University and recommended for publishing (protocol № 3, since 02.03.2017).

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The need for this methodical recommendations due to new requirements on writing case history in a therapeutic clinic. Methodical recommendations correspond to the program of discipline "Internal medicine" for students in higher educational institutions III-IV accreditation. Specialties: 7.12010001 "Medicine" 7.12010002 "Pediatrics." The manual provided with the necessary guidelines and requirements on writing case history of internal medicine and proper mastering practical skills during supervision of patient. Algorithms of differential diagnosis, clinical diagnosis components and examples of it formulation will allow students to learn the subject "Internal medicine" and develop clinical thinking of the future doctor.

CONTENT

INTRODUCTION

The aim of the publication is a synthesis of teaching materials for writing case history for students, under the program of discipline "Internal Medicine". Methodical recommendations designed for practical classes and independent work of students during the studying subjects. Practical classes, clinical visitations with a professor, associate professor or assistant department is the most important part of the educational process in the teaching of internal medicine at the IV and V courses (Modules 1 and 2).

Participation of students in the diagnostic and treatment process of outpatient and inpatient patients under supervision of the teacher, curation of thematic patients, mastering the technique of differential diagnosis and writing case history is binding means of learning, that most significantly impact on the mastering of practical skills and abilities in the discipline.

The publication given educational materials about methods of differential diagnosis in the clinic of internal medicine, guidelines and requirements for the academic case history, clinical diagnosis formulation according to the standards and protocols for diagnosis and treatment of the Ministry of Health of Ukraine and approved accordingly on the classifications.

Material, reproduced in the publication, will help to optimize students' practical training in methods of Supervision patient and facilitate the assimilation of clinical thinking skills as the basis for diagnostic and treatment process.

RECOMMENDATIONS AND REQUIREMENTS FOR REGISTRATIONCASE HISTORY AT THERAPEUTIC PATIENT

Case history is the main document, in which physician reflects and analyzes all the events, associated with the health of the patient, producing a concept idea of diagnostic and treatment. It is the document, in which you must substantiate the diagnosis by yourself, guided all the knowledge and information about the patient (survey, cover sheet by emergency doctor, hospital records, interviews with relatives or witnesses), data of directly (inspection, palpation, percussion, auscultation), laboratory and instrumental investigations. In addition, a case history must contain information of the course of disease, treatment, end of the disease.

Case history is a medical legal document, that reflects the work of the doctor, his experience, knowledge, professionalism, ability to think clinically. It is the evidence of proper patient management by physician and/or errors committed by him.

The scheme of history is based on the following main sections:

- Title-page
- Complaints
- History (anamnesis) of illness
- History (history) of patient's life
- Objective patient's state
- The preliminary diagnosis and its grounding
- Plan of patient's examination
- Data of laboratory, instrumental methods of research and consulting experts
- Temperature sheet
- Differential diagnosis
- The final clinical diagnosis and its grounding
- Etiology and pathogenesis
- Treatment and its grounding
- Prognosis and expertise of work capacity
- Prevention
- Diary
- Epicrisis on discharge

Title-page model

Head of Department
Internal Diseases 1
Professor V.D. Syvolap
Teacher: _____

CASE HISTORY №_____

Clinical diagnosis

Main disease:

_____

_____

_____

Complications of main disease:

_____

_____

Concomitant diseases:

_____

_____

Curator: _____
student IV course ___ group,
_____ faculty
Curation beginning: _____
Curation ending: _____

Registration of passport

Passport data

The initials of the patient _____

Gender _____ Age _____

Planned or emergency admission_____

Time of admission (year, month, date, hour)_____

Department profile _____

Discharge date _____

COMPLAINTS

This section voiced complaints that patient brings during a hospitalization at the clinic. You must hold details of their (the nature, severity, causes, duration, etc.). If there are attacks of the disease, you should describe details of the beginning of the emergence of the attack, its course, duration, what factors facilitate or medications are stop this attack. Often a student receives for supervision patient, who spent 5-6 days in the hospital and more. Therapy that is held during this time, has changed both subjective and objective symptoms of the disease. Patient does not provide any complaints in an interview with the curator. In such cases ever need to express those subjective manifestations that were at the time of hospitalization. In this situation, a curator says: "At the time of the survey no complains" and cites a complaint at the time of hospitalization.

Student (physician) got the complete picture of complaints by questioning the patient according to the scheme below. It should be noted, that the survey on systems is not taken out in a separate section of educational history, and held to clarify and detail complaints. Complaints recorded to the case history in edited form, first of all noted complaints related to the main disease, and afterward everyone else.

The scheme of focused patient survey on systems

Respiratory system

Cough:

• Dry or sputum;

• appearance: morning, evening, night;

• continuous or periodic;

• nature of cough: loud, strong, dumb, cursing;

• A cough occurrence: in connection with certain posture (which it is), after eating, etc.

Sputum:

• daily amount;

• cough up: easily, with an effort, in which the situation better;

• the nature and color of sputum;

• sputum odor;

• consistency;

• the number of layers and their characteristics.

Hemoptysis:

• intensity: streaks or pure blood;

• color of blood: red, dark;

• frequency.

Chest pain:

• nature of pain: dull, sharp, aching, prickly;

• connection of breath;

• what relieves pain;

• appearance: pressure on the chest, during torso in different directions.

Breathlessness:

• constant, at rest, during exercise, walk, depending on the position in bed, while talking;

• inspiratory, expiratory, mixed.

Cardiovascular system

Heart pain:

• permanent or paroxysmal;

• localization (chest, in the heart, in the region of the apical impulse, etc.);

• irradiation;

• character: aching, stabbing, squeezing, dull;

• what are accompanied by - a sense of anguish and fear, weakness, cold sweat, dizziness, etc.;

• intensity;

• duration;

• frequency of pain attacks;

• the causes and circumstances of the emergence of pain (during exercise, excitement, while sleeping, etc.);

• behavior and position of the patient during an attack of pain;

• what has a therapeutic effect.

Feeling of disruption of the heart.

Palpitation:

• the heartbeat character: permanent, seizures (intensity, duration, frequency);

• terms of appearance: during exercise, alone, when changing body position during the excitement and etc.;

• what are accompanied (breathlessness, pain in the heart, etc.), what are making the pass;

Edema: on the legs and elsewhere, while they appear (morning or twilight);

Feeling pulsations: which parts of the body to the bottom, what are making the pass.

Signs of peripheral vascular spasm: intermittent lameness, feeling "dead finger"; of what they are called and pass.

Digestive system

• appetite: good, low, high, warped, aversion to food (that).

• saturation: normal, fast, constant hunger.

• craving: how many drinks per day of liquid, dry mouth.

• taste in the mouth: sour, bitter, metallic, sweet, dulling or loss of taste.

• breath out of the mouth: rotten, sweet, ammonia, sour, smell of rotten apples, etc.

• swallowing and passage of food: painful, difficult, which food does not pass?

• salivation.

• regurgitation: the time of occurrence, severity, volume.

• heartburn: relationship with food, which relieves the heartburn?

• nausea: dependence on food and its character.

Vomiting:

• on empty stomach, after meals (immediately or after a certain period of time); feeling that preceded vomiting, relieves it patient's feeling;

• character of the vomiting: food eaten, bile, coffee color of density, with impurities of fresh blood, etc .; their odor (rotten, sour, etc.), odorless.

Abdominal pain:

• localization and irradiation of pain;

• what circumstances arise before meals, after meals (how long), night pain. Does pain decrease immediately after eating? Other factors that facilitate pain (vomiting, medications, heat, etc.);

• depending on the nature of the food (coarse, oily, spicy, etc.) or it quantity;

• pain of nature: sharp, dull, aching in the form of attacks or slowly growing;

• duration of pain;

• what is accompanied;

• whether there is jaundice, dark urine, feces discolored after the attack of pain;

• fullness and heaviness in the stomach.

• bloating, gas discharge, rumbling in his stomach.

Emptying:

• regular, irregular, alone or after enemas, purgative drugs.

• constipation on few days.

• diarrhea, associated with what, how many times a day;

• are there tenesmus;

• the stool (watery liquid, like rice broth, etc.), colors and scent of feces; impurities: blood, pus, undigested food remnants, worms;

• bleeding (before defecation, during or at the end of it).

• heartburn, itching, pain in the anus.

• rectal prolapse.

Urinary system

Pain in the lumbar area: character (dull, sharp, paroxysmal), irradiation, duration, from what appear or increase, what accompanies, relieves pain.

Urination:

• free, with an effort, conventional jet, thin, intermittent, down (interview only men);

• cramps, heartburn, pain during urination;

• frequency of urination, especially at night;

• the amount of urine per day;

• urine: normal, dark color "meat scrap of soap", beer, etc.

• presence of blood during urination: at the beginning, in all portions of the end;

• the presence of uncontrolled urination.

Musculoskeletal system

• **Pain** in extremities, joints. The nature of the pain, connection with the changes of weather, physical exercises, stress; the appearance of pain at rest, at night.

• **Swelling** of joints, hyperemia (which it is).

• **Difficulty** during the movement (in which of the joints), stiffness in the morning, its duration.

• **Pain and difficulty** in the movement in the spine (which department), irradiation of pain.

Endocrine system

• Violation of stature and constitution.

• Violation of weight (obesity, weight loss).

• Skin changes (excessive sweating or dryness, roughness, red leather, discoloration).

• Violation of primary and secondary sexual characteristics; dysmenorrhea and infertility in women; impotence in men.

• Violation of hairy (excessive development, appearance of hair on extrinsic of this sex places, hair loss).

The nervous system, organs of the senses

• Night rest (sleep deep, superficial, with frequent waking, creaky, without dreams, from dreams, color dreams, etc.)

• Condition after sleep (cheerfulness, improve health, weakness)

• Memory (excellent, good, normal, low, very bad).

• Mood - morning, in the first, in the second half of the day (excellent, good, satisfactory, bad, very bad).

• Attention (excellent, good, fair, bad, very bad).

• Headache (localization, character, something associated with its occurrence, frequency, duration, accompanying symptoms: tinnitus, vertigo)

• Violation of gait, trembling limbs, seizures, abuse hides sensitivity.

• Fever.

• Increasing temperature and its fluctuations during the day (the nature of the curve).

• The rate of temperature increasing and duration of fever. What does lower the temperature?

• Is chills preceding the fever, is sweating appearing after lowering the temperature, intensity of sweating, night sweats.

Complaints, received on closer questioning, assist formation prior understanding of the diagnosis.

Example 1. Patient N., 45 years old, at first felt pain behind the breastbone character shaking, it appears at rest, irradiation to IV and V fingers of left hand and neck, duration about half an hour, after taking nitroglycerin pain had passed for 10 minutes. The likely diagnosis "angina pectoris".

Example 2. Patient M., 56 years old, fell ill with acute sudden fever to 38.5, which passes from receiving antipyretic, with fever, cough with purulent sputum, two days later - joined by pain in the right half of the chest, appeared in breath, shortness of breath when speaking. The likely diagnosis "pneumonia, community-acquired".

HISTORY OF THE ILLNESS
(ANAMNESIS MORBI)

This section shows the beginning of the disease and its dynamics by the time of admission to the clinic (hospital).

During the questioning you should get answers to the following questions:

- When, where and at what circumstances patient was ill.
- How did the disease begin (acute, gradually).
- What are the causes of disease (in the opinion of the patient). Set the possible impact external environment (occupational, household, climatic and weather factors), physical or emotional stress, intoxication, errors in diet. infectious diseases (adenovirus infection, influenza, sore throat)on the occurrence of disease and the.
- What are the first signs of illness.
- When and which first aid was provided, its effectiveness. What changes were occurred in the condition of the patient from the beginning of the disease to today (recurrent complaints of the patient).
- In case of chronic type of the disease you must repel disease recurrence and their signs, periods of remission, its duration in chronological order.

- What investigations were conducted to the patient and their results. If possible, use patient card, extract from history, radiographs, spirogram, ECG and other documents.
- What treatment was applied at various stages of the disease, its effectiveness.
- What was the cause of this deterioration, describe the main symptoms of its manifestation in details.
- How does the patient's condition change during his stay in the hospital until the patient supervision (specifically for expression and characterization of symptoms).

PATIENT HISTORY OF LIFE
(ANAMNESIS VITAE)

- Brief biographical data (place of birth, growing and developing, training, profession, marriage, pregnancy, childbirth).
- Employment history (beginning employment, profession, it changes, working conditions, industrial hazard, using supply, service in the armed forces, in the war).
- Housing and living conditions in different periods of life of the patient, family members.
- Eating (mode, frequency, nature of food - its diversity, calories).
- Transfer of diseases, trauma, surgery, concussion, injury, tuberculosis, sexually transmitted diseases: indicating the severity and duration of illness, complications, treatment measures; intervention parenteral (subcutaneous, intramuscular, intravenous, blood transfusions, treatment and extractions), contact with patients who has viral hepatitis "B" and "C".
- Epidemiological history, contact with infectious patients.
- Bad habits: smoking, from what age smokes, quantity of cigarettes per day; alcohol, from what age, at what quantity, how often; Other bad habits (drugs, strong coffee or tea).
- Family history and heredity (parents, siblings, children - their health, causes of death), hereditary disease (congenital abnormalities, mental illness, syphilis, diseases of metabolism and others.) Burdened history (alcoholism, malignancies, endocrine diseases).

- Allergic history: the presence of allergic diseasesat the patient, his family and children; reactions to blood transfusions, serum inections, vaccines and medications (where and when); reactions to different foods, beverages (food allergy), cosmetics, fragrances, and pollen of various plants. Reaction to contact with a variety of animals, clothes, hair, household dust, linens.
- The impact on the course of diseases, professional factors, various factors (cooling, overheating, radiation).
- Meteo-sensitivity and seasonality. Set the effect of climatic and weather conditions, magnetic disturbances on the course of disease. Describe seasonality of exacerbations, their cause (infection, atopy, weather, etc..).
- Efficiency: the number of disability days in the year, the presence of disability.

According to the history of life you most likely found out the etiological factors of the disease, identify the leading entities or the range or syndromes. From all obtained information you should choose the one, that shows the relationship of the main pathology.

OBJECTIVE PATIENT'S STATE (STATUS PRAESENS)

- The general condition of the patient: satisfactory, moderate, severe.
- Consciousness: clear, depressed, stupor, sopor, coma, agitation, euphoria, delusions, hallucinations.
- Position of the patient: active, passive, forced.
- Facial expression: calm, excited, embarrassed, mask form.
- Pace: free, bound, cheerful, duck, specific (hemiparesis, Parkinson's, etc.).
- Constitution: correct, incorrect.
- Constitutional type (normostenic, asthenia, hypersthenic), height, weight. Ketle index (kg/m2).
- Skin and visible mucous membranes: color (pale, pale pink, red, cyanotic, yellow, earthy, pigmentation, depigmentation); rash (erythema, roseola, papules, pustules, vesicles, bull, petechiae, burning, bruising, erosions, fissures, ulcers); scars, spider veins, xanthoma, xanthelasma; skin moisture; skin turgor; type of body hair.

