DISSEMINATED PULMONARY TUBERCULOSIS
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- is a complication of primary tuberculosis in children and adolescents and secondary in adult, morphological substrate are nodular lesions with \( d = 2 \text{ mm} \) (millet-sized) and different sizes (subacute and chronic forms) symmetrically located in all areas of both lungs, spread throughout the body by haematogenous, limphogenous and bronchogenous ways
Clinical forms

- The sharpest form (Sepsis tuberculosis or tifobaciloza Landuzi)
- Acute (miliary) disseminated tuberculosis
- Subacute disseminated tuberculosis
- Chronic disseminated tuberculosis
The sharpest form

- to develop in young people with severely compromised immune different risk factors: poor social status, the homeless, alcoholics, prisoners
- Are an acute onset with fever up to 39° - 40°C, with a syndrome of intoxication very pronounced, cough, breathlessness, with a rapidly evolving, with the generalization and trends affecting multiple organs (liver, spleen, etc.)
- Are unsatisfactory and a prognosis of death is completed
- Is rarely
Disseminated (miliary) tuberculosis

- is acute, severe forms of tuberculosis caused by the haematogenous spread of the bacilli, often occurring soon after primary infection
- most often in children and young adults
- Unlike pulmonary tuberculosis, these acute forms are highly fatal
Miliary tuberculosis
Miliary tuberculosis

- have acute onset of fever up to 38° - 39°C and has different clinical manifestations depending on forms:
  - **Typhoid**
  - **Meningeal**
  - **Pulmonary**
Typhoid form

- is similar to typhoid (abdominal typhus)
- this condition often occurs within the first weeks after primary infection
- it appears as a severe generalized condition similar to typhoid fever, with high fever plateauing at 39–40°C, torpor, vomiting and diarrhea
- unlike typhoid fever, there are no rose spots on the abdomen or splenomegaly, and the pulse is elevated (there is no dissociation between the pulse and the temperature), which enables this diagnosis to be eliminated
Meningeal type

- the clinical manifestations are similar to meningitis:
  - high fever
  - headache
  - vomiting
- in the meningeal reactions ('meningismus') meningeal signs are less pronounced than in tuberculosis meningitis - nuchal rigidity, symptoms Kerning weak positive
- in cerebrospinal fluid pressure increases trivial (70 drops, rule - 60 drops), slightly increased protein, cells - 20-25 in cm² (normal up to 10 cells).
Pulmonary type

- predominant pulmonary symptoms:
  - Dyspnoea
  - Cyanosis
  - occasional respiratory distress
Miliary tuberculosis

- Its name comes from a distinctive pattern seen on a chest radiograph of many tiny spots (1-5 mm) distributed throughout the lung fields with the appearance similar to milletseeds—thus the term "miliary" tuberculosis.
- Harmonious "mirror"
- Starry sky
Miliary tuberculosis
Subacute disseminated tuberculosis

- is manifested clinically by a prodromal period with signs of intoxication for 1-2 weeks, then temperatures up to 38 ° - 39 °C, the intoxication syndrome worsens, to install broncho-pulmonary syndrome, appear larynx events – hoarseness of voice, pain in swallowing, foreign body sensation
Subacute disseminated tuberculosis

- nodular shadows, their size varies from a micronodule (less than 3mm in diameter), to a nodule (more than 3mm and less than 1cm in diameter), have irregular borders, from small to medium intensity, symmetrically located in medium and upper cortical segments on both sides, confluence and spread of the nodules
- There are not characteristic cavities, but if they are located subclavicular of both parties in the form of glasses, they have thin walls (stamped cavities)
- Radiological symptoms of "snowstorm"
Subacute disseminated tuberculosis
“Stamped cavern” in the upper part of the right lung
Chronic disseminated tuberculosis

- has a long evolution, flexuosity, with periods of remission and overheating
- During overheating the t°C raises up to 38 - 39°C, is ruled by intoxication syndrome - weakness, asthenia, headache, night sweats, anorexia, weight loss, loss of work ability
Chronic disseminated lung tuberculosis
Morphological features of chronic disseminated tuberculosis radiological events (by A. Strucov)

- affects the upper and medium lobes of the lungs
- nodular opacity different sizes and intensities are placed cortical, symmetrically
- in the upper lobes of the lungs develop a interstitial pneumosclerosis
- in subclavicular fossae bilateral are formed cavity
- in lower parts – hyper translucency (compensatory emphysema)
- heart is in the form of drop (cor pulmonale)
- appear extra respiratory tuberculosis in different organs
Chronic disseminated tuberculosis

- Broncho-pulmonary syndrome is presented by cough with expectoration of mucous-purulent sputum, dyspnoea.
- During the remission t°C decreases until feverish, patients state improves, patient is able to return to work, cough and expectoration is diminishing, but dyspnoea continues to grow dynamically.
Physical signs

- patient looks older, the skin is pale and moist
- Skinfold thickness is reduced, muscular tonus lowering
- Barrel-shaped chest, retraction of supraclavicular fossae, dullness in the upper and interscapular parts
- Breath sounds is diminished, crepitations and rhonchi
- Tachycardia, cardiac tone II is pronounced at a. pulmonalis.
Chronic disseminated tuberculosis

- Nodular opacity by different size and intensity, located asymmetrically, in the cortical area of upper and medium lobes on background a diffuse fibrosis, pulmonary emphysema in lower regions, symptoms of "weeping willow"
- Hypertransparency and stamped cavities
Chronic disseminated tuberculosis
Diagnosis

- **Sputum smear** is positive in most cases.
- **The tuberculin skin test** is usually negative in miliary tuberculosis.
- **Analysis of blood**: anemia, moderate leucoccytosis, eosinophilinopenie, lymphocitopenie, monocytosis, ESR accelerated during overheating and the trend of normalization during remission.
Differential diagnosis

- metastatic tumors
- bronchiolitis
- alveolitis (extrinsic allergic alveolitis, idiopathic fibrosing alveolitis)
- occupational disease (silicosis)
- disease of subcutaneous connective tissue
- pulmonary stasis in cardiac pathology etc.
Sarcoidosis of the lungs and intrathoracic lymph nodes
Carcinomatosis