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CHAPTER 1. EXAMINATION OF A PATIENT IN A THERAPEUTIC CLINIC: METHODOLOGICAL GUIDELINES AND LOGICAL CONSTRUCTION OF THE DIAGNOSIS

Systematic examination of the patient should pursue several goals: 1) consistent assessment of the subjective and objective data of the patient; 2) recommendation of an appropriate plan of additional examinations; 3) the construction of a detailed clinical diagnosis; 4) some aspects of the differential diagnosis and the choice of adequate treatment methods.

The following patient examination scheme has been developed and successfully applied in our therapeutic clinic.

I. Common information.

1. Name and surname.
2. Age.
3. Profession.
4. Date of admission to the clinic and referral diagnosis.
5. Address.

II. Complaints on admission.

Cardiovascular system

1. Dyspnea at rest or during physical activity. Attacks of apnea: precipitating factor and the patient's behavioral response.
2. Heartbeat: a) persistent or occasional; b) conditions of onset (at rest or during physical activity or emotional stress, etc.).
3. Feeling of interruptions in the heartbeat.
4. Pain in the heart area: a) persistent or occasional; b) location (retrosternal, apex beat, heart impulse area etc.); c) type (aching, stabbing, dull, crushing etc.); d) intensity and irradiation; e) duration; f) rate; g) conditions that trigger the pain; h) the patient's behavior during attacks of pain; i) pain-relief techniques.
5. Edema of the upper and lower limbs.
6. Feeling of pulsation in parts of the body.
7. Phenomena of vascular spasm: intermittent claudication, etc.

Respiratory system

1. Cough: a) dry or productive (with sputum); b) time of onset; c) persistent or paroxysmal.
2. Sputum: a) amount and fluctuation of its discharge during the day; b) type and color; c) odorous or non-odorous.
3. Hemoptysis: a) amount of blood; b) blood color (scarlet, dark); c) frequency.
4. Pain in the thorax: a) type (dull, aching, etc.); b) location and irradiation; c) relation to respiration, physical exertion, postural changes.

Digestive system

1. Appetite: good, reduced, increased. Distortion of appetite.
2. Thirst.
3. Taste in the mouth: sour, bitter, metallic; dryness of the mouth.
4. Swallowing and passage of food: free, painless.
5. Salivation.
6. Heartburn (occurs with or after a meal).
7. Belching: empty, sour, bitter, rotten-egg, or food.
8. Nausea: relation to food and type of food.
9. Vomiting: a) on an empty stomach or after eating; b) type of vomitus — food consumed the day before, bile, coffee-ground material, etc.; c) smell — unpleasant, putrid, sour, or absent.
10. Pain in the abdomen: a) location and irradiation; b) relation to food intake; c) relation to the type of food; d) type of pain (dull, aching, etc.).
11. Feeling of fullness and heaviness in the epigastric area (bloating, flatus), belching of gas.
12. Burning, itching, pain in the anus.
13. Stool: a) regular or irregular; b) constipation — number of days, conditions of onset; c) diarrhea — frequency per day, conditions of onset, false and painful urges (tenesmus); d) type of stool (liquid, watery, mushy, presence of worms, etc.).
14. Rectal bleeding. Prolapse of hemorrhoids. Rectal prolapse.

Urinary system

1. Frequency of urination during the day and at night.
2. Amount of urine per day.
3. Pain in the urethra, burning sensation and pain during urination.
4. Difficulty urinating.
5. Color of urine: straw-yellow, dark (the color of meat slops), etc.
6. Blood in the urine.
7. Frequent urge to urinate.
8. Involuntary urination.
9. Pain in the lumbar region: type, relation to urination, location and irradiation, factors that relieve the pain.