- Subcutaneous Cell: developed weakly, moderately, severe; place of the largest fat deposits; characteristics of edema localization and prevalence (general, local); skin color in the area of edema (pallor, cyanosis, redness), quality (mobile, soft, etc.).
- Lymph nodes: submandibular, cervical, supra- and subclavicularis, elbow, inguinal. Determining their size, texture, tenderness, mobility, adhesions between themselves and with the skin; tonsils, their size, color, presence of purulent plugs in the gaps.
- Muscles: degree of develop (normal, excessive, weak muscle atrophy - general or local), tone (high, low, normal); pain during palpation and movements; shaking or tremor of certain muscles; paresis, paralysis of limbs.
- Bones: explore the skull, chest, pelvis and extremities to identify the strain, periostitis, curvatures, acromegaly, changes of the terminal phalanges of hands and feet, drum fingers, pain during palpation.
- Joints: configuration (normal, swelling, deformity); local skin redness and fever in the joints; the amount of active, passive movements (free or restricted); pain during palpation and during movements; crunch, fluctuation, contractures, ankylosis.

Respiratory system

- Review (inspectio) (in the presence of suffocation – its nature, breathing, the number of breaths in 1 minute), the shape of the chest, bulging or retraction supra- and subclavicularis pits);
- palpation (palpatio) (resistance, chest pain, voice trembling);
- percussion: comparative percussion, definition blunting zones, tympanitis, etc. with their size and preciselocation, determine the nature of percutanic sound (clear lung sound, blunting, stupidity, box). Topographic percussion – determination of height standing tops light front and rear, lower borders, edge stours lung cm;
- auscultation, breathing character (vesicular, bronchial, hard, etc.), wheezing (dry and wet, large -, medium – and finely bubling, sonorous, not sounding, crackling, pleural rub their exact location) bronchophony.

Cardiovascular system

Review (visible pulsation of vessels, carotid dance, cardiac humpback, apex and cardiac beat:

- palpation (apical and cardiac impulse, its location, systolic and diastolic tremor);
- percussion (heart borders - relative and absolute stupidity, the configuration of the heart, vascular bundle width in cm);
- auscultation (heart sounds - clear, deaf, noise, their characteristics, pericardial friction noise);
- investigation of vessels: examination (visual pulsation) and palpation accesible arteries, temporal, bow and brachial arteries convolution and density, auscultation of carotid, femoral artery, phenomenon Traube-Vinogradov, auscultation of neck veins (noise broomrape);
- pulse: frequency, filling, tension, rhythm, form; availability of pulse asymmetry, in arrhythmia auscultation of the heart simultaneous with counting pulse beats (the definition of so-called pulse deficit); capillary pulse;
- blood pressure in both arms, in arterial hypertension - blood pressure in the lower extremities.

Digestive system

- Examination: oral cavity, mucous membranes, tongue, its coatedness, the state of its papillae, cracks, ulcers, gums, teeth;
- Abdomen (a form of participation in the act of breathing, expansion of subcutaneous veins), visual stomach and intestine peristalsis;
- Palpation - surface (strained abdominal Schotkin-Blumberg symptom, pain, its localization, divergence of straight abdominal muscles); deep (by Obraztsov-Strazhesko). Detection of ascites and percussion by determining fluctuations.
- Stool: regularity and nature;
- Liver: percussion determine the size of the liver – finding lines (dimension by Kurlov). If the liver is palpable, that speech from the costal arch - size, tenderness, surface (smooth, bumpy), the edge (sharp, rounded), texture (firm and soft). A Special examination of gallbladder area.
- Pancreas. Palpation by Groth.
- Spleen: palpation in different patient's positions (on the back, on the right side), its size, shape, texture and surface condition; percussion of the spleen - dimensions in cm (length and diameter).

Urinary system

- Examination of lumbal area;
- Palpation of the kidneys (size, shape, consistence, position). Tapotement symptom. Urination (free, painful, etc.).

Neuroendocrine system

The mood of the patient, sleep, memory, pupillary reflexes, a symptom of Romberg, the character of dermographism, exophthalmos (unilatelar or bilateral), ocular signs' availability, thyroid gland examination and palpation. Vision. Hearing.

PRELIMINARY DIAGNOSIS AND ITS GROUNDING

Preliminary diagnosis is based on complaints, medical history and objective data, directly supporting the presence of the disease (only those features that are characteristic of the disease), and takes into account the effectiveness of the treatment carried out. If possible, the diagnosis consist of form, phase, stage, course of disease, etc. Justification main, accompanying (therapeutic) diseases and complications are held separately.

It should provide objective and subjective symptoms, formulate syndromes and put the nosological diagnosis. The diagnosis should include:

• The main disease that caused of hospitalization;

• Complications, caused by the main disease;

• Functional diagnosis of the main disease, which should show the state of the affected organ: compensation or decompensation, the stage of it.

• Concomitant disease, which pathogenesis is not connected to the main disease;

• Complications, caused by concomitant disease;

• Functional diagnosis of concomitant diseases.

Justification preliminary diagnosis must be written by the analysis of complaints, history of illness and life, data of objective review of the following items:

• list the complaints that indicate a primary damage of a particular organ or system (at example, typical pain, presence of fever, shortness of breath, etc.);

• list the data of a history of the illness, which can be concluded about the preliminary diagnosis (at example, indication of the myocardial infarction in

anamnesis, analysis of available electrocardiograms, indication of carryover renal colic, etc.);

- list the data of a history of life, that indicate the disease (at example, family history, the presence of professional effects, bad habits - alcohol abuse, etc.);
- list the data of objective examination, that revealed abnormalities in physical status, or any symptoms (at example, presence of obesity, cardiomegaly, wheezing in the lungs, cyanosis, etc.), that suggest the disease;
- formulation the diagnosis of basic nosology should provide data, which can be more specific diagnosis with indication stage and forms of the disease, phase, level of activity, degree of functional disorders, etc;
- list the data that indicate the presence of disease complications;
- formulate the diagnosis of comorbidity patology, which may have an impact on the existing main disease.

Example the formulation of this section can be represented in such a way:

- On the basis of complaints for a long discomfort in the right upper quadrant, periods of simultaneous bleaching stool and dark urine, episodic itching, jaundice skin and mucous membranes, drowsiness during the day and insomnia at night.
- On the basis of history of the disease: the patient known fact (from the words of doctors) of liver enlargement, cholecystectomy surgery 10 years ago, previous hospitalization for gastroduodenal bleeding.
- On the basis of history of life: alcohol abuse, poor nutrition and social circumstances.
- On the basis of objective examination: ascites, peripheral edema, splenomegaly, expansion of subcutaneous veins in the abdomen "Medusa head", icteric skin and sclera, the presence of spider veins and palmaris erythema.
- You can formulate the preliminary diagnosis: liver cirrhosis, alcoholic etiology.
- The data indicate of portal hypertension: ascites, splenomegaly, "the head of Medusa" reference of the bleeding.
- The data indicate of jaundice: itching, icteric skin and sclera, discoloration of stool and dark urine.

- The data indicate of hepatic encephalopathy: insomnia, inadequate related to their illness.
- The data indicate liver failure: palmaris erythema, spider veins.
- Comorbidity pathology: condition after cholecystectomy, chronic pancreatitis.

PLAN OF PATIENT'S EXAMINATION

Based on the previous diagnosis, student plans of the individual supervision examination of the patients, consult other specialists.

Additional methods must aim to address issues of diagnosis, functional condition of organs and systems, involved in the pathological process, the degree of activity and severity of disease.

The plan of laboratory and instrumental examination should include:

• Clinical blood analysis every 7-10 days;

• Urinalysis every 7-10 days;

• Cal for helminthes eggs;

• Analysis of blood on AIDS, syphilis;

• Identification of blood group and Rh factor;

• Blood sugar level;

• Chest x-ray (if the last year was not performed);

• Electrocardiogram;

• Weigh patients every 10 days.

• The list of special laboratory and instrumental investigations to be carried out to identifying the patient's pathology (specify).

DATA OF LABORATORY AND INSTRUMENTAL INVESTIGATIONS SPECIALISTS CONSULTING

This section presents the results of mandatory and additional investigations, the findings of consultants. It is advisable to bring normal parameters and units of measurement in the additional column of laboratory and instrumental investigations. The interpretation of the data.

The same type of investigations better position in the table, which will highlight the dynamics of the level of peripheral blood leukocytes on the background of the pneumonia therapy by antibacterial drugs, or, the levelof hemoglobin in patients with anemia, receiving iron supplements.

Also, analysis of patient's ECG with myocardial infarction should not be formal. It would be grounded, if you introduce the dynamics of teeth and segments in specific leads (presence of pathological wave Q, segment ST elevation, in which leads, etc.).

So you can confirm the assumptions, put forward as a concept diagnostic conclusion in the previous section.

TEMPERATURE SHEET

Temperature sheet: curve of temperature, pulse rate, the number of breaths, schedule of blood pressure, weight, volume of drunk, intravenously injects and isolated from body liquid.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis is done by comparing the most important symptoms of main disease in a patient with similar signs of other diseases.

This section begins with a rationale for the choice of the disease, with which will be differentiation. Since describes the common symptoms of the patient's disease with similar diseases. Further, you compares each symptom in a patient with similar symptoms of a disease with display differences of their manifestations.

It is necessary to consider the absence of symptoms, typical for another disease and the presence of symptoms, not typical for another disease.

Differential diagnosis is made in the same order, which conducted examination of the patient: at first compared the complaints, next the results of history of illness and life, physical examination results, and finally, additional methods of investigations, confirming the main disease.

Remark: Use only the symptoms and the results of additional investigations, that are present in this patient.

Example: Chronic glomerulonephritis, hypertensive form, exacerbation phase. Uncomplicated. Without renal dysfunction. Urinary syndrome is the leading in chronic glomerulonephritis, without which we can not confirm the disease.

Specific features of urinary syndrome for the disease include are substantial daily proteinuria combined with microhematuria and cilindruria. Such signs are in secondary amyloidosis, vasculitis (Goodpasture's syndrome) periarteriitis nodosa. In chronic glomerulonephritis was damaged the glomerular apparatus, develops outside the kidney syndrome - renal symptomatic arterial hypertension, the compensatory response of the whole organism to damage renal parenchyma (glomerular apparatus). Hypertension is not typical for amyloidosis and Goodpasture's syndrome.

In Goodpasture's syndrome was damaged the lung vessels (pneumonitis).Since in this case there is no pulmonary damage in duration disease more than 3 years. That's why this process is less likely, but necessary for excluding pneumonitis we must use pulmonary radiography and sputum analysis. In secondary amyloidosis at such urinary syndrome should be nephrotic syndrome, a history of chronic purulent process, tuberculosis. Because they are absent, this disease is excluded too.

So, if we find the typical urinary syndrome, you begin to actively search out similarities or differences on the basic syndrome in diseases included in the differential row. The absence of direct primary criteria for the syndrome, typical for these diseases, allowing them to be excluded. Then the differential diagnosis include other non-driving, pathogenesis related, available in patient symptoms. The most likely process is formulated as a preliminary diagnosis.

FINAL CLINICAL DIAGNOSIS AND ITS GROUNDING

In this section diagnostic version should be possible fully disclosed and confirmed, because correct diagnosis helps to selected effective treatment.

Specify, which investigation data confirmed the preliminary diagnosis, which clarified form, phase, level of activity and complications. It is possible that diagnostic idea after additional examination had to be revised in favor of another diagnosis. It is

not contrary to the principles of medical thinking and does not reduce your ability to think and interpolate information.

All changes and further of diagnosis should find reflection in the text of case history: diaries, epicrisis and so on.

Summary of your idea would look like this:

Grounding of final diagnosis must be written by the repeating analysis of complaints, anamnesis of illness and life, data of objective examination. There are supplemented by the survey, which confirmed it while grounding the clinical diagnosis provided a link to a preliminary diagnosis and differential diagnosis. Next you used data of additional investigations, confirming the disease. It is necessary to make grounding of basic, comorbidities and complications separately, justifying each position of diagnosis.

Advanced clinical diagnosis is formulated in accordance with the requirements of the classifications approved by the Ministry of Health of Ukraine or doctor's congresses. In the diagnosis reflect the following sections:

• Etiology (if it is known);

• Clinical (morphological) variant of the disease;

• Phase (exacerbation or remission);

• Stage of the course;

• Some of the most distinct syndromes (the result of the inclusion in the pathological process of various organs and systems);

• Complications.

Example of this section's formulating can be represented as follows:

• Based on patient complaints at constant shortness of breath when walking, outflow of muco-purulent sputum in the morning during the last 3 years;

• On the basis of history of illness: the presence of chronic obstructive bronchitis over 15 years with exacerbations 3-4 times a year;

• The presence of such manifestations: found during the examination of a horizontal position in bed, diffusive warm cyanosis, jugular venous pulsation, epigastric pulsation, accent of II tone of the pulmonary artery, right heart failure

syndrome - tachycardia, dyspnea, positive Plesha symptom, hepatomegaly, peripheral edema.

• Based on examination data, polycythemia in peripheral blood, X-ray data: increased curves II of cardiac shadow in the direct projection on the left contour, in the right lateral position – conus pulmonalis; right ventricular hypertrophy on electrocardiogram data and echocardiography: right heart hypertrophy; data of lung function (FEV1 = 28%).

We can conclude the presence of the patient:

COPD stage IV, preferably bronchitis type, moderate severity exacerbation; Complications: Respiratory failure III, Chronic pulmonary heart decompensation, IV FC by NYHA.

ETIOLOGY AND PATHOGENESIS OF MAIN DISEASE

Information for this section should be obtained on the analysis of modern literature. The views on the etiology of the disease are presented in summary form. Describe accepted in currently scheme of pathogenesis of this disease and the most probable pathogenetic mechanisms occurring in the patient. Briefly explain the mechanisms of clinical symptoms and syndromes, identified at him. You can use diagrams, tables, graphs and drawings.

TREATMENT

Expounds modern principles of treatment of the main disease by the following plan:

- Mode;
- Diet;
- Psychotherapy;
- Medication:
- Physical therapy;
- Massage;
- Sanatorium treatment;
- Surgical treatment (evidence);
- Clinical surveillance and preventive treatment.

This section should show the main groups of drugs that are used in the treatment of this disease, indications and contraindications to their use. Describe the mechanism of action recommended by the patient drug's and their single daily dose, duration of treatment.

To prove individual treatment of the patient, make the prescription.

PROPHYLAXIS

Primary - prevention of the disease, secondary - prevention of exacerbations of chronic relapse process.

PROGNOSIS AND EXPERTISE OF WORKING CAPACITY

Prognosis grounded with regard of the disease, life and disability. Prognosis can be favorable, unfavorable and questionable.

Prognosis with regard to the disease is favorable if there is confidence to the patient's recovery; questionable - if there is no confidence to the full recovery and unfavorable if the disease is incurable and has a chronic progressive course.

