

Ministry of Health of Ukraine
Poltava State Medical University
Department of internal medicine No 3 with phthisiology

Approved
at the meeting of the Department of Internal
Medicine No. 3 with Phthisiology
Protocol № _____
"__" _____ 20____ p.
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Methodical instructions
for the independent work of students
during the preparation for a practical lesson and in class

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|------------------------|---|
| Academic discipline | Phthisiology |
| Module № | 1 |
| Theme of the lesson 11 | Focal and infiltrative lungs tuberculosis. Caseous pneumonia. Tuberculoma of lungs. Pathogenesis, clinic, diagnostics, differential diagnostics. Curation of patients. |
| Course | 4 |
| Faculty | International |
| Specialty | Medicine |

Consist by professor A.G.Yareshko

Assistent M.V.Kulish

1. Topicality of the theme: Consequently, knowledge of these clinical forms, their pathogenesis, clinic, diagnostics, differential diagnostics, will be instrumental in an early exposure them, that will provide effective treatment, diminishing of amount of discharge MBT, and will warn distribution of TB. Therefore the doctor of any specialist must know these clinical forms of TB and able to diagnose them.

So as today 90 – 100% patients with chronic TB of lungs have resistant to ATP, that is why they are the basic source of discharges of MBT and infecting of environment and people. TB is more frequent all ill chronic socially non adaptation person, which requires from medical workers timely measures, directed on the early exposure of such patients, their treatment and non-admission of distribution of exciter of TB. Patients with fibrous-cavern TB of lungs discharge MBT, that is why they are dangerous in an epidemiology relation. Among of the first found out patients this form of disease is 1,5-2%. Mainly chronic TB is the result of inferior, ineffective treatment or presence of resistant of MBT to ATP or concomitant diseases (AIDS, diabetes mellitus, drug addiction, alcoholism), whether undisciplined, unsocially persons do not wish to treat oneself. Quite often such patients long treat oneself in therapeutic separations, a while will not find MBT in a sputum. Taking into account all of unconcern of this disease, doctor be what profession must know the displays of TB, in good time to diagnose TB.

2. Specific objectives:

To analyse: epidemiology situation from primary TB in Ukraine, a value of different methods of inspection is in diagnostics of different forms of TB of lungs.

To explain: features of motion of primary TB, value of different methods of inspection, are in a diagnostician primary TB, features of motion of different forms of TB of lungs.

To offer: ways of diminishing of infected and morbidity among children and teenagers.

To classify: clinical classification of primary and secondary pulmonary TB.

To interpret: information x-ray inspections of patients on TB of lungs.

To draw: chart of the basic stages of pathogenesis of primary and secondary TB.

To analyze: information of laboratory inspection of sick child.

To make: planning of inspection and treatment of of different forms of TB of lungs; planning of test of Mantoux among children and teenagers.

3. Base knowledge, abilities, skills, are necessary for study themes (interdisciplinary integration)

| Names of previous disciplines | Skills are got |
|--------------------------------------|--|
| Anatomy | To know the structure of lights, partial and segmental for children and teenagers. Groups of in thorax lymphatic knots on Sukennikov and peripheral lymphatic knots. |
| Physiology | To know the function of lungs. Able to interpret a spirogram |
| Pathanatomy | To know character of TB of inflammation (morphological cyбcтpat). Structure of TB of granulom |
| Physiopathology | To know the allergic reactions of fast (anaphylactic shock) and retarded-action, mechanism of their development |
| X-ray diagnostic | To know the projection of stakes, segments of lungs on x-ray photography tape. X-ray signs of primary forms of TB of lungs. |

| | |
|-----------------------------------|--|
| Microbiology | To know the pathogenic cultures of MBT for a man, feature of structure of MBT, property. Sequence of painting of stroke on Tsil-Nilsen |
| | To know the types of immunity (humeral, cellular), mechanisms of their development |
| Propedevtics of child's illnesses | Able to collect complaints, anamnesis of disease, lives, epidemiology anamnesis; to conduct the objective inspection of sick child (review, palpation, percussion, auscultation) |
| Pharmacology | To know a pharmacokinetics, pharmacodynamics of ATP. Testimony, contra-indication. |
| Hygiene | To know the rules of the hygiene mode, which a patient on TB and doctor, persons which are in touch with this patient, must adhere to. |

