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FEATURES OF THE CLINICAL COURSE OF LUNG ABSCESS AND PLEURAL EMPYEMA

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Relevance. Many authors associate the widespread increase in the number of acute purulent destructive diseases of the lungs and pleura with the wide spread of antibiotic-resistant microflora and allergization of the population [1,3]. The results of treatment of patients with acute pleural empyema remain unsatisfactory; therefore, the issues of treatment of acute purulent-destructive diseases of the lungs and pleura cannot be considered finally resolved and require further development [2,3].

Purpose of the study: Improving the results of treatment of purulent lung diseases and COVID - 19 by improving early clinical and radiological differential diagnosis and treatment of COVID - 19 and purulent surgical lung diseases.

Material, research methods.

Data from the examination and treatment of 92 patients with purulent lung diseases of various etiologies who were treated in the purulent surgical department of the clinical base of the Bukhara State Institute in 2018-2021 were analyzed.

All patients, depending on the treatment method, were divided into 2 groups: I – comparison group and II – main group. Each group in turn is divided into 2 A and B subgroups. Group I consisted of 36 patients who were admitted with a diagnosis of pleural empyema. II - patients had acute lung abscess. Обеим группам больных выполнено традиционный метод лечения, включающий в себя консервативный, антибактериальный, общеукрепляющий и симптоматический и эндобронхиальная санационную бронхоскопию.

Of the 56 patients in group II, 32 (57.9%) patients had a right-sided localization of the purulent focus, and 24 (42.1%) patients had a purulent focus in the left lung.

The effectiveness of the used and proposed clinical methods for the treatment of suppurative lung diseases was assessed by the duration of bronchopulmonary symptoms, general symptoms of intoxication, the dynamics of X-ray and radiological symptoms of the lungs and the study of laboratory indicators of signs of endogenous intoxication (hemoglobin concentration, leukocytosis, ESR, LII, LI, MSM), the qualitative composition of sputum microflora, as well as the size of the total bed-day.

Results and discussions.

Group I included 36 patients with pleural empyema of various etiologies. Of these, 22 (61.1%) were patients with an infiltrating stage of purulent inflammatory disease of the lung (unformed lung abscess) complicated by pleural empyema, 11 (48.9%) were patients with pneumonia complicated by exudative pleurisy.



Of the 36 patients in comparison group I, 21 (58.3%) patients had right-sided localization of pleural empyema, 15 (41.7%) patients had left-sided localization.

Analysis of the results of intoxication indicators in the body of patients with purulent lung diseases of the first comparison group revealed the following changes. On the first day of treatment, the patients' body temperature averaged $38.90 \pm 0.080^{\circ}\text{C}$. The content of blood leukocytes was on average $9.70 \pm 0.06 \times 10^9/\text{l}$. The volume of average molecules was 0.192 ± 0.005 units. Similarly, an increase in LII and ESR was noted

With further treatment and observation, by the twentieth day, all analyzed indicators of intoxication, except for blood ESR, were within normal limits.

In the following, the assessment of the patients' condition was studied using $\text{SpO}_2\%$. On the day of admission in patients of group I, the $\text{SpO}_2\%$ indicator was slightly less than normal - $94.20\% \pm 0.08$. Starting from 6-7 days of treatment, a positive dynamics of the SpO_2 indicator was observed, reaching up to $94.70\% \pm 0.50$

The average duration of inpatient treatment in group I was 19 ± 2.3 bed days.

14 (38.8%) patients had a diffuse form of pleural empyema, 22 (61.2%) patients had limited pleurisy. Of these, 8 patients had encysted parietal pleurisy in the projection of the middle lobe of the right lung.

In 22 (61.1%) patients in complex cases, the final diagnosis was made using computed tomography. The use of CT allowed a detailed assessment of encysted effusions, thickening of the pleural layers, and focal formations in the pleura.