Prognosis with regard to the life can be favorable at the patient is not threatening complications, life-threatening; questionable - if under certain circumstances the patient (considering its age, course of disease progression, complications, treatment efficiency, etc.) can occur fatal case and unfavorable if the patient fatal accident is inevitable.

Prognosis with regard to the disability decided in plan of the temporary or persistent loss of disability taking into account with the degree of functional impairment and the patient's profession.

DIARY

Making the diary:

Date The patient's condition Prescription

In the section "patient's condition" was served the evaluation of the general condition of the patient, describes a complaints, objective data on pathological changes in organs; in the days following shows the dynamics of the disease.

In the section "Prescription" was indicated the regime, diet, treatment conducted, changes in therapy, needed additional investigations.

EPICRISIS OF DISCHARGE

Epicrisis - the final part of history. It is the reduced medical findings about the nature of the disease, its causes, the course of disease and the results of treatment, the patient's condition to the moment of epicrisis, conclusions regarding prognosis and ability of further treatment, treatment and prevention of recurrences.

In epicrisis summarizes the passport data, of the complaints of the patient and their characteristics, history of the illness, the patient's life history (facts related to this disease), clinical symptoms, basic laboratory data and instrumental investigations that confirm the diagnosis. Then put up diagnosis and treatment conducted (single and daily dose applied drugs), the results of treatment, changes in the condition of the patient during treatment. End of the disease (a full recovery, partial recovery, a slight deterioration, condition unchanged, the transition from acute to chronic disease, degradation, death).

During discharge the patient you must evaluate the prognosis regarding recovery, submit an assessment of capacity with considering his profession and place of work (functional, partially functional, indicated the transfer to lighter work required the transfer to disability, group of disability), recommendations for further clinical supervision, treatment and prevention of relapse, sanatorium treatment.

LITERATURE

This section indicates literature that were used in the writing of case history according to conventional bibliographic form (with the name and initials of the authors in alphabetical order of title, source, year and place of publication, page).

Student Signature Date

RECOMMENDATIONS AND REQUIREMENTS FOR WRITING OF HISTORY CASE OF ENDOCRINOLOGY PATIENT

Execution of the title page

Head of internal diseases-1 department

professor Syvolap V.D.

Teacher: _____

HISTORY CASE #

Clinical diagnosis

Main disease:

_____

_____

_____

_____

Complication of main disease:

_____

_____

_____

Concomitant diseases:

_____

_____

Curator: _____

Student of IV course ___ group,

_____ faculty

Start curation: _____

Finish curation: _____

PUBLISHED DATA

Patient's initials _____

Sex _____ Age_____

Education _____

Place of employment, training _____

Personal address_____

Hospitalization planned or urgent _____

Time of hospitalization (year, month, date, hour) _____

Department_____

Discharge date _____

PATIENT COMPLAINTS

In this section complaints which are shown by the patient during hospitalization in clinic are collecting. It is necessary to carry out specification them (character, the expression degree causing them the reasons, duration, etc.) if there is a paroxysmal course of a disease, it is necessary to describe in details the start of attack, its character, duration, factors or medicamental agents which facilitate or stop an attack. Quite often the student receives for a curation of the patient who carried out in clinic of 5-6 days and more. Therapy which was carried out during this time entirely changed both subjective, and objective implications of disease. For example, during this time at the patient with a diabetes mellitus thirst, a frequent urination, delicacy and other implications of a decompensation disappeared. The patient doesn't show complaints in time of conversation with the curator. In such cases in the history it is necessary to specify those subjective implications which were at the time of hospitalization . In such situation in the history case the curator states "At the time of inspection of complaints doesn't show. However five days ago during hospitalization pointed out delicacy, dryness in a mouth, thirst, frequent urinations".

Survey on systems of organs after clarification of the main subjective feelings and their preliminary analysis is conducted. It is expedient to begin inspection with that system which suffers first of all. It will give the chance to gain more general idea about the nature of a disease, quite often defines the course of a further clinical thought, it will allow not formally, but purposefully to conduct survey on systems, to confirm the preliminary diagnosis or to exclude it.

The main references on holding poll on organs and systems. It is necessary to notice that survey on systems isn't taken out in the separate section of an educational case history, but it is carried out for the purpose of specification and detalization of complaints.

a) Respiratory organs. Pains in a thorax when breathing, without connection with breathing. Dyspnea: inspiratory, expiratory, the mixed, temporal, constant. Prescription of a dyspnea, a condition of its appearance (in case of movements, disturbance). Time of appearance of a dyspnea. Position of the patient in time of dyspnea (on one side, orthopnea).

b) Cardiovascular system. Heartbeat: in case of movement, at rest, in case of disturbance, comes paroxysms. Feeling of a pulsation in a breast, on a neck, interruptions in operation of heart, etc. Pains and unpleasant feelings in heart at rest, in case of physical tension, in case of disturbances. Character: pricking, aching, squeezing, etc., duration. Irradiation of pain, the possible reasons, than pain is killed.

c) Digestive organs. Appetite, taste, swallowing, dryness in a mouth, thirst. Dyspeptic phenomena: eructation, heartburn, nausea, vomiting, origin time, hiccups. Gravity and belly-aches: location, communication with food, the nature of pain, irradiation, night pains, than are facilitated, light intervals, the period of peaking of pains. Swelling, abdominal murmur. Stool: frequency, character of feces, impurity of slime and blood. Gases, rumblings. Liver: pains in the right hypochondrium, their character, force, irradiation, communication with food, jaundice, temperature increase, fever.

d) Urinary system. Violation of an urination. Pains in urination. Pains in kidneys, their frequency, duration, irradiation. Heavy feeling and pains in suprapubic area.

e) Nervous system. Headache, dizziness, memory, mood, irritability, irascibility. Working capacity. Dream.

f) Sense organs (hearing, sight).

g) Movement organs. Joint, muscles pains.

h) Temperature increase, sweats, night sweats, chill.

HISTORY OF DISEASE
(ANAMNESIS MORBI)

The anamnesis begins with data of the patient on when where and under what circumstances the first signs of a disease appeared (with their characteristic). The possible reasons which caused a disease become clear. In details in the chronological sequence development of each symptom, accession new, their further development is described. Treatment which was carried out earlier, its efficiency is described. A recurrence, the reasons of their origin, the frequency, remission duration is displayed. The last worsening is described in details , the reasons of the last hospitalization in clinic (worsening in a condition, adjustment of the diagnosis, planned treatment and inspection) are specified.

LIFE HISTORY
(ANAMNES VITAE)

Birthplace of the patient. Development in children's and school years. Accommodation in the area, endemic goiter. Beginning of work and further work (professional route, military service). Data on working conditions, professional harmfulness, specific working conditions, life (housing, clothes) and patient's nutrition at present.

Transferred diseases in the past, since childhood. Venereal illnesses, tuberculosis, viral hepatitis, nervous and psychiatric illnesses. Addictions: alcohol, smoking, salt, etc.

Family and sexual anamnesis: women - time of menarche, their regularity, morbidity, duration, the number of pregnancies and their outcome. Climacterium, time of onset and signs. Almost at all diseases of endocrine system at women disturbances of menstrual function are taped. Having received for the patient's curation, the student of the 4th course who didn't learn obstetrics and gynecology yet, experiences some difficulties. In this regard, for assessment of disturbances of menstrual function it is possible to use the following criteria:

Amenorrhea - lack of a menses for 6 months and more. It is necessary to

distinguish an amenorrhea primary (a menarche, that is the first menses weren't) and secondary (menses were, however stopped and they are absent for 6 months); an opsomenorrhea - a scanty menses; a menorrhagia - menstrual bloody allocations more than 7 days; a polymenorrhea - dense menstrual bleedings more than 7 days; a metrorrhagia - chaotic bloody allocations, dysfunctional uterine bleedings; an oligomenorrhea - an irregular menses with intervals between the first days of two last menses more than 35 days; a dysmenorrhea or an algomenorrhea - an irregular, excruciating menses. Heriditary diseases, constitutional features (obesity, gout, diabetes) at parents and the immediate family. Illnesses and causes of death of parents and close relatives. Allergic reactions to natural, alimentary, medical substances.

RESULTS OF OBJECTIVE EXAMINATION (STATUS PRAESENS OBJECTIVUS)

This section traditionally begins with assessment of the patient general condition. General condition of the patient: satisfactory, middle severity, severe. Consciousness: clear, obnubilation, stupor, sopor, coma, excited, euphoria, rave, hallucinations.

Position of the patient: active, passive, enforced. Face expression: quiet, excited, indifferent, suffering, mask like. Gait: free, held down, vigorous, duck, specific (hemiparesis, parkinsonism, etc.). Constitution: correct, wrong. Constitutional type (normostenic, asthenic, hypersthenic), growth, weight. Kettle's index.

Changes of skin are detected at whole a number of endocrine diseases that forces to suspect this or that endocrine pathology already at the initial stages of survey.

Skin displays of endocrinopathies	
Symptom	Disease
Hyperpigmentation, especially in the area the wrist joints, areolas, genitals, hems, mucous membranes, palmar folds.	Addison’s disease Nelson’s syndrome APUDoma (corticoliberin/ACTH-produced tumor)
"Black acantosis" (acanthosis nigricans - symmetrically located fleecy and warty growths of flaky-black color located in the field of axillary hollows, a crotch)	Obesity Policyst ovarii syndrome Particular forms of diabetes mellitus (for ex., lipoatrophic Lawrence’s diabetes) Hair-an-syndrome (hyperandrogenia+insulinresistance+acantosis nigricans) Metabolic syndrome (syndrome X)
"Dirty elbows" (Ber’s syndrome)	Hyperthyroidism Cushing’s disease
Depigmentation: generalized or local (vitiligo)	Panhypopituitarism Frequently – in case of autoimmune Addison’s disease (in combination with diffuse hyperpigmentation) Diffuse toxic goiter Hypoparathyroidism (autoimmune)
Rough skin: - dry - grease, sweaty	Hypothyroidism Acromegaly
Strias: -wide, cherry red, with bruises - narrow, pink or "nacreous"	Cushing’s disease (syndrome) Puberty-adolescense dispituitarism

Girsutism, frequently in combination with acne vulgaris	Different forms of hyperandrogenia (adrenal and ovarial genesis)
Alopecia	Hypothyroidism Hypopituitarism Virilized syndrome Thyrotoxicosis Hypoparathyroidism
Necrobiosis lipoidica, "a spotty shin", diabetic foot syndrome	Diabetes mellitus

Hypertrophy, and swelling of the mucous membranes in acromegaly leads to a violation of patency of the nasal ways and the paranasal sinuses. Destruction bottom sella turcica with pituitary tumors or certain forms of "empty" sella is accompanied by the development of liquorrhea. Loss of smell is typical of Kallmann's syndrome (a particular form of hypogonadotropic hypogonadism in combination with hypo- and anosmia). Already at the first words spoken by the patient, it is possible to point out some characteristic changes endocrinopathies: quiet, hoarse voice with hypothyroidism due to the deposition of glycosaminoglycans and swelling of the vocal cords, barifoniya - low tone of voice when virility syndrome. I case of thyrotoxic crisis can be affected pronunciation of sounds that require pressing the tongue against the palate ("r", "l"); tone of voice changes in acromegaly, when the expansion of the paranasal sinuses add it resonating tone. With the development of hypogonadism before puberty voice pitch in men remains high. Quiet and small voice is typical for addisonic and panhypopituitary crises. Pigmentation of the mucous membrane of the mouth is typical for primary chronic adrenal insufficiency.

Respiratory system

Inspection: the shape of the chest (normostenic, hypersthenic, asthenic, flat, paralytic, barrel, etc.).

Deformation of the chest and spine. Condition supra- and subclavian pits, the position of the blades. The symmetry of the respiratory movements of the chest, their frequency, type of breathing (abdominal, thoracic, mixed, Cheyne-Stokes, Biot's, Kussmaul's). Dyspnea, the nature (expiratory, inspiratory, mixed, severity).

Palpation: resistance, chest pain, voice trembling.

Percussion: the relative light percussion, definition of dullness zones, bloat, and others, with their size and the exact location, determination the nature of percussion sounds (clear lung sound, shortening, dullness, pad, boxed). Topographic percussion performed if necessary.

Results of auscultation: breathing character (vesicular, bronchial, hard, etc..), rales (dry and large, medium, small bubbling, sonorous, unsonorous, crepitation, pleural rub, their precise localization), bronchophony.

The cardiovascular system

The lesion of the cardiovascular system is observed in many endocrinopathies. One of endocrine diseases, when cardiovascular system is a key element of clinic, is thyrotoxic syndrome. So, permanent sinus tachycardia is the most common symptom of hyperthyroidism. The trend towards an increase in pulse pressure, increased heart rate in thyrotoxicosis accompanied by a kind of feeling of "enhanced" palpitations with visible pulsation of the carotid arteries, abdominal aorta (especially in difficult cases in individuals with a significant body weight loss). In diffuse toxic goiter and other forms of thyrotoxicosis may develop atrial fibrillation, which is sometimes the singular sign of disease. The presence of this type of arrhythmia - one of the most important signs of severe thyrotoxicosis, its development is more likely with the prior myocardial damage (atherosclerosis, heart disease).

Extrasystoles observed in thyrotoxicosis, but usually occurs on the background of sinus tachycardia. Extrasystoles in the background of the normal rhythm is not typical for thyrotoxicosis. Paroxysmal tachycardia (sinus, supraventricular, with the pacemaker migration) is typical for pheochromocytoma - a tumor of adrenal medulla, which is accompanied by a massive release of catecholamines into the blood. Sinus tachycardia is common to all types of endocrinopathies that occur with dehydration (decompensated hypocorticism, diabetic ketoacidosis). Tachycardia in hypercorticism and diabetes account for myocardial dystrophy, as well as cardiac autonomic neuropathy with a lesion of the nervus vagus.

The bradycardia is typical for hypothyroidism, but it is not mandatory sign: as in the early stages of the disease (due to compensatory activation sympatho-adrenal

system, sometimes with sympatho-adrenal crises), as well as the development of myxedema heart (circulatory failure) can be observed even tachycardia. Permanent arterial hypertension with high pulse pressure is typical for thyrotoxicosis, predominantly diastolic hypertension - for hyperaldosteronism, Cushing's syndrome. Paroxysmal arterial hypertension is typical for pheochromocytoma. Arterial hypertension develops as a result of kidney damage in diabetes and hyperparathyroidism. Arterial hypertension, exactly as hypotension, can be observed in primary hypothyroidism. Combination of hyperlipidemia and arterial hypertension contributes to the development of atherosclerosis, myocardial infarction, stroke (obesity, primary hypothyroidism, diabetes, Cushing's syndrome).

It should be emphasized that the primary hypothyroidism and Cushing's syndrome is a real frequency of heart attacks is much lower than it could be, based on the data of hyperlipidemia and arterial hypertension. Reducing the size of the heart may be detected by Addison's disease, hypopituitarism, its increase - with hypothyroidism, and also at all endocrinopathies which occur with arterial hypertension. The increase of heart size in primary hypothyroidism is associated not only with dilatation of the cavities, but also to the accumulation of fluid in the pericardial cavity, rich in proteins and glycosaminoglycans.