4. Task for independent work during preparation to employment

4.1. List of basic terms, parameters, descriptions which a student must master at preparation to employment:

| Term | Determination |
|---------------------------------|---|
| Fibrouz-cavernous TB | the clinical form of the second TB, which has the protracted (1,5 – 2 years and anymore) chronic motion, with the periods of remission and sharpening is characterized forming in lungs of fibrotic cavity, pneumofibrous, lympho- and bronchogenic distribution of focal defeats of lungs, diminishing of their volume and displacement of organs of mediastinum in the staggered side with permanent or periodic secreting MBT. |
| Cirrhotic TB | it is a clinical form of the second TB, which is characterized excrescence in lungs of fibrous scars ftissue with a maintainance in them of hearths of the specific impression, which stipulate the periodic sharpening of process with wretched secreting MBT. |
| TB is a pleurisy | it is a clinical form which is characterized specific inflammation of pleura and accumulation of exudates in a pleura cavity. |
| TB of pleura | it is a clinical variant of exudates pleurisy which is characterized the specific dissemination defeat of sheets of pleura. |
| Empyema (festering TB pleurisy) | it is a clinical form of TB of pleura with the accumulation of festering exudates. |

4.2. Theoretical questions are to employment:

1. What are the features of the clinical presentation of cirrhotic tuberculosis?
2. What are the features of the clinical presentation of fibro-cavernous tuberculosis?
3. What are the features of the clinical presentation of TB pleurisy?

4.3. Practical works (task) which execute on employment:

1. What syndrome does prevail in the clinical picture of cirrhotic tuberculosis?
 - A. Bronchio-lungs.
 - B. Intoksication.
 - B. Pain.
 - Г. Hyperthermic.
 - Д. Meningeal.

2. To what clinical category does take a patient with the presence of the first diagnosed infiltration TB of lungs in the phase of destration and presence of secreting MBT?
 - A. 1
 - Б. III
 - В. II
 - Г. IV
 - Д. V
3. What from transferred characteristically for TB of process on the late stages of HIV-infection?
 - A. The expressed lasted intoxication with a negative reaction for a sample Mantua.
 - Б. Diffuse infiltration is with localization both in overhead and in the middle and lower departments of lungs.
 - В. Out lungs defeats, increases inwardly of pectoral lymphatic knots, generalization lymphadenopathy.
 - Г. In halves sick absence of MBT is in sputum.
 - Д. All is transferred characteristic.
4. How is confirmed etiology of TB pleurisy?
 - A. By the presence of changes TB of nature in lungs or other organs.
 - Б. Finding of MBT in a pleura liquor or sputum.
 - В. By the expressed reaction for a sample Mantua or recent "turn" of tuberculin reactions.
 - Г. Puncture by the biopsy of pleura.
 - Д. All of transferred matters for confirmation etiology of pleurisy.
5. What mechanism of development of pleura inflammatory reaction of MBT?
 - A. Only lymphogenic.
 - Б. Limpho-hematogenic.
 - В. Sputogenic.
 - Г. Bronchogenic.
 - Д. Only haematogenic.
6. What is condition appearance of exudates in a pleura cavity at patients on different clinical forms of TB?
 - A. By anatomic and functional connection between the sheets of pleura, lymphatic knots and lymphatic system of lungs.
 - Б. By an inflammatory reaction in a pleura which is caused MBT, that got to the pleura with the current of lymph from hearths or infiltration in lungs.
 - В. By an inflammatory reaction in a pleura which is caused MBT, that got to the pleura as a result bacteriemia.
 - Г. As a display of hypersensibilisation of pleura by the products of disintegration of MBT.
 - Д. All is marked correct.
7. What variant of TB of pleurisy is most widespread after frequency?
 - A. Exudates with the presence of serosal or serosal-hemorrhagic liquor.
 - Б. Armour.
 - В. Chiletic.
 - Г. Hemorrhagic.
 - Д. Festering.
8. What character of exudates at TB to the empyema of pleura?
 - A. Serosal-fibrinotic and fibrinotic.
 - Б. Seropurulent and festering.
 - В. Hemorrhagic.
 - Г. Serosal-hemorrhagic.