Endocrine system

1. Increased mental irritability, tearfulness, excessive dreaming or insomnia, sleepiness, distractibility, poor acumen, apathy, sluggishness.
2. Rapid heartbeat (tachycardia), interruptions (skipped beats), pain in the heart, dyspnea, fear of death.
3. Severe headache, dizziness, weakness, rapid physical fatigability.
4. Increased appetite and thirst, frequent urge to urinate, weight gain, vomiting, diarrhea, seizures.
5. Mental retardation and mental degradation, changes in appearance, voice, vision; impairment of memory.
6. Excessive sweating, feeling of pressure and discomfort in the neck, thickening of the anterior surface of the neck, poor heat tolerance, tremor of the limbs, exophthalmos, itchy skin, tinnitus.
7. Sexual disorders (decreased libido and potency, menstrual cycle disorders), male-pattern hair growth in women.

III. The history of the present disease.

This section of the patient's study provides a significant amount of information (more than 50%) that contributes to making a correct diagnosis. While questioning the patient, one should not be content with general and vague information. Each point needs to be specified. It is necessary to achieve certainty and clarity in all details. The exception can be the cases that traumatize the patient's mental state and do not have decisive significance for the doctor's conclusions about the diagnosis. When considering the history of the disease, a logical chain of questions should be built. When did you get sick? How did the disease begin? Did you feel completely healthy before the onset of the disease? How did the disease develop before the actual hospitalization? What medical institutions did you seek help in? What investigations were made, their results? What was the diagnosis? What was treated, what effect was achieved? The reason and circumstances of the last hospitalization. It should be noted that the dynamics of complaints and symptoms is very important when questioning.

IV. Past medical history (Anamnesis vitae).

Childhood and youth: place of birth. The age of the parents at the patient's birth. Development at an early age: the age at which he started walking and talking, developmental abnormalities.

School period: at what age he started school, how he studied, how many classes and when he graduated. Features of physical development in youth.

Work history: when he started working, the nature and conditions of work, occupational hazards. Military service, participation in military actions.

Household history: relocations. Characteristics of the dwelling. Nutritional profile. Rest habits after work and during vacation. Physical education and sports.

Family history: age, health, and the status of family members (parents, brothers, sisters, husband (wife), children, grandparents, uncles, aunts on the father's and mother's side). Causes of death and age of deceased relatives. Relatives suffering from any of the following disorders: cardiovascular, respiratory, gastrointestinal, mental, tuberculosis, neoplasms, alcoholism.

Bad habits: smoking, drinking alcohol, drugs (since when and for how many years, regularity, amount). Signs of chronic alcoholism.

Sexual development and sexual life: first sexual experience, present sexual practice. For women — first menstrual period, regularity of periods, painfulness of periods, tenderness, volume of menstrual flow — abundant or scanty. Cessation of the menstrual cycle (the onset of menopause). Pregnancies, their course. Normal childbirth, abortions, miscarriages.

Previous diseases: what diseases he suffered from, starting from childhood (in chronological order with age indication); injuries, contusions, operations; established group of disability (if any), reasons for obtaining this status. Mental trauma during life.

Allergic history: intolerance to drugs and other substances, food intolerance. Manifestation of intolerance.

Blood transfusion history: Was there a transfusion of donor blood (normal reaction, complications)? Were there autohemotransfusions, for what disorder? The use of plasmapheresis, hemodialysis.

V. The present state.

General examination: a) general condition (satisfactory, moderate, severe); b) patient's body position (active, passive, forced); c) consciousness (clear, confused, unconscious); d) facial expression (excited, indifferent, masked, feverish, suffering); e) body build (correct, incorrect), posture, constitutional type (normosthenic, hypersthenic, asthenic), height, body weight, temperature.

Skin and visible mucous membranes: a) color; b) humidity (normal, elevated, decreased), peeling; c) rash, hemorrhage from or into the skin (dermatorrhagia), signs of scratching, scars, ulcers, varicose veins; d) hair (type of hair loss — male, female) severity and localization of baldness, gray hair; e) nails: shape (normal, flat, spoon-shaped, in the form of watch glasses), the presence of trophic disorders (dull, brittle, fragile nails); f) mucous membranes (lips, nose, eyes, eyelids, palate).