Digestive system

A significant reduction of appetite seen in hyperparathyroidism, hypopituitarism, ketoacidosis, a less pronounced - in hypothyroidism. One of the most important symptoms of hypocorticism is loss of appetite combined with a taste for salty foods. Nausea and vomiting are typical for diabetic ketoacidosis, as well as severe decompensation hypocorticism, hyperparathyroidism. Increased appetite may be in thyrotoxicosis, diabetes, Cushing's syndrome, insulinoma. More complex nutritional disorders occur in anorexia nervosa. Difficulty swallowing, especially solid food, may be associated with diabetic ketoacidosis, particularly in children, or in patients with addisonic, rarer - thyrotoxic crisis. Large goiter can also be a cause of dysphagia. Spilled, low intensity constant abdominal pain are very common hypocorticism, hyperparathyroidism.

Recurrent peptic ulcers with appropriate clinical symptoms are typical for

hyperparathyroidism, Zollinger-Ellison’s syndrome and may be complicated by gastrointestinal bleeding. When endogenous Cushing's syndrome, contrary to popular belief, peptic ulcer disease is not more common than in the general population, although when taking glucocorticoids in high doses may occur steroid ulcer. Constipation - symptom, which occurs in many endocrine diseases such as hypothyroidism, hyperparathyroidism, hyperaldosteronism, Cushing's syndrome. Nocturnal diarrhea may occur with gastrointestinal form of diabetic autonomic neuropathy. Permanent diarrhea is typical for carcinoid tumor and medullary thyroid carcinoma, much less – in Zollinger-Ellison’s syndrome. When thyrotoxicosis frequent, liquid stool can be observed (hyperdefecation), but not a true diarrhea. Significant liver function abnormalities observed with extremely severe thyrotoxicosis. Fatty liver degeneration is typical for long decompensated diabetes, exogenous constitutional obesity. The level of liver enzymes (ALT, AST, GGT) is increased in hyperthyroidism, hypothyroidism, Cushing's syndrome.

Urinary system

Polyuria and nocturia frequently observed in patients with diabetes mellitus and diabetes insipidus, as well as hyperparathyroidism, primary hyperaldosteronism. In diabetic autonomic neuropathy occur pollakiuria, urinary incontinence or retention, associated with damage of the nerves that innervate urinary tract. Urinary incontinence and nocturia are typical for postmenopausal urogenital disorders. Pyelonephritis is extremely common in patients with diabetes mellitus and exacerbation may be accompanied by severe complications such as the formation of renal papillary necrosis or kidney carbuncle. One of the most frequent late complications of diabetes is diabetic nephropathy. Congenital abnormalities of the urinary tract are typical of Turner's syndrome and other genetic syndromes that are accompanied by the lesion of the endocrine system. Nephrolithiasis and nephrocalcinosis complicate primary hyperparathyroidism, Cushing's syndrome. Less urinary tract stones are common in patients with acromegaly, thyrotoxicosis.

Reproductive system

Sexual disorders (violation of libido, erectile dysfunction) are the basis for endocrine examination, but only a small number of patients with such disorders is

real endocrine pathology.

Erectile dysfunction is typical of long-existing and decompensated diabetes, complications of autonomic neuropathy and microangiopathy, and is a frequent symptom in patients with hypocorticism, hypopituitarism.

Hyperprolactinemia any etiology, including drug-induced, leading to a decrease in libido in both sexes, amenorrhea, and barrenness in women, to oligo- or azoospermia, and erectile dysfunction in men. Amenorrhea is typical of ovarian dysgenesis syndrome and refractory depleted ovarian, testicular feminization syndrome (syndrome of total androgen insensitivity), congenital adrenal hyperplasia, hyperprolactinemia.

Amenorrhea may occur with any endocrine disease, which is not accompanied by a primary lesion of gonads (Cushing's syndrome, hypopituitarism, hyperthyroidism and hypothyroidism), psychosomatic disorders, such as anorexia nervosa. Metrorrhagia (acyclic uterine bleeding) typical hyperestrogenia states (tecoma, granular cell tumor of the ovary, corticoestroma, polycystic ovary syndrome). Those are the reasons that lead to amenorrhea, and oligomenorrhea, determine infertility.

Under the influence of an excess of androgens in women develop viril syndrome, which includes, besides the complex described cutaneous signs, decrease mammary glands and clitoris hypertrophy. If the action of androgens in the female body has begun during the prenatal period, the external genitalia of the child will be formed on the male pattern. Puberty is considered premature if it is started for girls up to 7 years and boys under 9 years old. It may be due to hormonally-active tumors, inflammatory and traumatic brain lesions chief, constitutional violations.

Excessively large sizes of the breast in men may be due to true gynecomastia, ie a physiological or pathological excessive development of glandular tissue of the breast. Physiologic hyperplasia typical of puberty healthy boys with a moderate excess body weight.

Gynecomastia is considered false if it is caused by hyperplasia of adipose tissue - lipomastia that occurs in many forms of obesity. Gynecomastia, which quite often have to meet the endocrinologist may be the result of endocrine, somatic and genetic

diseases. Its cause is corticoestroma, rarely mixed tumor of the adrenal or extremely rare - Cushing's syndrome, as well as tumors of the testes or liver disease, cirrhosis, hyperthyroidism. Gynecomastia is typical for Reifenstein’s syndrome. It can develop as a result of receiving different drugs: estrogens, androgens, neuroleptics, human chorionic gonadotropin, and drugs. Very rarely hyperprolactinemia may be cause of gynecomastia, and/or galactorrhea. In women, an excessive increase in breast - gigantomastia (megalomastia, macromastia) almost never associated with primary endocrine disorders, and is a reflection of impaired sensitivity to sex hormones and possibly growth hormone and prolactin. Cases of gigantomastia were described in primary hypothyroidism.

Not associated with childbirth lactorrhea usually caused by elevated (permanent or transient) the secretion of prolactin, but may be a reflection of the neuro-reflex actions. Hyperprolactinemia with appropriate clinical symptoms can be observed in patients with primary hypothyroidism - a Van-Wick-Hennes-Ross’ syndrome.

Locomotorium

Violation of growth in children (sharp lag or acceleration) is often a strong indication of a number of diseases and requires consultation with an endocrinologist. Stunting or dwarfism in children with pituitary nanism, hypothyroidism, decompensated diabetes, panhypopituitarism, hypercorticism, Turner’s syndrome. There is typical dynamics of growth in children with congenital adrenal hyperplasia: they are born large, with a long body on the upper limit of normal, growing rapidly, ahead of peers, up to 10-12 years, and then in connection with the closing of growth zones of their growth stops, and eventually, these patients remain stunted, with disproportionately long torso.

Tall is typical for gigantism which developed due to pituitary adenomas, in a production of excess of growth hormone, as well as primary hypogonadism (e.g., Kleinefelter's syndrome, for a typical tall disproportionate excessive lower limb length).

Enlargement of the soft tissues of the face, the increase of the hands and feet, prognathism typically change the appearance of patients with acromegaly. Calcium bone loss (osteoporosis, osteopenia) observed in many endocrinopathies: endogenous

and exogenous hypercorticism, hyperphosphotasia of adults, hypogonadism, gonadal dysgenesis, postmenopausal, at long thyrotoxicosis, complications of diabetes.

Shortening of IVth metacarpal bones are typical for pseudohypoparathyreosis and Turner's syndrome.

In hyperparathyroidism violation of bone structure has a wide range: from pronounced fibrocystic osteitis with multiple fractures to diffuse osteoporosis. In acromegaly, excessive growth of bones with the destruction of the articular surface leads to arthritis. Bone catabolism in combination with neuropathy of lower limbs is one of the causes of Charcot joint in diabetics (diabetic foot syndrome).

Myopathic syndromes and disorders of motor function can occur in hyperthyroidism, hypothyroidism, hypercorticism, disorders of calcium-phosphorus metabolism. When thyrotoxicosis is particularly noticeable weakness of the muscles of the pelvic girdle and thighs, which is accompanied by muscular atrophy, less atrophy muscles of the shoulder and arm. Thyrotoxic arthropathy develops as a result of protein metabolism of bone disorders, and possibly due to concomitant immune changes. In hypothyroidism myopathy can be without muscle atrophy, but can also be observed hypertrophic myopathy (syndromes Hoffman, Debre-Semelen). For myopathy in hypercorticism, a long-term acromegaly is typical weakness, predominantly of the proximal muscles. Muscular atrophy may also occur in hyperparathyroidism, hypophosphatemic rickets, osteomalacia. Muscle weakness due to a deficiency of sex hormones is observed in various forms of hypogonadism. Occasional bouts of muscle weakness seen in primary hyperaldosteronism, Bartter's syndrome, at least - in thyrotoxicosis. Local muscle atrophy can occur in diabetes.

Hayropathy - the defeat of the joints of hands - is typical for type 1 diabetes

Central and peripheral nervous system

The growing pituitary tumor exerts pressure on the dura mater, causes headache, which may stop after it break. Compression of the growing tumor of the optic chiasm leading to the formation of the so-called chiasmal syndrome. Less frequently, in case of damage or compression of the hypothalamus may occur drowsiness, hyperphagia, thirst, polyuria, hyperthermia. In a frontal tumor growth may cause epilepsy, in case of lesion of olfactory tract -anosmia, with the growth of

the tumor in the side of the cavernous sinuses are affected III-VI pairs of cranial nerves, resulting in ptosis, diplopia, ophthalmoplegia, hearing loss.

Acutely occurring headache combined with chiasmal syndrome occurs with hemorrhage in the pituitary gland. Intracranial hypertension and syndrome of "empty" sella accompanied by constant headaches, dizziness. Spastic syndrome observed in hypoparathyroidism, hypoglycemia, hypothyroidism, Addison's disease, hypopituitarism, syndrome of inappropriate secretion of ADH. In hypopituitarism, and hypothyroidism may develop depression and sometimes psychosis with hallucinations, paranoid behavior, dementia. The development of psychosis is possible with hyper- and hypocorticism, thyrotoxicosis. Depression, confusion, emotional lability, euphoria are possible for hypercorticoidism, confusion typical of hypothyroidism; expressed hypochondriacal traits acquire patients with hypoparathyroidism. Neuropathy - one of the most common chronic complications of diabetes; often observed polyneuropathy. Increased muscle relaxation time (slowing of reflexes) is typical of hypothyroidism, Addison's disease and syndrome of inappropriate secretion of ADH. Occasionally ultrafast neuropathy observed with insulinoma. The distal part of the median nerve is compressed at the wrist level thickened (acromegaly) or swollen (due to excess of glycosaminoglycans in hypothyroidism), connective tissue, which leads to the formation of the carpal tunnel syndrome, which is expressed as numbness, cramps and pain in the 2/3 palmar surface of the finger from a radial bone. It may be formed violations abduction and matching thumb. The most rare complication of hyperthyroidism are thyrotoxic pareses and paralyses. Metabolic and vascular changes in the cerebral cortex in combination with a direct influence on several hormones lead to formation of the central nervous system encephalopathy - thyrotoxic, diabetic, steroid.

Changes in vision and hearing

Most endocrine diseases accompanied by changes in the functions of the body.

Changes of vision organ function in endocrinopathies	
Symptom	Disease (condition)
Pain in eyeballs	Endocrine ophthalmopathy Glaucoma/iridocyclitis in diabetes

	mellitus, Hypercorticism
Acute myopia	Hyperglycemia
Hypermetropia (acute, transient)	Diabetes mellitus at start of glucoselowering therapy
Strong worsening vision s a result of:	
• Diabetic proliferative retinopathy	Long-term decompensated diabetes mellitus
• Pigmentary atrophy of visual nerves	Laurence-Moon-Bardet-Biedl's syndrome
• Atrophy of visual nerve in compression	Pituitary tumors with extrasellar growth; suprasellar extrahypophyseal tumors; severe endocrine ophthalmopathy
Bitemporal hemianopsia, asymmetrical violations of area vision	Tumors with suprasellar growth
Hemeralopy (day blindness)	Hypothyroidism
Cataract, lenticular opacity	Diabetes mellitus Hypoparathyroidism Hypothyroidism
Bleeding into vitreous body	Diabetes mellitus
Periorbital edema of soft tissues	Endocrine ophthalmopathy Hypothyroidism Acromegaly
Conjuctival chemosis, eyelid swelling	Endocrine ophthalmopathy
Enlargement of lacrimal glands	Acromegaly
Falling out in lateral parts of eyebrows	Hypothyroidism Hypoparathyroidism
Total falling out of eyebrows	Hypoparathyroidism

Ophthalmoplegia, diplopia	Hypoparathyroidism Pituitary tumors with growth into synus cavernosus Endocrine ophthalmopathy Malignant myastenia Diabetic ophthalmoplegia with lesion of III и IV cranial nerves Insulinoma
Sharp evagination of eyeball (exophthalmos)	Endocrine ophthalmopathy
Keratitis, keratoconjunctivitis	Endocrine ophthalmopathy Diabetes mellitus Hypoparathyroidism
Calcifications in tissues of the eyelids and in the bulbar conjunctiva	Hypoparathyroidism
Angiopathy	Acromegaly Primary hyperaldosteronism Cushing's syndrome
	Pheochromocytoma Diabetes mellitus
Edema of the optic papilla	Endocrine ophthalmopathy Hypoparathyroidism "Empty" sella turcica syndrome Pheochromocytoma
Glaucoma	Diabetes mellitus Endocrine ophthalmopathy (rarely) Iodin-deficite condition Postmenopause (as result of cochlear nevritis)

One of the rarest forms of enzimopathies is Pender’s goiter - is characterized by a combination of hypothyroidism and hearing loss. Hearing loss is also typical for children, pre-natal development of which took place in the conditions of iodine deficiency.

Endocrine system

- **The hypothalamus. Pituitary gland**

Curation and registration of the patient's history with the pathology of the hypothalamic-pituitary system have their own features. In contrast to the thyroid gland and testes, pituitary gland and the hypothalamus are not accessible by palpation, visual inspection. However, violation of activity of these glands leads to the initiation of impressive and different symptoms, and identify changes size and shape are achieved by using modern instrumental and laboratory examinations (computer tomography, magnetic resonance imaging, determination of tropic hormones, etc.). Influence of different pathogenic factors on the hypothalamus, the pituitary gland leads to changes in their endocrine and regulatory functions, and these disorders cause dysfunction of peripheral endocrine glands (thyroid, adrenal glands, gonads). This gives rise to clinical syndromes (symptom) hypo- or hyperfunction peripheral glands. Features of diseases of the hypothalamic-pituitary system lies in the fact that it can fall or drop one gland function (hypopituitarism) or several glands (panhypopituitarism).

During curation of patient with suspected disease of the hypothalamic-pituitary system student performs a targeted search to identify endocrine deficiency or hyperfunction peripheral glands.