9. What method of research decides in diagnostics of pleurisy of different etiology?

- A. Roentgenologic.
- Б. Ultrasonic diagnostics.
- В. Study of clinic and information of physical methods.
- Г. Pleura puncture.
- Д. To the tuberculin test.

Theme contents:

FIBROUS-CAVERNOUS of LUNGS TUBERCULOSIS

A fibrous-cavern lung tuberculosis is a clinical form of chronic tuberculosis by duration not less than 1,5—2 years, which is characterized the periods of sharpening and pemicii and presence in lungs of fibrotic cavity, fibrous and focal of lympho- or bronchogenic sifting out.

In the structure of contingents of clinical account is 10—15%.

Pathogenesis. A fibrous-cavernous lungs TB develops from caseous pneumonia, destructive forms infiltration, dissemination and others forms of lungs TB at their making progress motion during the 1,5—2-years-old course of uneffective treatment as a result of violation of the mode of treatment, stopping of him, abuse of strong waters, drug addiction, development of резистентності of мбт a patient to antiphthisic preparations and their bad bearableness.

Pathomorphological basis of fibrous-cavernous lungs TB is made presence of the old thick-walled fibrotic cavities in one or both lights, hearths of лимфо- and bronchogenic sifting out, excrescence of грубоволокнистої connecting fabric, development of перикавітарного пневмофіброзу, bulge and accretion of pleura sheets, diminishing of volume of the staggered lights and development of істинної emphysema in basale segments.

Clinic. Depending on prevalence of pathological changes in lights, the phases of process and his complications select three types of clinical motion of fibrous-cavernous lungs TB :

1. limited with stable motion
2. making (quickly or slowly) progress and
3. motion is complicated.

Clinical motion of fibrous-cavernous lungs TB has chronic character with the periods of sharpening and remissy. Basic symptoms, characteristic for a period sharpening: attacks of cough with the selection of sputum, shortness of breath, increase of temperature to febril, nightly sweats, pulmonary bleeding, weakness, loss of appetite, loss weight.

Objectively: a thorax is flat, asymmetric from deep over- and underclavicular fossulas, narrowing to intercostal on the side of pathological process, breathing limited, superficial. Percussion a sound above the area of the impression is shortened, there hearken to the bronchial breathing, dry and moist wheezes. Above the lower areas of staggered lungs timpanic is marked percussion sound and breathing is hyposthenic.

Indexes of hoemogram are in the period of sharpening: leucocytosis with the undent of formula, eosinopenia, lymphopenia, RSE to 30-50 mm/hour.

In the sputum of patients constantly find MBT, resistant to ATP.

Tuberkulinic test of Mantoua at the terms of making progress motion is negative, although can be positive.

A roentgenologic picture is characterized the presence of the fibrotic, thick-walled, often deformed cavity mainly in an overhead particle lungs, on a background diminishing of volume and decline of pneumatisation staggered there are lungs, bronchogenic polymorphic hearths and displacement of middle shade pathological process.

The diagnosis of fibrous-cavern lungs TB is proposed on the basis of the protracted motion of tuberculosis (1,5-2 years and anymore), presence of fibrotic cavity on a background diminishing lights as a result of fibrous lungs tissues, permanent or periodic secreting MBT and hearths of the bronchogenic sifting out.

Treatments patient with fibrous-cavernous lungs tuberculosis are conducted after a category 4 taking into account the sensitiveness of MBT to ATP and their bearableness by a patient.