Subcutaneous fat: a) subcutaneous fat layer (normal, weak, excessive), the areas of the greatest fat deposition, general obesity, cachexia; b) edema and their distribution (limbs, face, eyelids, abdomen, lower back), pasty skin, anasarca.

Lymph nodes. Localization: occipital, parotid, submandibular, cervical, supraclavicular, axillary, ulnar, inguinal (palpable or nonpalpable). Size in centimeters, consistency, tenderness, mobility.

Muscles. General development (good, moderate, weak). Asymmetry of individual muscle groups. Tremor. Paralysis. Paresis. Tenderness on palpation/touch. Induration. Tone (normal, elevated, lowered).

Bones: Deformity (osteoectasia (bowing of bones), thickening, erosion), its localization; tenderness on palpation and percussion.

Joints: a) configuration (normal, swollen, deformed); b) hyperemia of the skin and the elevation of the local temperature in the joint area; c) movements (active, passive), free or limited, range of motion; d) tenderness on palpation/touch and when in motion; e) circumference of symmetrical joints in centimeters; f) articular crepitus, fluctuation.

The respiratory system

1. Examination of the nose: deformity, skin coloration, signs of herpes.
2. Neck examination. Larynx: palpation, mobility, tenderness. Palpation of the thyroid gland.
3. Examination of the chest: a) shape (normal, hypersthenic, asthenic, emphysematous, paralytic, rickety, funnel-shaped, etc.); b) asymmetry (protrusion or sinking of one side of the chest); c) curvature of the spine (lordosis, kyphosis, scoliosis, kyphoscoliosis, kypholordosis); d) width of the intercostal spaces; e) position of the shoulder blades (normal, lagging from the chest-winged shoulder blades); f) symmetry of respiratory movements (uniform, lagging of the one or the other part of the chest); g) type of breathing (thoracic, abdominal, mixed); h) depth and rhythm of breathing (shallow, deep, rhythmic, pathological types of breathing), number of breaths per minute, chest circumference and shortness of breath (inspiratory, expiratory, mixed).
4. Palpation of the chest: tenderness, elasticity, vocal fremitus in symmetrical areas, pleural friction on palpation.
5. Comparative lung percussion: the nature of the percussion sound and its variation over various areas of the chest.
6. Topographic percussion of the lungs: a) height of the lung apices (anterior and posterior); b) the lower borders of the lungs along topographic lines can be parasternal, mid-clavicular (right), anterior, middle, posterior axillary, scapular, paravertebral; c) excursion of the lower pulmonary margin.
7. Lung auscultation: a) normal breath sounds (vesicular, rigid, pathological bronchial breathing); b) adventitious (added) breath sounds (dry or wet wheezing, crepitation, pleural friction rub, succussion splash); c) bronchophony in symmetrical areas.

The cardiovascular system

1. Examination of the cardiac area: a) cardiac hump, apical and cardiac tremors; b) visible pulsation in the epigastric region and heart region, pulsation in the jugular fossa, «carotid pulse».

2. Palpation: a) apical impulse (localization, character, strength, height, width); b) cardiac impulse (localization, characteristic), thrill on palpation (presystolic tremor in left atrioventricular stenosis) or purring thrill, systolic tremor in case of aortic stenosis, pulmonary artery, with an open Botallo's duct, aortic aneurysm, pericardial friction rub.
3. Percussion: a) the borders of the relative cardiac dullness (right, upper, left); b) the heart breadth with regard to its dullness, calculation of the diameter of the relative dullness of the heart in centimeters: right, left, general; c) the width of the vascular bundle in centimeters.
4. Auscultation: a) rhythm, heart rate; b) sounds (frequency, sonority, timbre change, amplification or attenuation, splitting, bifurcation, gallop rhythm); c) murmurs (character, localization, relation to the phases of cardiac activity, strength, timbre, duration, positions of maximal auscultation, conductivity), pericardial friction rub, Sirotinin–Kukoverov's symptom.
5. Examination of peripheral vessels: a) visible arterial pulsations (carotid, temporal, and peripheral arteries), head bobbing, **palpable tortuosity and induration of the arterial wall («worm sign», suggestive of atherosclerosis)**, assessment of the vascular wall; b) pulse on the radial arteries (compared in both hands, filling, tension, the rate of rise of the pulse wave, the condition of the vascular wall); c) capillary pulse; d) examination and palpation of veins (vein dilation in the thoracic and abdominal walls, in the legs, induration and tenderness along the veins), venous hum; e) arterial pressure on both hands (systolic, diastolic, pulse).