• Thyroid gland

In diseases of thyroid gland it can be enlarged (goiter) or decreased (hypoplasia) in size. Palpation is used primarily for the investigationof the thyroid gland. After palpation, which gives an idea of the density, nature of its surface, the presence of nodules, go to a special study by palpation. Investigator places four bent fingers of both hands deep behind the rear edge of the m.sternocleidomastoideus and the thumb – behind the front edge of these muscles. During palpation of the gland

patient must make swallowing movements, in which the thyroid gland moves together with the larynx and moves between the fingers of investigator. This method of palpation allows even find small changes in the size of the thyroid gland, which is not captured in the normal palpation, and to determine the mobility of the gland during swallowing and mechanical shear, the presence and absence of pulsations, painfulness. To facilitate palpation one side portion is possible by clicking on the thyroid cartilage on the opposite side. Thyroid gland isthmus examined by sliding finger movements over the surface in a downward direction, to manubrium of sternum. If the nodes defined on the surface of thyroid gland lies behind the sternum upper arm department, you must enter a fingers exploring hands behind juguli sternum and shear thyroid gland during swallowing to try to determine the upper pole assembly, its shape and texture. For a dynamic observation of increased thyroid gland matter its size. Determined by its transverse size, neck circumference, and the value of individual nodes. When measuring neck circumference of one end of tape is fixed to the spinous processes of the VII cervical vertebra, and in front of the tape is placed on the most prominent part of the gland. When measuring the transverse size anterolateral thyroid surface measuring tape placed over the outside back edges of m.sternocleidomastoideus and have it on the front surface of the thyroid gland.

In auscultation in patients with hyperthyroidism can listen on enlarged thyroid gland tones and noises, caused by rapid blood flow and increased blood supply to the gland.

In describing the properties of the thyroid gland is necessary to note its consistency (soft, elastic, dense, wood density), the nature of the surface (smooth, rough, uneven, with nodules), painfulness or lack thereof. It is very important for diagnostics description of mobility nodes, cohesion with the surrounding tissues. It indicates the presence of lymph nodes of the neck, the skin condition of the thyroid gland, especially when it is painful (redness, swelling, hot when touched, and others.). Identify exophthalmos requires a description of its severity, the nature (single, double-sided), the presence of edema, the mobility of the eyeballs, limiting their mobility.

• Parathyroid glands

Physical examination of patients with impaired function of the parathyroid glands requires separate consideration.

Inspection and palpation of the neck is very rarely able to identify a tumor of the parathyroid gland (paratireoma). More frequently patients with parathyroid disorders have post-surgical scars in the neck. On examination, pay attention to the violation of the growth and weight, changes in skin condition and its color ("earthy" color in pseudohypoparathyreidism), the presence of skeletal deformations, gait changes ("duck walk" is typical for hyperparathyroidism and osteomalacia). Low growth and round face is typical for pseudohypoparathyreoidism. Even in mild forms during the inspection can determine the reduction metacarpal bones or finger phalanges. Percussion bone in the area of cysts is a specific "watermelon" sound.

These glands (2 pairs or more) through small sizes (diameter to 5 mm) are not detected by palpation. Their localization, enlargement size detected by ultrasound, MRI- and CT examination of the parathyroid glands. However, a violation of the function of the glands is judged not only by the level of parathyroid hormone, calcium et al., but also a number of general clinical signs. At the same time determine the presence of muscular hypotonia, hypertonia, increased excitability, neuromuscular excitability, convulsive twitching, tonic convulsions.

Trophic changes in nails, hair, brittle teeth, bone deformation.

In the case history of patients with hypoparathyroidism is obligatory assessment of Trousseau, Weiss, Schlesinger, Hoffman’s symptoms.

• Adrenal gland

Dysplastic distribution of adipose tissue are detected in patients with hyperactivity of the adrenal glands (android, gynoid). The presence of "fat hump" in the 7 cervical vertebrae.

Matronism: round, purplish-red, often with cyanotic shade the face, baldness, hypertrichosis, hirsut syndrome that often in patients with hyperactivity of the adrenal glands (their tumors, Cushing's disease, and others.).

Features of constitution: virilization, feminization. Hyperpigmentation (melanodermia), depigmentation (vitiligo), the nature, location, features. Brown spots on the mucous membranes of the mouth. Marbling, cyanosis of the skin; acne,

hemorrhage (localization, prevalence). Strias marks: character (location, color, size).

PRELIMINARY DIAGNOSIS

Preliminary diagnosis formating is simple and concise. It is based on the analysis of complaints, medical history and a number of objective data obtained during general clinical studies (therapy ex juvantibus).

Sometimes a preliminary diagnosis may have a hypothetical character and be finished with a question mark. If it's possible, the preliminary diagnosis can be observed (without justification) form, phase, stage of the disease, and others.

The first contact with the patient provides a complete picture of the history of the objective status, the results of surveys as set out in the volume of outpatient card and history case. In this case, the preliminary diagnosis will differ little from the final clinical.

PLAN OF EXAMINATION

Based on the preliminary diagnosis data, the student prescribes an individual list of required patient examinations and consulting of narrow specialists.

Additional tests should be directed at issues of diagnostics solution, the functional state of organs and systems involved in the pathological process, the degree of disease activity, localization of the pathological process, its duration and extent.

The plan set out the necessary examinations, not all can be carried out due to the series of reasons. For example, a patient with an adenoma and thyrotoxicosis suspected diffuse nodular toxic goiter is necessary in addition to determining the level of thyroid hormones is also the result of ultrasound scanning of gland. However, by the end of curation these studies or second functional test are not conducted. In this case, in plan of examination it is necessary to explain why the test is required and how it is important for the diagnosis, treatment strategy and assessment of the effecacy of treatment.

The plan of laboratory and instrumental methods of research: Clinical analysis of blood every 7-10 days; urinalysis every 7-10 days; feces on eggs of helminths; blood test for AIDS, syphilis; blood group and Rh factor; blood sugar; chest x-ray (if not carried out during the last year); electrocardiogram; patients

weighing every 10 days).

The list of special laboratory and instrumental studies to be carried out when a patient diagnosed endocrine pathology

Pathology	List of examinations
Diabetes mellitus	Blood and urine glucose, glycemic profile, glycosylated hemoglobin, C-peptide, insulin, liver function tests, Reberg's probe, lipidogram, acetonuria, microalbuminuria, rheovasography, capillaroscopy, consulting of ophthalmologist, neurologist
Pathology of thyroid gland	Blood tests on thyroid hormones (free T3, free T4), TSH, antibodies to TG and TPO, calcitonin, blood electrolytes, thyroid ultrasound, when indicated - fine-needle punction biopsy of the thyroid gland formations, lipidogram, urinary iodine excretion, consultation of ophthalmologist, neurologist.
Pathology of parathyroid glands	Ultrasound of the parathyroid glands, calcium, phosphorus, blood and urine tests, blood alkaline phosphatase, parathyroid hormone, proteinogramma, daily proteinuria, Ben Jones' protein in the urine, X-rays of hands, long bones, densitometry, FNAB of tumors.
Acromegaly	The level of growth hormone, TSH, prolactin, glucose blood, EEG. X-rays of the cranium, CT, MRI of brain, consulting of ophthalmologist, neurologist, neurosurgeon.
Cushing' disease	The level of cortisol, blood ACTH, by indication - blood prolactin, 11-OKS, 17-OKS, 17-KS daily urine proteinogramma, lipidogram, blood electrolytes, creatinine, coagulation, X-rays of the cranium, CT and MRI of the brain, ultrasound of the adrenal glands. Densitometry. Consultation of ophthalmologist, neurologist.
Diabetes insipidus	Analysis of urine by Zimnitsky, EEG, Echo-EG, blood electrolytes, coagulation, vasopressin, renin, aldosterone blood, X-ray of cranium, CT and MRI of the brain.

	Consultation of ophthalmologist, neurologist.
Addison’s disease	Electrolytes of blood, lipidogram, urea, creatinine, blood proteins, ACTH, cortisol, 11-OCS, 17-OKS, 17-KS daily urine, EEG, Echo-EG. Consultation of ophthalmologist, neurologist.
Panhypopituitarism	Urinalysis by Zimnitsky, EEG, Echo-EG, blood electrolytes, proteinogram, creatinine, urea, lipidogram. TSH, ACTH, LH, FSH, cortisol, free T4, 11-AKS, 17-OKS, 17-KS daily urine, EEG, Echo-EG. Consultation of an ophthalmologist, neurologist.
Pheochromocytoma	Ultrasound, CT, MRI, adrenal glands, catecholamines of daily urine, vanillylmandelic acid urine. Consultation of an ophthalmologist, neurologist, cardiologist.

RESULTS OF LABORATORY AND INSTRUMENTAL METHODS OF INVESTIGATION, CONSULTATIONS OF NARROW SPECIALISTS

This section presents the results of laboratory, radiological and other research methods with a mandatory assessment of pathological findings. We give advice to other professionals.

If some of the studies were carried out repeatedly in the history of making two or three studies that show the most characteristic of the dynamics of the pathological process.

These consultations of ophthalmologist, neurologist and others. Specialists, as well as the results of ultrasound examination of thyroid gland, adrenal glands, and others. Special studies are carried out outpatients maps showing the date.

TEMPERATURE SHEET

The sheet temperature curator notes: patient's temperature, pulse, blood pressure (graphics); diuresis.

DIFFERENTIAL DIAGNOSTICS

Differential diagnosis is done by comparing the most important symptoms of the underlying disease of the patient during curation with similar symptoms in other diseases.

This section starts from the justification choice disease, which will be differentiated. First at all describe the general symptoms of the patient during curation with similar disease. Subsequently a comparison of each symptom conducted in this patient with similar symptoms in other diseases with imaging features (differences) of their manifestations.

It is necessary to take into account the lack of symptoms in a patient during curation, which are typical for other diseases, and vice versa, the presence of symptoms that are not typical for other diseases.

Sometimes, on the contrary, there is an underestimation or even ignoring the general clinical symptoms, but the basis for justification of the diagnosis are special methods of investigation. This is typical in curation for patients with diffuse toxic goiter with moderate increasing in the degree of breast and light displays its hyperfunction. During the writing of history in such cases should be justified and reasoned to eliminate the disease, which have similar clinical symptoms - rheumatism, cardiopsychoneurosis, thyroiditis, etc. This is done by analyzing the general clinical symptoms, results of using special methods of investigation.

Serious consideration should be given to the justification of the disease severity degree, compensation state, type of diabetes and other components of the clinical diagnosis.

This section history ends with unfolded formulation of clinical diagnosis, concomitant diseases. Justification of comorbidities is not carried out.

The differential diagnosis is carried out in the same manner in which the survey was carried out of the patient: at the beginning of the complaint are compared, then the data of the anamnesis of disease and life, physical examination results and, eventually, additional methods of study, which confirm the disease.

Note: Use only the symptoms and the results of additional research methods, which are in a particular patient.

FINAL CLINICAL DIAGNOSIS AND ITS JUSTIFICATION

Traditionally, justification of the clinical diagnosis is carried out on the basis of complaints, anamnesis, physical examination, clinic. Reference is made to preliminary diagnosis and differential diagnosis: the data are then used additional methods of study, that confirm these diseases.

However, the most important thing in the hospital practice is the ability to think clinically. Rationale for clinical diagnosis - it is a stage in the formation of clinical thinking. In the description of this section, the student states the facts "on the basis of complaints, physical examination, the results of laboratory and instrumental methods of investigation, which confirmed the disease," and then puts the final diagnosis. It remains unclear on what basis the exposed: the severity of the disease, course of the disease, the stage, the state compensation. Therefore, the student must constantly ask themselves the question - why? For example, why diabetes type 1 reason why the average severity, etc. It is necessary to justify each point of the diagnosis. In addition, the need to separately carry out the basic rationale for the diagnosis, its complications and related diagnoses. Extended clinical diagnosis is formed in accordance with the classifications approved by the Ministry of Health of Ukraine, WHO or congresses of doctors.

ETIOLOGY AND PATHOGENESIS

Curator describes the main etiological factors and pathogenesis of the disease in a patient with curation.

TREATMENT

Sets out the principles of the modern treatment of the underlying disease on the following plan: the regimen; diet; psychotherapy; medical treatment; physiotherapy and massage; spa treatment; surgical treatment (indication); clinical examination and preventive treatment.

To describe the mechanism of action of drugs recommended by the patient during curation and their single daily dose, duration of treatment.

To justify individual treatment to the patient, prescribe recipes.

PROGNOSIS AND EXAMINATION OF EMPLOYABILITY

Prognosis is justified in relation to the disease, life or disability. Prognosis can be favorable, unfavorable and uncertain.

Prognosis relative to the disease is considered to be favorable, if there is confidence that the patient comes recovery; doubtful - if there is no confidence in the full recovery and unfavorable - if the disease is incurable and has a chronic progressive course.

Prognosis towards life can be beneficial in the event that the patient will not get any complications, life-threatening; doubtful - if the patient (including age, course of disease, progression, complications, treatment efficiency, etc..) can occur and fatal adverse and unfavorable - if the patient's death is imminent.

Prognosis towards disability is solved in terms of temporary and permanent loss of her (the definition of disability group) according to the degree of functional disorders and the patient's profession.

DIARY

Making diary:

Date Condition of the patient Prescriptions

In "The patient's condition" is given assessment of the overall condition of the patient, described the complaint, the objective of tribute, with an emphasis on the pathological changes in the organs; in future days displayed the dynamics of the disease course.

In the "Prescriptions" is the mode, diet, treatment given, changes in therapy, more research is needed.

DISCHARGE SUMMARY

Epicrisis - the final part of history. This is a short conclusion of the doctor about the nature of the disease, its causes, clinical course and outcome of treatment, the patient's condition at the time of epicrisis, output relative prognosis of the disease, disability and further the regimen, treatment and prevention of recurrence of the disease.

In epicrisis succinctly expresses the published data, complaints of the patient and their characteristics, the history of the disease, the patient's life history (facts that are relevant to the disease), clinical signs of the disease, the basic data of laboratory and instrumental examinations that confirm the diagnosis. Then the diagnosis is complete and treatment is prescribe (one-time and daily doses of medications), the results of treatment, changes in patient's condition during treatment. Disease results (complete recovery, partial recovery, a slight deterioration of state without change, the transition from acute to chronic disease, deterioration, death).

At discharge summary of the patient is necessary to determine the prognosis for recovery, to assess disability in recognition of his profession and place of work (ability to work, disability, shows transfer to lighter work, require a transfer to disability, disability group), recommendations on the future of follow-up, treatment and prevention recurrence of the disease, spa treatment.

LIST OF REFERENCES

This section specifies the literary sources used in the writing of history according to the standard bibliographic standards (with the name and initials of the authors, in alphabetical order, title, source, year and place of publication, pages).

Student Signature Date

METHODS OF DIFFERENTIAL DIAGNOSIS

Differential diagnosis - is comparing of the clinical case with various nosological forms in order to exclude other possible diseases in individual patients.