CIRRHOTIC LUNG TUBERCULOSIS

A CIRRHOTIC LUNG TUBERCULOSIS is a clinical form of lungs TB, which is characterized excrescence of rough fibrotic lung tissues with a maintainance in them of active tubercular hearths which stipulate the periodic sharpening of illness with scanty secreting MBT.

Among the contingents of clinical account makes ~0,5%.

Morphogenic *basis* of cirrhotic tuberculosis is formed as a result of involuted infiltration, dissemination, fibrous-cavern white, exsudate pleurisy, to the atelectasis as a result of obturation of bronchial tube by caseous, after treatment a piezotherapy, after a thoracoplasty excrescence of rough connecting material is characterized and substituting for the parenchym of lungs. A process develops gradually, begun with sclerosis, fibrosis and completed a cirrhosis. Thus productive hearths are saved in fibrotic tissue, sacculated caseous and gapsimilar cavities. Bronchial tubes test deformations, perybronchial of elasticity fibre collapse, as a result violated them drainage function, bronchioectasis (enlargement) and autosensibilisation develop. Vessels are added a sclerosis, obliteration, stipulating development of angioenlargement and hypertension in the small circle of circulation of blood. Angioectasy become the source of the frequent bleeding.

Clinic. Select the limited and widespread cirrhosis of lungs. Limited is development of cirrhosis in 1—2 segments of overhead particle. Such process can lose activity and runs across without clinical displays.

A cirrhosis is widespread often engulfs a middle and lower particle, acquiring chronic motion. Clinical displays are characterized a chronic bronchitis, bronchioectasy and by respiratory insufficiency. The increase of temperature, loss of appetite, nightly sweats, *схуднення*, appear in the period of sharpening, a cough increases with the selection of sputum, sometimes festering, *кровохаркання*, bleeding and asthmatic attacks is possible.

Objectively: a thorax is asymmetric, deep and diminishing above the area of the impression. There is displacement of trachea shadows cirrhosis. Percussion a sound above the area of cirrhosis is dull, breathing is bronchial or hyposthenic, sometimes hearken to the dry wheezes. Accent of II sink above a pulmonary artery.

In the sputum of patients sometimes find single MBT. Tuberkulin test of Mantoux is a not model. At doubtful activity conduct the test of Koch.

Roentgenologic a cirrhotic lungs TB is characterized diminishing of volume, decline of transparency and ariness and by the compression of tissue of the staggered particle or all the lungs, narrowing of intercostals, displacement of organs of mediastinum shadows of pathological process.

From cirrhotic tuberculosis distinguish a remaining cirrhosis after brought through tuberculosis (looking after a category 5.1).

Treatments of cirrhotic tuberculosis conduct after a category 4, taking into account the sensitiveness of MBT to ATP.

TUBERCULAR PLEURITIS

A tubercular pleurisy is a clinical form of tuberculosis, which is characterized the specific or allergic impression of sheets of pleura at the pulmonary and out lungs forms of tuberculosis of primary or secondary genesis.

Consider that pleurisies in the structure of clinical forms of tuberculosis do not exceed 6%. The persons of young age are ill mainly (to 40). From data of I. D. Dugiy (1997) among pleurisies

tuberculosis of pleura is 51,2%, from which in 87,6% he develops as the independent specific impression of pleura and in 12,3% as complication of pulmonary tuberculosis.

Tubercular pleuritis rarely are the independent form of tuberculosis. More frequent they accompany lungs and out lungs TB. At idiopathic pleuritis in lungs it is not succeeded to find the cell of TB of infection. In the first time linked them from TB of Laennek, noticing that early or late necessarily lungs developed TB. During the last years frequency of TB of pleuritis among the contingents of ant tuberculosis establishments makes about 2 – 3%. Among of the different pleuritis of TB etiology is makes about 24%.

Pathogenesis, pathomorphology. The inflammatory reaction of pleura is predefined MBT, that penetrate for it lymphogenic, hematogenesis or contact ways, and hypersensibilisation of pleura sheets by the products of activity of MBT. Procatarxis which assist development of pleuritis are considering super cooling, hyperinsolation, and physical overload.