The digestive system

1. Breath odor (normal, putrid, ammonia, apples, etc.). Labial mucosa [color, cracks in the corners (angular cheilosis), ulcers, moisture].
2. Teeth (dental formula, tooth mobility, dental deposits).
3. Gums (color, pigmentation, looseness, bleeding when pressed, impaired skin integrity, ulceration).
4. Tongue (color, condition of papillae, coating, moisture, integrity of the surface, the presence of inflammation).
5. Pharynx/fauces. Mucosa: color, puffiness, humidity. Tonsils: size, presence of purulent plugs on the lacunae, plaque, coloration.
6. Examination of the abdomen: contour, bulging, visible pulsation, peristalsis, participation of abdominal muscles in respiratory movements, presence of free fluid (ascites), flatulence, condition of the umbilicus, presence of dilated subcutaneous veins, circumference.
7. Percussion of the abdomen: determination of free and compressed fluid. Symptom of the fluid wave. Mendel's symptom, Glinchikov's symptom.
8. Superficial indicative palpation: abdominal wall tension, tenderness (localization), hernias. Shchetkin–Blumberg's symptom.

9. Methodical deep sliding palpation of the gastrointestinal tract according to Obraztsov–Strazhesko: sigmoid, cecum, transverse colon, greater curvature (location, shape, consistency, tenderness, mobility, size, rumbling). Determination of the lower border of the stomach.
10. Auscultation of the stomach and intestines, i.e., listening to peristalsis.

Hepatolienal system

1. Liver: its palpability, characteristic of the edge on palpation (sharp, rounded, smooth, uneven, dense, soft, painful, painless, smooth, bumpy, granular). The dimensions of the transverse dullness in centimeters are measured along three lines.
2. Gallbladder: its palpability, tenderness on palpation, Ortner's symptom, Mussy's symptom, Courvoisier's symptom, etc.
3. Spleen: its palpability when the patient is lying on his back and on the right side, size, characteristics of the edge.

The genitourinary system

1. Examination of the lumbar region (bulging) and bladder.
2. Palpation of the kidneys. Nephroptosis. Pasternatsky's symptom. Ureteral points. Palpation of the suprapubic region (bladder, enlargement or tumor of the uterus).
3. Secondary sexual characteristics.

Nervous system and sensory organs

Characteristics of intelligence (impaired, preserved). Sociability. Memory. Sleep. Headaches. Dizziness. Speech. Gait. Convulsions. Paralysis. Senses of vision, hearing, and smell.

VI. Preliminary (hypothetical) diagnosis.
VII. Examination plan.
VIII. Examination data (paraclinical).
IX. Differential diagnosis.
X. Detailed clinical diagnosis and its justification.
XI. Treatment plan.
XII. Diary.
XIII. Epicrisis.
XIV. The presumed etiology and pathogenesis of the disease.
XV. List of references.

Thus, as a result of a systematic step-by-step examination of the patient, the basic concept of diagnosis is formed in the doctor's thinking and ways of adequate therapy are outlined. At the same time, in order to make a detailed clinical diagnosis, a thorough assessment of all signs and symptoms and paraclinical data based on the principles of the syndrome approach is necessary. It is the syndrome diagnosis that provides a perfect diagnosis and determines rational methods of treatment.