Differential diagnosis helps you to take diagnosis. It begins with a first look at the patient and continues until the patient is under medical supervision. Diagnostic working hypotheses in the study patients must succeed each other as long as the last one will not be valid diagnosis. The basis for the differential diagnosis is to distinguish the leading syndrome or symptom. Leading symptom or syndrome should be considered as those pathological manifestations which come to the fore in the clinical picture, determining its severity, danger to life and, as a rule, pathogenesis-related illness essence. To select dominant syndrome requires knowledge of the main features and patterns of flow of many diseases. When a patient several important syndromes or symptoms of each of these can be the basis for self-diagnostic analysis.

Leading syndromes are: cardialgia, arterial hypertension, bronchoobstructive, nephrotic, anemic, febrile, articular, hemorrhagic, edematous syndrome, jaundice, congestive heart, acute or chronic renal failure, arrhythmia, heart murmurs, abdominal pain, and others.

After selecting the syndrome leading a doctor includes in the diagnostic process all diseases with similar clinical picture. First of all, it needs to be taken of the disease most likely frequency, then all possible, including rare. In the academic case history make the next record (as an example): "In this patient leading syndrome is a polyarthritis, which may be in the following diseases: rheumatism, rheumatoid arthritis, systemic lupus erythematosus, and so on."

A crucial moment in the differential diagnosis is the comparison of the studied case with each of the possible diseases.

Excluding sindrome-liked disease occurs at finding differences or contradictions on the basis of the following principles of differential diagnosis:

• The principle of substantial differences due to the lack of supervised patient signs and symptoms characteristic of the disease being compared;

• The principle of substantial differences due to the presence at the supervised patient symptoms and signs are not comparable with the disease;

• Opposites exclusion principle. The observed event is not a disease to which we compare, for this pathology is characterized by a symptom, opposite the present case;

• The principle of exclusion due to different nature of the symptoms, mismatch (quantitative or qualitative) characteristics.

These four basic principles should be applied in the process of differential diagnosis and exclusion of various diseases by comparing them with the clinical picture, which takes place at the supervised patient.

The next stage of the diagnostic process - establishing a clinical diagnosis based on the synthesis of results of the clinical examination and differential diagnosis. In the formation of the clinical diagnosis is necessary to observe the principle of nosological diagnosis.

Nosological disease - a structural and functional damage that certain etiology, pathogenesis, and characteristic clinical and anatomical picture, poses a threat to health and life, requires treatment, and stands out as a separate statistical categories at this stage of development of medicine and health care in order to study the incidence, mortality and improved prevention and treatment.

Clinical diagnosis - is a complete, obtained by in the differential diagnosis of a subjective conclusion about the nature of the disease and the patient's condition.

A doctor must take clinical diagnosis within the time frame of not more than 3 days of hospital stay, imposed on the title page with the date of its setting and the doctor's signature was diagnosed. Date of formulation of clinical diagnosis and the date of his justification in the history of the disease should coincide.

If the diagnosis is clear already during the initial examination of the patient (especially patient is hospitalized frequently to this hospital), the clinical diagnosis can be substantiated and formulated on the day of admission to hospital. Justification should be carried out according to each fragment to formulate a diagnosis.

The main disease is one that in itself or because development of complications was the reason for seeking medical attention, was the cause of

hospitalization and (or) death. The main disease is certain nosological unit. Complications are those pathological processes that are directly related to pathogenesis main disease, although in some cases may have other etiology (eg, peritonitis with perforated gastric ulcer).

"Concomitant diseases" not directly related to main disease and not affect the development and course.

EXAMPLES OF FORMULATION DIAGNOSIS IN THE INTERNAL MEDICINE

PULMONOLOGY

- Bronchial asthma, allergic (allergy to house dust), intermittent form, mild exacerbation. Lung failure I stage.
- Bronchial asthma, mixed form with prevalence of allergic component (sensitization to house dust), persistent mild form, moderate exacerbation. LF II st.
- Bronchial asthma, non-allergic, persistent severe form, moderate exacerbation. Emphysema. LF II st.
- Bronchiectasis: cylindrical bronchiectasis in the middle lobe of the right lung, S_{IV} (lateral segment), moderate clinical course, exacerbation phase. Chronic obstructive pulmonary disease, stage II, remission stage. LN II st.
- Exudative, serous-fibrinous, diaphragmatic pleurisy (tuberculosis), subacute phase.
- Community-acquired aspiration pneumonia (staphylococcal) in the lower lobe of the right lung. Lung abscess. IV group, severe form, severe respiratory failure (RF). Diabetes mellitus, type 1, severe form, decompensation stage. Diabetic nephropathy IV st.
- Community-acquired pneumococcal pneumonia in the lower lobe of the right lung, I group, mild form, mild RF.
- Community-acquired pneumococcal pneumonia in the lower lobe of the right lung, II group, mild form, mild RF. Coronary artery disease: stable angina, II FC. HF I st.
- Community-acquired pneumococcal pneumonia of the right lung lower lobe (lobar), group III, severe form, severe RF. CHD: acute Q anterior myocardial infarction (19.09.16), HF IIA st, FC III.
- Community-acquired pneumococcal pneumonia of the right lung lower lobe (lobar), IV group, severe form. Right-sided pleural effusion, severe RF.

- Nosocomial pneumonia in the right lower lobe, later, severe form (18.09), severe RF. Coronary artery disease: acute anterior Q myocardial infarction (12.09). Acute heart failure (14.09) (Killip II).
- Nosocomial aspiration pneumonia in the lower lobe of the left lung, early, moderate form, moderate RF.
- COPD, III stage, acute phase, diffuse pulmonary fibrosis, pulmonary emphysema. LF II st.
- COPD, IV stage, acute phase, diffuse pulmonary fibrosis, pulmonary emphysema. Cor pulmonale, subcompensation stage. LF II st, HF IIA st.
- COPD, II stage, phase of remission, LF I st.
- Chronic purulent (streptococcal), nonobstructive bronchitis, acute phase, LF I st.
- Chronic catarrhal nonobstructive bronchitis, phase of remission, LF I st.

CARDIOLOGY

- Adenoma of the right adrenal gland, primary hyperaldosteronism (Conn's syndrome). Secondary (symptomatic) arterial hypertension 3st, III st. Residual effects of ischemic stroke in the basin of the left carotid artery (January, 1999). Right-sided hemiparesis. HF I st., FC III.
- Essential arterial hypertension, 1st., I st.
- Essential arterial hypertension, 2st., II st. Hypertensive retinopathy (generalized narrowing of the arteries).
- Essential arterial hypertension, 2st., II st. Hypertensive heart (left ventricular hypertrophy). CH IIA st. FC II.
- Essential arterial hypertension, 2st., II st. Hypertensive nephropathy.
- Essential arterial hypertension, 2st., II st. Coronary artery disease: stable angina, II FC. CH I st.
- Essential arterial hypertension, 2st., III st. Hypertensive retinopathy (hemorrhage in the fundus).
- Essential arterial hypertension, 2st., III st. Hypertensive heart, heart failure IIБ st., systolic dysfunction (ejection fraction 38% on 06/12/16), FC III.
- Essential arterial hypertension, 2st., III st. Residual effects of ischemic stroke in the basin of the right middle cerebral artery (13.11.13).

- Essential arterial hypertension, 3st., III st. CHD: acute inferior Q - myocardial infarction (15.12.16). HF IIA st. FC III.
- Essential arterial hypertension, 3st., III st. CKD IV st. Hypertensive nephrosclerosis.
- Essential arterial hypertension, 3st., III st. Transient ischemic attack in left vertebro-basilar artery (08/09/16)
- Essential arterial hypertension, 2st., III st. Discirculatory hypertensive encephalopathy III st.
- Essential hypertension 3st., III st., malignant course. Hypertensive retinopathy (papilledema, hemorrhages in the fundus)
- Acute rheumatic fever, activity III. Carditis, polyarthritis, anulare erythema, HF IIA st. FC III.
- Acute ischemic attack (indicate vascular pool, views of the stroke). Essential hypertension 2st., III st.
- Acute viral (flu) diffuse myocarditis, extrasystolic arrhythmia, heart failure IIA st.
- Acute streptococcal exudative (serous-fibrinous) pericarditis, moderate form (f 18.10 15) HF IIA st. FC III.
- Dilated cardiomyopathy. Atrial fibrillation, constant form. HF IIB st. FC IV.
- Closed head injury. Concussion (15/08/2015). Secondary (symptomatic) arterial hypertension 2st., I st. Uncomplicated hypertensive crisis (8/20/15).
- Coronary heart disease: acute antero-lateral Q-myocardial infarction (01.11.16). Percutaneous coronary angioplasty anterior interventricular arteria: TIMI 3 (11.01.16). HF IIA st.
- Coronary heart disease: acute inferior Q-myocardial infarction (11.20.16). Acute heart failure (Killip II) (21.11.16). HF IIA st. FC III.
- Coronary heart disease: acute inferior Q-myocardial infarction (11.10.16). Acute heart failure (Killip III) (11.11). The early post-infarction angina (18.11). Postinfarction cardiosclerosis (06.12.98). HF IIA st. FC III.
- Coronary heart disease: progressive angina (21.10). HF IIA st. FC III.
- Coronary heart disease: stable angina FC II, HF I st.

- Coronary heart disease: new-onset angina. HF_0.
- Neurocirculatory dystonia, hypertensive type, moderate form.
- Neurocirculatory dystonia, dyshormonal, moderate form, hypertensive, tachycardial, depressive syndromes. Panic attacks.
- Neurocirculatory dystonia, moderate form, cardialgia, respiratory and neurotic syndromes.
- Primary staphylococcal endocarditis, activity III; aortic insufficiency, mitral insufficiency; HF IIB st. Systemic vasculitis, nephritis with isolated urinary syndrome, splenomegaly.
- Congenital heart disease: atrial septal defect. Secondary infective (fungi), endocarditis, activity III, a defeat of the aortic valve (aortic insufficiency), HF IIA st.
- Urolithiasis disease. Secondary chronic pyelonephritis, remission. Renoparenchymatous hypertension 3st, II st. Hypertensive heart. HF IIA st. with preserved systolic function, FC II.
- Stenosis of the right renal artery. Condition after balloon angioplasty (January 2015). Renoparenchymatous hypertension 2st, II st. Hypertensive heart (left ventricular hypertrophy). Ventricular extrasystoles, III class Lown. HF IIA st., FC II.
- Pheochromocytoma right adrenal gland. Symptomatic hypertension 3st, II st. Hypertensive heart. Uncomplicated hypertensive crisis (09/08/2016). HF IIA st., FC II.
- Chronic rheumatic heart disease: mitral valvular disease with predominance of stenosis, II st. HF IIA st., FC III.
- Chronic (idiopathic) constrictive pericarditis. HF IIB st. FC III.
- Posttuberculosis chronic adhesive pericarditis. HF I st., FC II.

RHEUMATOLOGY

- Ankylosing spondylitis, central form, II stage, activity II st., bilateral sacroiliitis III st., spondylitis of the lumbar spine II st., impaired joint function (IJF) II stage.
- Secondary monoosteoartros left knee, synovitis, radiographic stage II, IJF I st.
- Polyarteritis nodosa, renal-polineurotic variant, active phase; polineyromiosit, polyarthralgia, nephropathy, arterial hypertension 3st., II st.

- Polyarteritis nodosa, skin-trombangitic form, slowly progressive course, active phase; subcutaneous nodules, hemorrhagic purpura, myalgias.
- Hemorrhagic vasculitis (Henoch's disease) with skin lesions, joints (ankle - stage arthritis), the kidneys (glomerulonephritis), acute phase, moderate form.
- Acute gouty arthritis of the big toe of the left foot, radiographic stage 2, IJF III. Nephrolithiasis.
- Dermatomyositis, chronic form, activity II, with skin lesion, muscles of the trunk and limbs, myocardium, IJF -II.
- Idiopathic dermatomyositis, subacute form, activity III; skin erythema, periorbital edema, muscle quadriplegia, loss of muscles of the pharynx, larynx, esophagus, diaphragm. Dysphagia. Nosocomial aspiration pneumonia of the lower lobe of the left lung, group II, moderate course, RF II st.
- Osteoarthritis with the defeat of the left hip joint, III radiographic stage, both knees, radiographic stage II, synoviitis of the right knee joint, IJF I.
- Polyosteoarthrosis with lesions of the proximal and distal interphalangeal joints of the hands, III radiographic stage, metacarpal-carpal joint, I left fingers with synoviitis, metatarsus-phalanx joint I toe of the right foot with synoviitis, right hip joint, radiographic stage IV, IJF II.
- Polymyositis, chronic form, activity II.
- Psoriatic arthritis, common form, distal variant without systemic manifestations, limited vulgar psoriasis, stationary phase, activity II, radiographic stage III, IJF I.
- Psoriatic arthritis, severe form, polyartritic variant with systemic manifestations - renal amyloidosis, renal disease, common vulgar psoriasis, progressive course, activity III, radiographic stage III, IJF II.
- Psoriatic arthritis, severe form, spondylo-arthritic variant with systemic manifestations - aortitis, left-sided anterior uveitis, palmar-plantar pustular psoriasis, progressive stage, activity III, radiographic stage II, bilateral sacroiliitis, radiographic stage IV, multiple sindesmophytosis, IJF III.

- Rheumatoid arthritis, polyarthritis, seropositive variant, active phase, activity III, mainly affecting the joints of the hands, wrist, shoulder, knee joints, Raynaud's syndrome, radiological stage III, IJF II-III stage.
- Rheumatoid arthritis, seronegative variant, arthritis with a primary lesion of the knee joints, hands and feet, active phase, activity II, radiographic stage II, IJF I.
- Rheumatoid arthritis, seropositive variant, arthritis with a primary lesion of the jaw joints, hands and knees; rheumatoid lung disease (alveolitis), polyneuropathy, active phase, activity III, radiographic stage II, IJF II.
- Reactive arthritis, urogenital (Chlamydia) with a primary lesion of the knee and ankle joints, unilateral sacroiliitis, active phase, activity III, radiological stage II, IJF II.
- Systemic scleroderma, subacute form, activity III, II stage. Basal bilateral pulmonary fibrosis. Subcompensated pulmonary heart, LF II. Esophagitis, Raynaud's syndrome.
- Systemic scleroderma, chronic form, activity I, III stage, Raynaud's syndrome, sclerodactylia, polyarthritis, diffuse pulmonary fibrosis, LF II st.
- Systemic lupus erythematosus, acute form, activity III. Dermatitis, arthritis of small joints of the hand, myocarditis, HF IIA st., FC III.
- Systemic lupus erythematosus, subacute form, activity III, with heart disease (myocarditis) and kidneys (glomerulonephritis, nephrotic form), right-sided pleural effusion. HF IIA st., FC III.
- Reiter's disease, urogenital form, immuno-pathological stage, prolonged course. Polyarthritis ankles. Urethritis, conjunctivitis. Moderate activity. IJF II stage.
- Chronic gouty arthritis, polyarthritis, acute form, with a primary lesion of the foot joints, knee joints with the presence of peripheral tophi in auricles, radiographic stage II, IJF II stage.
- Juvenile rheumatoid arthritis, polyarthritis, seronegative variant, rapidly progressive course, active phase, activity III, radiological stage II, IJF II stage.