A large role in pathogenic of pleuritis is played by a structure and features of lymphatic flow in pleura. At normal terms there is a two-bit of serosal fluid in a pleura cavity (1-2 ml). At hypersensibilisation in reply to penetration of infection there is hyperemia and expansion of vessels of deep collagen layer of visceral sheet of pleura. From them in a pleura crack sweat liquid. Suction ability of parietal sheet of pleura goes down at the same time, and after education on its surface of massive stratifications of fibrin or caseous-necrotic the masses of suction of liquid halted. It is set a biopsy, which on pleura under the skim of fibrin there is shallow TB humps, more frequent than all dissipated on parietal, diaphragmatic, and far fewer, on a visceral pleura.

After pathogenic select: **allergic, perifocal pleuritis and TB of pleura.**

An allergic pleuritis more frequent is at primary TB as a display of hypersensibilisation of pleura by the products of disintegration of MBT from the remote TB hearth of defeat. At him MBT does not find in pleural liquid.

A perifocal pleuritis develops as a result of distribution of specific process on visceral pleura from the subpleural placed focuses of TB inflammation in the lungs. Then specific inflammation which in future can become reason of exudates in a pleura cavity develops on the limited area of pleura.

TB of pleura is complicates the mainly heavy forms of dissemination TB or TB inwardly pectoral lymphatic nodes, from where MBT retrograde, lymphatic ways are arrive at visceral pleura. It can be and by the result of breach of caseous focus of lungs in a pleural cavity. For this form the characteristic abundant pouring out is on the pleura of TB of humps which can meet, forming large knots with a caseous-necrotic center. If a cavity breaks through in a pleura cavity, its maintenance and air gets there, festering pneumopleuritis develops. If during great while it is not succeeded to liquidate fistula, a chronic **TB empyema** is formed. A pleura is considerably incrassate, in course of time in it, next to the areas of inflammation and caseous-necrotic changes, fibrous is formed, calcination and even ossification.

Clinic. Depending on character of the impression pleuritis divide on **dry (fibrotic)** and **sweat (exudates)**.

Pathomorphogenesis The tubercular impression of pleura can develop as a result of lymphogenic, haematogenic distribution of MBT from the fresh impressions of primary tuberculosis or at relapses of the old remaining impressions above the carried tuberculosis. Also a pleuritis can develop a contact way at the sub pleural localized of the specific impressions of lungs. The important condition of development of pleuritis is an allergic reaction of pleura on a tubercular infection. Morphological basis of the specific impression is made the hump of pouring out mainly on parietal and in a less measure on diaphragmatic and to the visceral pleura, on a background its bulge and hyperemia mainly in areas near a spine and intercostals.

Pathogenesis features of development of pleuritis select:

1) Para focal is distribution of inflammation on a pleura at the sub pleural location of pulmonary tuberculosis;

2) tuberculosis of pleura develops as a result of lymphogenic or hematogenic distribution of infection or at the breach of cavity in a pleura cavity, with development of festering pneumopleuritis which can pass to the empyema of pleura;

3) allergic (idiopathic) pleurisy — develops as a result of forming of hyperergic reactivity at infecting of MBT with the allergic impression of serositis (poliserositis) or only pleuritis.

After clinical motion select fibrosis (dry) and exudates pleurisies.

A **dry pleurisy** is characterized inflammation with fibrotic stratifications on the limited area of sheets of pleura.

Fibrosis pleurisy more frequent to begin gradually, but there can be beginning of sub sharply or sharply on a background different expressed of general and pectoral symptoms.

Basic symptoms: there is a pain in flank, dry cough and displays of intoxication. Pain sharp, prickly, increases on inhalation and in position, lying on the staggered side. Depending on localization pain can simulate different pathological processes. At the impression of apex pleura pains perceive after plexitis; a costal pleurisy reminds a intercostals neuralgia, miositis, attack of stenocardia; diaphragmatic pleurisy irradiation pains are accompanied in a stomach, simulating a cholecystitis, pancreatitis and est.; a interlobular pleurisy is accompanied the origin of no communicative pains between shoulder-blades. In third sick a fibrinosis pleuritis is accompanied a dry cough. Intoxication syndrome shows up a fervescence sometimes to the febrile level, by a fatigue, weakness, worsening of appetite

General state of patients, as a rule, is good. Breathing is superficial, frequent.