Thus, our analysis of the results of the study of patients in group I revealed the following:

- with pleural empyema, in most cases the etiological factor is a complicated form of pneumonia;
- pleural empyemas were more often localized in the lower parts of the pleura on the right;
- complex etiopathogenetic treatment using targeted drainage of a purulent pleural focus, antibiotic therapy taking into account the sensitivity of the microflora is an effective way to treat purulent pleurisy;
- the average duration of conservative treatment of purulent pleurisy is 20 ± 1.2 days;
- MSCT diagnostics is more effective for accurately establishing a diagnosis and determining the localization of a purulent focus in the pleura.

Of the 56 examined patients in group II, 39 (69.6%) had an acute abscess, 17 (30.3%) had an exacerbation of a chronic abscess.

Objectively, they noted: shortness of breath, cyanosis, tachycardia, weakness, in 35% of cases forced body position, consistently high body temperature up to $39-40^{\circ}\text{C}$.

Clinical evaluation of the effectiveness of treatment of patients with suppurative lung diseases of group II, as in the previous group, was accompanied by the study of laboratory indicators of signs of endogenous intoxication from peripheral blood (hemoglobin concentration, leukocytosis, ESR, LII, LI, MSM), the qualitative composition of sputum microflora. At the time of admission and during treatment, the condition of the patients



was assessed based on clinical signs, according to laboratory and instrumental examination methods, as well as using radiological research methods.

The studied results of intoxication indicators of the body of patients with purulent lung diseases of the II comparison group revealed the following changes.

On the first day of treatment, the body temperature of patients in group II averaged $39.30 \pm 0.040^{\circ}\text{C}$. The content of blood leukocytes was on average $9.90 \pm 0.39 \times 10^9/\text{l}$. The volume of average molecules averaged 0.198 ± 0.010 units. Similarly, an increase in LII and ESR was noted.

With further treatment and observation, by the twentieth day, all analyzed indicators of intoxication, except for blood ESR, were within normal limits.

A study of SpO₂% indicators in patients of group II revealed the following. On the day of admission in patients of group II, SpO₂% indicators were also significantly lower than normal - $93.80\% \pm 0.2$. During treatment, SpO₂ indicators tended to normalize at a faster rate than in group I.

The average duration of inpatient treatment in group II was 20 ± 2.3 bed days.

Of the 56 patients in group II, 32 (57.1%) patients had a right-sided localization of the purulent focus, 24 (42.85%) patients had a left-sided localization. Of the 32 patients with right-sided localization, the purulent focus in 10 (31.2%) cases was located in the upper lobe, in 13 (40.6%) patients - in the lower lobe, in 9 (28.1%) in the middle lobe of the right lung. With a left-sided location, out of 24 patients, in 17 (70.8%) cases the lesion was located in the lower lobe, in 7 (29.1%) patients the upper lobe localization was observed.

In group II patients, 39 (69.6%) had acute abscess, 17 (30.3%) had exacerbation of chronic abscess.

Features of the X-ray radiological course of examined patients with acute lung abscess.

X-rays and CT scans reveal a round-shaped cavity with a level of fluid in it. In the cavities, individual fluid levels and sequesters are visible, some of which move freely.

During the treatment process, with adequate drainage of the abscess, the size of the infiltrate gradually decreases, and the volume of the affected lobe during radiation examination becomes normal or slightly reduced. The symptom of "sagging" of the interlobar pleura persists the longest. Features of the X-ray and radiological course of examined patients with chronic lung abscess.

Characteristic signs of a chronic abscess were a decrease in the volume of the affected part of the lung, the presence of areas of local emphysema and traction bronchiectasis around the formation. These were distinctive signs of chronic abscess from a number of other lung pathologies.

Conclusion. *In most patients, infectious destruction is characterized by typical X-ray and CT semiotics, which, in combination with a correctly collected anamnesis and clear clinical symptoms, allows one to correctly determine the nature of the pathological process. At the early stages, pathological changes must be differentiated from pneumonia of bacteriological and viral etiology, as well as from secondary infectious destruction against the background of obstruction of a large bronchus. After the abscess breaks through into the bronchi and the formation of an air-containing cavity, differential diagnosis is carried out with peripheral neoplasms, tuberculous and mycotic infiltrates and other destructive processes. Dynamic*



radiographic examination and CT with intravenous contrast play an important role in differential diagnosis.

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