GASTROENTEROLOGY

- Peptic ulcer disease, small ulcer on the anterior wall of the bulb of duodenum (0.4 sm), Hp-associated, active phase, mild form. Superficial antral gastritis with intestinal metaplasia, increased acid-forming gastric function.
- Gastric ulcer, ulcer on the pyloric part of the stomach (1.5 cm), Hp-negative, active phase, average form. Atrophic fundal gastritis, dysplasia III st., intestinal metaplasia, increased acid-forming gastric function.
- Gastroesophageal reflux disease, erosive form, active phase, class C Los-Angeles.
- Chronic viral hepatitis B, Metavir, level 2/4 and 2/4 step (septal fibrosis).
- Postviral (virus hepatitis B), liver cirrhosis, macronodular, decompensation stage, class B Child-Pugh. The syndrome of portal hypertension. Ascites.
- Primary biliary dyskinesia, gallbladder dysfunction, hypermotoric form.
- Irritable bowel syndrome, mixed form, acute phase.
- Chronic duodenitis, exacerbation period, increased acid-forming gastric function.
- Chronic atrophic pangastritis with intestinal metaplasia in the corpus of stomach, decreased acid-forming gastric function.
- Chronic enteritis (postinfectious) jejunitis, mild form, acute phase, with severe inflammatory mucosal changes without atrophy and without breaking the suction capacity.
- Chronic alcohol calcificated pancreatitis, acute phase, hyperenzyme form, mild form.
- Chronically non-ulcerative colitis, postdysenteric, proctosigmoiditis, acute phase, mild form.
- Nonspecific ulcerative colitis, proctosigmoiditis, chronic form, moderate, exacerbation period. Iron deficiency anemia, mild form.
- Chronic noncalculous cholecystitis, acute phase, severe form. Phlegmona gallbladder.
- Chronic noncalculous cholecystitis, acute phase, mild form. Secondary hypotonic dyskinesia of gallbladder.
- Chronic superficial gastritis (H.pilory-associated), acute phase, moderate form, increased acid-forming gastric function.

- Chronic radiation total enteritis, severe form, acute phase. Malabsorption syndrome.
- Chronic biliary fibrose-infiltrative pancreatitis, acute phase, hypoenzyme form, severe form, exocrine insufficiency, moderate.
- Cholelithiasis. Chronic calculous cholecystitis, acute phase, severe form. Mechanical jaundice.

NEPHROLOGY

- Secondary amyloidosis, CKD stage III: nephrotic syndrome, anemia.
- Hemorrhagic vasculitis, CKD stage III: pseudomembranous-proliferative type (class VI), secondary anemia, moderate.
- CKD stage III: hypertensive nephropathy.
- Acute glomerulonephritis, nephrotic syndrome.
- Acute pyelonephritis sided, uncomplicated.
- Acute tubulointerstitial nephritis
- CKD IV: polycystic of both kidneys. Renoparenchymatous hypertension 3 st., II st.
- CKD II: glomerulonephritis, nephrotic syndrome. Renoparenchymatous hypertension 2 st., II st.
- CKD III: chronic left-side pyelonephritis, exacerbation st.
- CKD III: tubule-interstitial nephritis. Anemia of chronic disease, moderate.
- Diabetes mellitus type 1, moderate form, subcompensation. Diabetic nephropathy, III st.

HEMATOLOGY

- Autoimmune hemolytic anemia, acute form, hemolytic crisis
- B-12 deficiency anemia, moderate.
- B-cell chronic lymphocytic leukemia; C (IV) stage. Secondary anemia, thrombocytopenia.
- Acute myeloid leukemia, M_O (minimal differentiation).
- Acute erythroleukemia, M6.
- Acute lymphoblastic leukemia, variant L III.

- Iron deficiency anemia, mild.
- Iron deficiency anemia, moderate.
- Lymphogranulomatosis, IIB stage, mixed-cellularity subtype, active phase.
- Celiac disease. malabsorption syndrome. B12-folate deficiency anemia, moderate.
- Myelodysplastic syndrome: chronic myelomonocytic leukemia, refractory anemia, hypoplastic form.
- Minkovsky-Chauffard`s anemia, hemolytic crisis.
- Polycythemia vera, II stage, phase A.
- Polycythemia vera, III stage (terminal), transformation to acute leukemia.
- Marchiafava-Micheli`s disease, hemolytic crisis.
- Chronic lymphocytic leukemia, initial stage.
- Chronic lymphocytic leukemia, T-shape, terminal period (blast crisis).
- Chronic myeloid leukemia, clinical manifestation period, II stage.
- Chronic myeloid leukemia, terminal period, blast crisis.
- Chronic myeloid leukemia, accelerated phase. Secondary anemia, moderate. Secondary thrombocytopenia, mild.
- Non-Hodgkin lymphoma, low-grade, stage 4A.

ENDOCRINOLOGY

- Autoimmune thyroiditis, atrophic form, hypothyroisis, moderate, decompensation.
- Autoimmune thyroiditis, hypertrophic form, euthyroisis.
- Adreno-genital syndrome. Virile form.
- Bronchi adenocarcinoma. Ectopic ACTH-syndrome. Cushing syndrome.
- Anaplastic thyroid cancer with metastases to the regional lymph nodes in the neck on both sides and lighter, $T_4N_2M_1$.
- Secondary hyperthyroisis, amiodarone-associated, moderate, decompensation.
- Acute purulent thyroiditis. Abscess of the right lobe of the thyroid gland.
- Diffuse goiter, IIst. Euthyrosis.
- Diffuse toxic goiter. Hyperthyroisis, moderate, decompensation. Thyrotoxic heart. HF IIA st., FC III.
- Diffuse toxic goiter. Thyrotoxicosis, severe, decompensation. Atrial fibrillation,

persistent form. HF IIA st., FC III. Thyrotoxic ophthalmopathy, IIIst.

- Neurogenic diabetes insipidus, compensation stage.
- Primary hyperparathyroisis. Adenoma of the parathyroid glands.
- Subacute thyroiditis, thyrotoxic early stage.
- • Postoperative hypothyroisis, moderate, decompensation.
- Postoperative hypothyroisis, moderate, medical compensation.
- Postradiation hypothyroisis, moderate, decompensation.
- Nodular goiter, node in the right lobe of the thyroid gland. Euthyrosis.
- Klinefelter`s syndrome. Hypergonadotrophic hypogonadism.
- • Syndrome Turner. Primary amenorrhea.
- • Autoimmune thyroiditis, hypertrophic form. Subclinical hypothyroidism.
- Pheochromocytoma, adenoma of the left adrenal gland, paroxysmal form, mild course.
- Pheochromocytoma, adenoma of the right adrenal gland, constant form. Secondary hypertension, 3 st,, II st.
- Chronic adrenal insufficiency (primary), moderate, decompensation.
- Diabetes mellitus type 1, severe form, decompensation. Diabetic peripheral distal sensory-motor polyneuropathy of the lower extremities.
- Diabetes mellitus type 1, severe form, subcompensation. Nonproliferative diabetic retinopathy. Diabetic nephropathy IV st. Renoparenchymatous hypertension 3 st., II st.
- Diabetes mellitus type 2, secondary insulin-depended, severe form. decompensation. Diabetic peripheral distal sensory-motor polyneuropathy of the lower extremities. Diabetic angiopathy of the lower extremities, IV st. Trophic ulcer of II finger of the right foot. Diabetic nephropathy III st.
- Diabetes mellitus type 2, moderate, subcompensation. Diabetic peripheral distal neuropathy of lower extremities, sensory form. Diabetic angiopathy of lower extremities II stage. Alimentary-constitutional obesity, I st.
- Diabetes mellitus type 1, moderate, decompensation. Ketoacidosis, II stage.
- Iatrogenic chronic adrenal insufficiency, mild form, compensation.

MAIN NORMAL INDEXES WITH REFERENCE RANGES

I. General clinical analyses

General blood analysis

Index	Males	Females
Hemoglobin, g/L	130-160	120-140
RBC, 10^{12}/L	4,0-5,0	3,7-4,7
Hematocrit, %	40-48	36-42
ESR, mm/h	1-10	2-15
Color index, U	0,85-1,05	
Reticulocytes, %	2-12	
WBC, 10^9/L	4-9	
Leucogram		
Band neutrophils, %	1-4 (0,04-0,3)	
Segment neutrophils, %	45-70 (2,0-5,5)	
Eosinophils, %	0-4 (0,02-0,3)	
Basophils, %	0-1 (0,0-0,065)	
Lymphocytes, %	25-35 (1,2-3,0)	
Monocytes, %	3-8 (0,09-0,6)	
Platelets, 10^9/L	180-320	

Urinalysis

Index	Reference range
Urine quantity, ml/day	800-1800
pH, U	4,5-8,0
Bacteria, per ml	Up to 1000
Protein, g/day	Up to 0,075
Specific gravity in Zimnickiy test, U	Up to 1020
RBC in field of view	0-2
WBC in field of view	0-3
Urate	In acidic habitat
Phosphate	In acidic habitat

Stomach secretory function

Index	Type of secretion		
	basal	submaximal	maximal
Juice volume, ml	50-100	100-140	180-200
General acidity, U	40-60	80-100	100-120
Free hydrochloric acid, U	20-40	65-85	90-110
Conjugated hydrochloric acid, U	10-15	10-15	10-15
General acid production / Debit-hour of hydrochloric acid, mmol/mg	1,5-5,5 55-200	8-14 300-500	18-26 650-950
Pepsin by Tugolukov, concentration, mg/L	200-400	500-650	500-750
Debit-hour of pepsin, mg	10-40	50-90	90-100

Functional limits of acid-production stomach function

during intragastral pH-metry [Chornobroviy V.M., 1988]

pH	Functional limits	Acid production
0,9-1,2	5	Severe hyperacidity
1,3-1,5	4	Moderate hyperacidity
1,6-2,2	3	Normal acidity
2,3-3,5	2	Moderate hypoacidity
3,6-6,9	1	Severe hypoacidity
7,0-7,5	0	Anacidity

Excretory function of stomach indexes

Index	In blood	In urine
Amylase by Volhemuth, U	16-32	16-64
Amylase by Smit-Rose, U	80-120	Up to 400
Lipase by Comfort, U	0,2-1,5	200-500

Coprological test

Index	Result
Syndromes	Absent
pH	basic or neutral
Muscle fibers	± (changed)
Neutral fat	Absent
Fatty acids	±
Starch	Absent
Digested cellulose (plant)	±
Connective tissue	Absent
Mucosa	Absent
Oxalates	Absent
Stercobilin, mg	40-280
Bilirubin	Absent

Bacteriological examination of stool

Microflora	Amount of microbes
Pathogenic colon species	10^7-10^8
General amount of E. coli	Up to 10
E. coli with weakly expressed enzymatic properties, %	Up to 5
Lactose negative enterobacteries, %	0
E. coli hemolysing, %	Up to 25
Coccoid forms in general microbe culture, %	0
Hemolytic staphylococcus, %	10^9 and more
Bifidobactries	0-10^3
Proteus species	0-10^4
Candida fungi	0
E. coli M17 after treatment by colibacterin or bificol, %	0

Test of Nechiporenko

RBC	up to 1000/ml
WBC	up to 4000/ml

Main bile indexes

Index	Cystic	Hepatic
Bilirubin, μmol/L	225-702	37-154
Cholesterol, μmol/L	3,5-8,0	1,0-5,0
Bile acids, g/L	20,3-63,3	5,2-13,5
Protein, g/L	5,9-6,9	2,5-2,9
Lipoprotein complex, g/L	12,5-17,5	1,9-29
DFA reaction, U of opt. density	0,05-0,10	0,070-0,073
Cholate-cholesterol coefficient	6-8	–

Indexes of multi-fractional duodenal intubation

Phase	Duration	Bile quantity	Excretion velocity
I – choledochus	10-20 min	15-20 ml	1-2 ml/min
II – closed sphincter Oddy (insert to the tube 40 ml of 33% solution of magnesium sulfas)	2-6 min	–	–
III – opened sphincter Oddy (cysticus duct, portion A)	3-6 min	3-5 ml	1 ml/min
IV – opened sphincter of Lutcens-Martynov (cyst, portion B)	20-30 min	30-50 ml	2,5 ml/min
V – opened sphincter of Marizzi (hepatic, portion B)	20-30 min	> portion B	1-1,5 ml/min

II. Biochemical parameters

Indexes of protein metabolism (blood serum)

Index	SI units	
General protein, g/L	70-90	
Protein fractions	g/L	%
Albumins	32-55	56-66,5
α_1-globulins	1-4	2,5-5
α_2-globulins	5-9	5-9
β-globulins	6-10	8-12
γ-globulins	8-18	12,8-19
A/G coefficient	1,3-2,0	

Diagnostic criterions of transudate and exudate

Index	Transudate	Exudate
Specific gravity	1,005-1,015	More then 1,016
Protein, g/L	5-25	More then 30
Albumins/globulins	2,5-4,0	0,5-2,0
Rivalt test	–	+
WBC	Up to 15	More then 15
LDH of pleural liquid	0,6	0,6

Indexes of lipid metabolism (blood serum)

Index	SI units
Cholesterol, mmol/L	<5,2
Triglycerides, mmol/L	0,5-2,1
Atherogenic coefficient	Up to 3,0 U
General lipids, g/L	4-8
β-lipoproteins, opt. U	35-55
HDL cholesterol, mmol/L	0,9-1,9
LDL cholesterol, mmol/L	<2,2
NEFA, μmol/L	400-800

Content of bilirubin in blood serum

Index	SI units
General bilirubin by Iendrashik, mmol/L	8,5-20,5
Conjugated bilirubin (direct), mmol/L	0-5,1
Unconjugated bilirubin (indirect), mmol/L	8,5-15,4

Indexes of nitrogenous substances in blood serum

Indexes	SI units	
Residual nitrogen, mmol/L	14,3-25,0	
Urea, mmol/L	4,2-8,32	
Creatinine, μmol/L	50-115	
	males	females
Uric acid	0,21-0,46	0,15-0,40

Enzyme metabolism indexes in blood serum

Indexes	SI units
Alanine transaminase, μmol/(h/L)	0,1-0,8
Aspartate transaminase, μmol/(h/L)	0,1-0,45
Lactate aminotransferase by Savelio, μmol/(h/L)	0,9-4,0
LDH-5, μmol /(h/L)	0,16-0,82
Acid phosphatase, μmol/(h/L)	5,0-6,7
Alkaline phosphatase, μmol/(h/L)	0,7-2,3
Ceruloplasmin, μmol/L	1,2-2,45