Percussion sound above the area of the impression often is not changed, sometimes shortened, so to hear noise of friction of pleura, which breathings hearken to in both phases.

There can be moderate in hemogram is leucocytosis, increase of SER to 25-35 mm/hour. MBT in sputum and scourges of bronchial tubes, as a rule, does not find. Tuberculin test of Mantoux is often positive (normergy), sometimes can be hyperergic or negatively.

X-ray changes at fresh processes absent or show up the weak diffuse darkening lungs. In late terms find pleural accretions, stratifications.

Through 4-6 resurrections of motion a process can spontaneously resolve. But if there is a palindrome, it testifies to its tubercular nature. The test of Koch or trial treatment is conduct in doubtful cases.

Treatments of fibrinoid pleuritis conduct on a category 3.

Exudative pleuritis is characterized inflammation of pleura with the accumulation of exudates in a pleural cavity as a result of the functional and anatomic blocked of lymphatic hatches on parietal pleura. After character of exudates select serousal, serousal-fibrosis, hemorrhagic and festering pleurisies. Exudates in a pleural cavity can be free and sacculated. After localization select: apical, costal, interlobar, paramediastinum, diaphragmatic and panpleuritis.

Clinic. Beginning of exudates pleurisy shows up variously. In majorities sick (55%) he carries sharp character and begun with the increase of temperature to 39-40°C, with a fever, perspire, expressed weakness, worsening of appetite. Pain appears at a side, permanent dry cough. On the measure of increase of exudates in a pleura cavity pain diminishes and appears shortness of breath and feeling of weight at a side.

For some patients an exudates pleurisy develops gradually during a few resurrections and begun with a premonitory period, which the characteristic worsening of feel, weakness, subfebrile temperature, loss weight, inconstant pains at a side and dry cough are for.

Sometimes an exudates pleurisy has little symptoms or without symptoms motion and find out him at a prophylactic fluorography inspection.

The general state of patients changes depending on the amount of exudates. A patient can lie only on to the staggered side. Pallor, diffuse cyanosis is marked. Lag of the staggered half of thorax at breathing and bulge of intercostals. Percussion sound above the area of exudates is from dulled passes to dull to the bottom. Breathing there is not conducted. On verge of dullness it is possible to hear noise of friction of pleura at the beginning of illness and at resolve of exudates.

Necessarily conduct diagnostic pleural tapping. A pleural exudates is transparent, a relative closeness makes 1015-1025 g/L, amount of albumen in an exudates 30-60 grammas/l, the reaction of

Rivalt is positive, cytosis of $10 \times 10^9/l$, lymphocytes prevail, MBT find no more than in 6% cases, a heterospecific flora absents. Sometimes exudates has hemorrhagic character.

There are moderate leucocytes in hemogram, often lymphopenia and increase of ESR to 40-60 mm/hour.

MBT in a sputum or scourages does not find, but they can be at the terms of the specific bronchia-lungs impression.

High-informing is histological research of tappinal biopsy of pleura.

It is roentgenologic found out an exudates pleurisy, if exceed the amount of exudates 200 ml, characterized the intensive, homogeneous darkening in the caudal-lateral areas of lungs with diminishing of intensity in overhead part, an overhead contour has the appearance of arc (a line is Elis-Damuaso-Socolov) the lateral end of which goes down from above downward to mediastinum. An interlobar pleurisy forms lenticular shade.

It is described near 70% diseases which are accompanied exudates in a pleural cavity. Therefore for establishment of etiologic diagnosis conduct the searches of tubercular changes in lungs or other organs, search of mbt in a pleural exudates and sputum, determine sensitiveness to the tuberculin test and also histological research of tappinal biopsy at thorascopi.