Indices of lipid peroxidation and antioxidant system protection of blood serum

Index	SI units
Molondialdehyde in blood, μmol/L	0,48-1,16
Molondialdehyde in erythrocyte membranes, μmol/L	5,7-10,9
Catalase, mg	14,0-19,0
Peroxidase, mg/(min/L)	257-305

Parameters of carbohydrate metabolism in blood serum

Index	SI units
Glucose, orthotolidine method, μmol/L	3,5-5,5
Glucose, Chagerdone-Yensen method, μmol/L	4,4-6,6
Pyruvic acid, μmol/L	0,04-0,14
Lactic acid, μmol/L	0,99-1,75

Content of electrolyte and microelements in blood plasma

Index	SI units
Potassium, μmol/L	3,8-5,2
Sodium, μmol/L	138-148
Calcium, μmol/L	2,25-2,75
Magnesium, μmol/L	0,75-1,25
Phosphate inorganic, μmol/L	0,8-1,5
Iron of blood serum, μmol/L	11,6-30,0
Chlorine, μmol/L	95-110

Indexes of inflammatory activity process

Index	Normal range
C-reactive protein	Negative
Sialic acid, U	0,18-0,2
Ceruloplasmin, g/L	0,23-0,5
Antistreptolisin (ASL)-O	1:250
Antistrepthohyaluronidase	1:250
Myoglobin of blood serum	1:2 – 1:64

Coagulogramma

Index	Normal range
Prothrombin index, %	80-105
Prothrombin time, sec	15-20
Thrombin time, g/L	15-18
Fibrinogen, g/L	2-4
Fibrinogen B	Negative
Time of blood sedimentation	5-10
Duration of bleeding (by Duke), min.	Up to 4

III. Immune indexes

Index	Normal range
Unspecific resistance	
Phagocytic activity of WBC, %	50-70
Bacterial activity of serum, %	50-80
Titer of complement, %	0,02-0,08
Cell immunity	
T-lymphocytes, %	40-60
T-helper, %	30-40
T-supressor, %	15-20
Tx: Tc, U	1,-2,5
Humoral immunity	
B- lymphocytes, %	15-30
Ig A, g/L	
Ig G, g/L	
Ig M, g/L	

IV. Instrumental indexes

ECG parameters

Waves and intervals	Duration, sec	Amplitude, direction
P wave	0,06-0,1	0,5-0,25 (not more than 1/6-1/8 of R-wave in standard leads, positive)
P-Q interval	0,12-0,2	Isoelectric
Q wave	0,02-0,03	0-3 mm (not more than 25% of next R wave in standard leads, negative)
R wave	0,03-0,04	In classic leads not more than 20 mm, in thoracic leads – 25 mm
S wave	0,03	< 8 mm (in I, II leads), < 8 mm (in V_1)
QRS complex	0,06-0,1	
ST segment	0,02-0,12	Isoelectric, can be replaced not more than 2 mm in V_{1-2} and 0,5 mm in classic leads
T wave	0,1-0,25	3-5 mm (less then 1/3-1/4 of next R wave in standard leads, positive)
U wave	0,06-0,16	2-3 mm, positive

Indices of diurnal ECG monitoring

Index	Normal range
HR at rest, beats / min	60-90
Descendent ST segment depression, mm	Up to 2
Supraventricular and ventricular single extrasystoles in adolescence and adulthood per day	Up to 100
Night bradicardia	30-40
Supraventricular tachicardia > 60 years	Never
Polymorph and couple ventricular extrasystoles > 60 years	Never
Ventricular tachicardia	Never
Extrasystoles more than 60 years	100-500

Echocardiography indices (EchoCG)

Index	Normal range
End-systolic diameter (ESD), sm	2,3-3,8
End-diastolic diameter (EDD), sm	3,5-5,5
End-systolic volume (ESV), ml	20-60
End-diastolic volume (EDV), ml	50-160
Interventricular septum in diastole (IVSd), sm	0,6-1,1
Left ventricular posterior wall in diastole (LVPWd), sm	0,6-1,1
Left atrium (LA), sm	3,0-4,0
Ejection fraction (EF), %	50-70
Degree of anter-poster diameter shortening (%ΔS)	30-40
Velocity of circular shortening of myocardium in systole, circ/sec	0,9-1,45

Central hemodynamic indices

Index	Normal range
Heart rate, / min	60-90
Systolic BP, mmHg	<120
Diastolic BP, mmHg	<80
Systolic volume, ml	60-80
Cardiac volume, L/min	4-6
Cardiac index (SI), U	3,2±0,3

Normal ranges

of heart rate variability

Index	Value M±m
SDNN, ms – the standard deviation of NN intervals, calculated over a 24-hour period	141±39
SDANN, ms – the standard deviation of the average NN intervals calculated over short periods, usually 5 minutes	127±35
RMSSD, ms – the square root of the mean of the squares of the successive differences between adjacent NNs	27±12
pNN50, - the proportion of NN50 divided by total number of NNs	
LF, ms – low frequency spectrum component	1170±416
HF, ms^2 – high frequency spectrum component	975±203
LF/HF, U – sympathetic-parasympathetic nervous system activity balance	1,5-2,0

Spirography indices,

used for determination of ventilation insufficiency type

Index	Normal range	% from predicted
Forced vital capacity (FVC), L	3-5	M-81 F-78
Forced expiratory volume in 1 sec (FEV1)		M-88 F-86
FEV1/FVC (index Tiffno)		M-90 F-91
Maximum voluntary ventillation, L	50-180	±15-20

Note: M – male; F – female

Liver USE indices

Index	Normal range
Anter-poster size of right lobe on media-clavicular line	8,1-10,6 sm
Left lobe size on medium line	5,6-8,2 sm
Cranio-caudal size of:	
right lobe	10,5±1,5 sm (max=12 sm)
left lobe	8,3±1,6 sm (max=10,9 sm)
Liver size in transverse plane	17,0±0,23 (14-19 sm)
Right lobe size	13,8±0,17 (11-15 sm)
Angle, formed by anterior and ventral surfaces of:	
liver left lobe	<45°
liver right lobe	<75°

USE indices of bile ducts

Index	Normal range
Segmental and subsegmental ducts (<40% from duct diameter)	Up to 1 mm
Right and left lobar ducts	2-3 mm (max=4-5 mm)
Ductus choledochus:	
norm	Up to 5 mm
probable dilation	6-7 mm
pathological dilation	>7 mm
after cholagogue preparations	Decrease on 2-3 mm

USE indices of gallbladder

Index	Normal range
Wall thickness	1-2 mm
During gallbladder contraction	from 2 to 5 mm
Cervical wall thickness	4-5 mm
Pathological wall thickness	>4-5 mm
Thickness in norm	from 7 to 10 sm
Width	from 3 to 5 sm
Gallbladder volume	from 8 to 42 ml
as exclusion	100-160 ml
Gallbladder square	8-12 sm^2

Pancreas and duct of Wirsung USE indices

Index	Normal range
Pancreas	
Location of pancreas	5-6 sm below of processus xiphoideus
Distance from anterior abdominal wall	
normosthenic	3,7±0,72 sm (2,6-5,3 sm)
asthenic	2,6 sm
hypersthenic	from 9,5 sm
Anterior-posterior size of caput	Up to 2,0-2,5 sm
Cervix width	from 0,7 to 1,2 sm
Corpus width	from 0,7 to 1,2 sm
Cranial-caudal size of corpus in sagittal plane	3,0±0,6 sm
Anterior-posterior size of tale	from 1,5 to 2,0 sm
Cranial-caudal size of tale	3,6±1,2 sm

Duct of Wirsung	
Visualization in healthy individuals	50-86%
Anterior-posterior size of duct	from 0,8 to 2,0 mm
Diameter of duct:	
Area of tail	1,0-1,7 mm
Area of corpus	2,4-2,6 mm
Area of caput	2,6-3,3 mm

Kidney USE indices

Index	**Normal range**
Longitudinal size	7,5-12 sm
Difference of length between kidneys	<1,5-2,0 sm
Width	4,5-6,5 sm
Thickness	3,5-5,0 sm
Capsule	0,9-1,5 sm
Diameter of the piramids	0,5-0,9 sm
Ratio of the renal parenchyma to pyelocaliceal system	2:1 (in children – more, in elderly patients – less)
Internal diameter of pelvis	0,5 sm
Pelvis size	1,0-2,5 sm

USE indices of spleen

Index	Normal range
Longitudinal size	1-2 mm
Transverse size	from 2 to 5 mm
Distance from upper pole till external edge	4-5 mm
Thickness	>4-5 mm
Distance from upper pole to lower	from 7 to 10 sm
Lineal index (longitudinal size x transversal size)	from 3 to 5 sm

USE indices of suprarenal glands

Index	Normal range
Length of right suprarenal gland	1,8-2,8 sm
Length of left suprarenal gland	1,8-2,3 sm
Thickness	1,1-1,6 sm
Visualization abilities	
right suprarenal gland	89%
left suprarenal gland	76%

Protocol of patient clinical analyses

Patient's name _____

Age _____ Sex_____

Complains: _____

_____

_____

_____

Anamnesis morbi: _____

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_____

Anamnesis vitae: _____

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Objective status: _____

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Preliminary diagnosis: _____

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Exam plan: _____

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Additional tests results: _____

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Background of clinical diagnosis: _____

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Clinical diagnosis:

Main disease: _____

_____

_____

_____

Concomitant disease: _____

_____

_____

Complications: _____

_____

_____

Treatment:

1. Regimen: _____

2. Diet: _____

3. Prescriptions: _____

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Recommended literature

Main:

1. Kumar and Clark Clinical Medicine, 9th edition, 2016, http://store.elsevier.com/Kumar-and-Clarks-Clinical-Medicine/isbn-9780702066016/
2. Harrison's Principles of Internal Medicine, 19th Edition, 2015, https://www.amazon.it/harrisons-principles-internal-medicine-2vols/dp/0071842292/ref=sr_1_1/253-5825314-6321635?ie=UTF8&qid=1471257659&sr=8-1&keywords=harrison+internal+medicine+19
3. Davidson's Principles and Practice of Medicine, 22nd Edition, 2014, https://www.amazon.com/Davidsons-Principles-Practice-Medicine-STUDENT/dp/0702050350

Additional:

1. Murray and Nadel's Textbook of Respiratory Medicine: 2-Volume Set (Textbook of Respiratory Medicine (Murray)) by Robert J. Mason MD, V. Courtney Broaddus MD, Thomas Martin and Talmadge King Jr. MD (May 6, 2013), http://www.amazon.com/Murray-Nadels-Textbook-Respiratory-Medicine/dp/1416047107/ref=sr_1_1?s=books&ie=UTF8&qid=131715407
2. Williams Textbook of Endocrinology: Expert Consult-Online and Print by Shlomo Melmed, Kenneth S. Polonsky MD, P. Reed MD Larsen and Henry M. Kronenberg MD (May 27, 2014), http://www.amazon.com/Williams-Textbook-Endocrinology-Expert-Consult-Online/dp/1437703240/ref=sr_1_1?s=books&ie=UTF8&qid=1317154124&
3. **Williams Hematology, Eighth Edition, 2012,** http://www.amazon.com/Williams-Hematology-Eighth-Kenneth-Kaushansky/dp/0071621512/ref=sr_1_2?s=books&ie=UTF8&qid=1317154171&sr=1-2#_

Information issues

1. Official evidence practically-oriented medical information in your medical publications: newspapers, magazines.

2. Internet issues:

- http://depositfiles.com/files/ztx7w7zxy
- http://depositfiles.com/files/kgfplnxku
-http://www.amazon.com/Textbook-Gastroenterology-2-Vol-Set/dp/0781728614#reader_0781728614

Appendix 1

Temperature list

Patient's name _____

Department _____ Ward _____

Date																						
Day of the disease																						
Day of treatment	1		2		3		4		5		6		7		8		9		10		11	
T	d	n	d	n	d	n	d	n	d	n	d	n	d	n	d	n	d	n	d	n	d	n
39																						
38																						
37																						
36																						
35																						
Diet																						
Breath rate																						
Heart rate																						
Systolic BP																						
Diastolic BP																						
Body weight																						
Diuresis																						
Stool																						

Abbreviations of lab tests results

General blood count:

WBC - White Blood Cells

GRA-Granulocytes

LYM - Lymphocytes

MON - Monocytes

RBC – Red Blood Cells

HGB - Hemoglobin

HCT - Hematocrit

MCV - Mean Cell Volume

MCH - Mean Corpuscular Hemoglobin;

MCHC - Mean Corpuscular Hemoglobin Concentration

RDW - Red Distribution Width;

PLT - Platelets

MPV - Mean Platelets Volume

PCT - Plateletcrit

PDW - Platelet Distribution Width

Biochemical indexes:

TBIL – total bilirubin;

DBIL – direct bilirubin;

TP – total protein;

ALB - albumin;

URE - urea;

CRE - creatinine;

ALTR – alanine transaminase

ASTR - aspartate transaminase;

GLU - glucose;

CHOL - cholesterol;

TG-B - triglycerides;

HDL – high density lipoproteins;

LDL - low density lipoproteins;

LDH - lactate dehydrogenase;

URIC – uric acid;

LIPA - lipase;

AMIL - amylase;

ALP – alkaline phosphatase;

GGT - gamma-glutamatetranspeptidase;

CK (MB) – creatine kinase MB-fraction

FE - iron

TRF - transferrin

TIBC – total iron-binding capacity

CRP - C-reactive protein;

RF – rheumatoid factor;

ASO – antistreptolysin O;

HBA1c – glaciated hemoglobin;

MAU - microalbuminuria;

BNP – brain natriuretic peptide;

AMM – ammonia;

PSA – prostate specific antigen;

AFP - alpha-phetoprotein;

INR – international normalized ratio

APTT – activated partial thromboplastin time;

TSH – thyroid stimulating hormone;

T4 - thyroxin;

T3 - triiodothyronine;

Fr T4 – free thyroxin;

Ab TG – thyroglobulin antibodies.

IRV – inhale residual volume

TV – tidal volume

FVC – forced vital capacity

FEV1 – forced expiratory volume in 1 sec

FEV1% VC IN – index Tiffno

FEV1% FVC – index Gensler

PEF – peak expiratory flow

Acidic-basic balance (ABB)

pH - pondus Hydrogenii

pCO2 – partial pressure of Carbone dioxide

pO2 - partial pressure of Oxygen

SaO2 – arterial blood saturation

Lac - lactate

BUN - urea

Estimated results of ABB:

BE-ECF - base excess in the extracellular fluid compartment

BE-B - base excess in blood

SBC – standard bicarbonate concentration

HCO3 – bicarbonate level

TCO2 – total Carbone dioxide

O2Ct – oxygen content

AaDO2 – alveolar-arterial oxygen gradient

Spirometry

VC – vital capacity

ERV – exhale residual volume

ИСТОРИЯ БОЛЕЗНИ В ТЕРАПЕВТИЧЕСКОЙ КЛИНИКЕ

Учебно-методическое пособие

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