Differential diagnostics. Pain at a fibrinosis pleuritis it is necessary to distinguish from a **intercostal neuralgia**, as at both diseases there are not changes on a sciagram. However neuralgias characteristic pain points after motion of intercostal nerves, and also strengthening of pain at motion trunks in the staggered side. At a pleurisy pain increases at inclinations in a healthy side. Subfebril temperature of body, the expressed reactions on a tuberculin are peculiar fibrinosis pleuritis TB of etiology.

A **transudate or exsudate** can appear at the heart attack of lungs, Besnier-Boeck-Schaumann, tumours of lungs or other organs.

Transsudate is apierense of the cardiac insufficiency, cirrhosis of liver, nephrotic syndrome, mixedeme.

Phisico-biochemical of description of transudate and exsudate

| Description of exudative | Transudate | Exsudate |
|---|---------------------|--------------------------------|
| Transparency | Transparent | Transparent |
| Color | Primrose | Yellow, yellow-red, red, white |
| Consistency | Liquid | Liquid, granule similar |
| Smell | It is not | No, sometimes putrid |
| Specific gravity | Less than 1015 | More than 1015 |
| Albumen (gramme/l) | Less than 30 | More than 30 |
| Test of Rivalt" | Negative | Positive |
| Activity of LDG | < 1,6 mmol/l•hour | > 1,6 mmol/l•hour |
| Table of contents of cages | < $1 \times 10^9/l$ | > $1 \times 10^9/l$ |
| Correlation of maintenance is in a pleura liquid and whey of blood: it is a squirrel - LDG | < 0,5 < 0,6 | > 0,5 > 0,6 |

It is found out **an exsudate** at the diseases of infectious nature (bacterial, viral and others like that), pancreatitis, system diseases of connecting tissues, post infarcte syndrome of Dreslera, to exogenous allergic alveolitis.

Differential diagnostics of exsudate pleurisy

| Signs | TB is a pleurisy | Heterospecific pleurisy | Cancer pleurisy | Kardiogennyy (stagnant) transudate |
|-----------|---|-----------------------------------|---------------------------------|------------------------------------|
| Anamnesis | Contact with to the patients on TB and infected | Pneumonia, abscess, a gangrene of | New formation of lungs, pleurae | Heart troubles are uncompensated |

| | | | | |
|--|---|--|--|--|
| | MBT, local forms of TB of lights | lungs | | |
| Symptoms | Sharp, subsharp or gradual beginning. Stethalgias, dry cough, intoxication | Sharp beginning, displays of basic illness | Gradual development, dull pains in a breast, shortness of breath, dry cough | Bessymptomnoe development, symptoms of cardiac insufficiency |
| Temperature | Febril, subfebril | Febril, hectic | Normal, subfebril | Normal |
| Gemogramme | Lymphocytosis, moderato speed-up SER | Leykocitoz, considerable приско-рения SER | Leykocitoz, permanent growth SER | Within the limits of norm |
| Exudative | Straw – yellow, transparent specific closeness 1015 – 1020, an albumen is 30 grammes/l and anymore, lymphocytes, the test of Rivalt” is positive; MBT–, rarely Mbt+ | Not quite clear, specific closeness 1018, an albumen is 30 grammes/l and anymore, neutrophiles, monocites, the test of Rivalt” is positive; MBT– | Hemoridge, transparent or turbid specific closeness 1018, an albumen is 30 grammes/l and anymore; a cytositis is atypical cells, cancer, mesotely, cells of blood; the test of Rivalt” is positive; MBT– | Transparent, straw – yellow, specific closeness 1008 – 1015, an albumen is a less than 2,5 gramme/l; the test of Rivalt” is negative; MBT– |
| Dynamics of exudative after evacuation | Gradually diminishes and resolves under act of treatment of ATP | Does not grow, resolves under act of heterospecific treatment | Grows quickly, exudative is not halted | Can grow at the maintainance of decompensation of cardiac activity |

If etiology of pleurisy it was not succeeded to find out, he is examined as TB and ATP apply. Sometimes at allergic TB pleurisies arrive at a rapid effect on a background inadequate antibiotic and desensitizing therapy and propose the diagnosis of heterospecific pleurisy. For such patients often TB of lungs or other organs develops during 2-3 month.

Treatments of pleurisies depending on weight of motion conduct after a category 1 or 3. Medical pleural tapping are recommended.

For patients which did not get the complete course of treatment or gave up him, in 1-3 years a disseminated TB develops after the carried pleurisy.

The empyema of pleura (festering pleurisy) develops as complication of white plague with formation of pleural-pulmonic fistulas or caseous impression of pleura. Festering pleurisy is characterized the displays of the expressed intoxication. Pleura are thickened and lose the function. Needs is acquit surgical treatment.

Materials are for self-control:

A. Task for self-control (tables, charts, pictures, graphic arts):

B. Task for self-control

1. For the child of 11 years found out the "turn" of tuberculin test. At a clinical and x-ray inspection signs which specify in the presence of liquid in a right pleura cavity are set. At pleura tapping got straw-yellow color, slightly opalescent liquid. The

reaction of Rivalt is positive. Specific gravity 1019, albumen 45 grammes/l, lymphocytes 90%. Not found MBT and AC.

What disease more reliable than all found out at patient?

2. The patient of 20 years grumbles about the sharply expressed shortness of breath, increase of temperature to 39 °C, cough, and nightly perspire. Acrocyanosis is expressed. There are lungs in right, from a collar-bone downware, shortening of percussion sound is marked, and from a 4th rib is dullness. Above a right lung not hearkened to breathing in right, from a 4th rib to the diaphragm, found out the homogeneous darkening with a slanting overhead contour. Test of Mantoux from 2 TU PPD is infiltration of diameter 25 mm blood Test: L- $12 \times 10^9/l$, to RSE - 30 mm/hour. From the pleura cavity of aspiration there is 850 ml of serofluid lymphocytes prevail in which, reaction of Rivalt's positive, specific weight - 1020.

What etiology of pleurisy is more credible than all determined at patient?

3. The patient of 32 is disturbed by a weakness, increase of temperature to 38,00C, cough with the two-bit of sputum. Worsening of feel is observed during 2 weeks. Objectively on the left on an apex single dry wheezes. Blood test: π - $9,2 \times 10^9/\pi$, lymphocytes - 22%, RSE – 25 mm/hour. On a survey sciagram in the 6th segment of left lungs the area of darkening is determined 4x4 see in a diameter, small intensity, with unclear contours and clearing up in a center, in the lower departments of left lungs are marked low-intensity focal shad with the unclear contours of different size. It is discovered baktrioskopic MBT.

Formulate a diagnosis in accordance with clinical classification?

4. Patient of 22 At an attendant fluorographic inspection in the 2 segment of right lungs found the area of darkening of the rounded form, small intensity with unclear even contours, to 3 cm in a diameter. Grumbles about an insignificant cough with sputum. It is objective pathology it is not discovered. Blood test: π - $8,2 \times 10^9/\pi$, RSE - 30 mm/hour. It is not discovered in sputum of MBT.

What clinical form of lung TB found for a patient?

Literature

Basis:

1. Phthisiology : a teaching manual / B.F. Moskalenko, V.I. Petrenko, G.O. Timoshenko – Kiev: Medicina, 2012. – 216 p.
2. Phthisiology : textbook / V.I. Petrenko, O.K. Asmolov, M.G. Boyko [et al.] ; edited by V.I. Petrenko. – Kiev : AUS Medicine Publishing, 2015. – 416 p.

Supplementary

1. Tuberculosis : manuel for teacher, students and doctors / A.G. Yareshko, M.V. Kulish. – Poltava : Poltava Literator, 2011. – 156 p.

Information resources

1. Childhood TB for Healthcare Workers: an Online Course. – Access mode: <https://childhoodtb.theunion.org/courses/en>
2. WHO: tuberculosis. – Access mode: <http://www.who.int/tb/en/>