

DIFFERENTIAL EXPRESS DIAGNOSIS OF ECHINOCOCCOSIS AND PECILOMYCOSIS OF THE LUNGS

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Introduction. Differential diagnosis of echinococcosis and pecilomycosis of the lungs is an important task in clinical medicine. Both diseases have similar symptoms and can lead to serious complications, but their causes, pathogenesis and treatment approaches differ. Echinococcosis of the lungs occurs as a result of infection with tissue cysts of echinococcus, a parasitic helminth. Patients with this disease often complain of cough, weakness, shortness of breath and chest pain. X-ray examinations can reveal the presence of cysts in the lungs, as well as vascular and pleural changes. Diagnosis is based on the clinical picture, the result of the patient's examination and laboratory data such as immunoserological and molecular biological methods. Pecilomycosis of the lungs, on the other hand, is caused by a fungus from the genus *Pecilomyces*. Patients with this disease usually have symptoms similar to echinococcosis, such as cough, shortness of breath and chest pain. However, the presence of specific radiological signs and laboratory data can help in differential diagnosis. Mycological methods and molecular studies can also be used to determine the type of fungus.

The purpose of the work. To study the effect of fungi from the genus *Pecilomyces* on echinococcosis of the lungs and to organize timely diagnosis of this disease.

Materials and methods of research. Observations and studies were conducted on 189 patients with echinococcosis of the lungs (PEL), whose age ranged from 16 to 63 years and about 200 patients with pecilomycosis of the lungs.. Special immunological methods were used to diagnose the disease: indirect hemagglutination reaction (IGAR), latex agglutination reaction (LAR), lymphocyte antigen binding reaction (LABR), scolexoprecipitation reaction (SPR). Ultrasound and X-ray examinations were performed. The diagnosis was confirmed by surgical intervention with helminthological and bacteriological studies of echinococcal cysts and their contents with the determination of morphological modifications of echinococci.

The results of the study.

Differential rapid diagnosis is an important tool in the field of detection of echinococcosis and pecilomycosis of the lungs. These diseases pose a serious threat to human health and require rapid and accurate identification in order to prescribe appropriate treatment. With the use of modern methods based on differential express technologies, obtaining results becomes a more efficient process. Such methods make it possible to detect the presence of echinococcosis or pecilomycosis of the lungs with minimal time and with the highest degree of accuracy.

Differential express methods are based on the isolation and identification of certain markers characteristic of echinococcosis and pecilomycosis of the lungs. These may be genetic, protein, or other types of markers that allow you to determine the presence of the disease with a high degree of probability. The main advantage of differential express diagnostics is its high specificity and sensitivity. Due to these features, it is possible to accurately distinguish echinococcosis and pecilomycosis from other lung diseases, which makes it possible to prescribe a more targeted and effective treatment. In addition, differential rapid diagnosis can be carried out in the shortest possible time, which is especially important if it is necessary to quickly determine priorities in the treatment and prevention of complications of the disease.

Preliminary X-ray examinations made it possible to perform video thoroscopic echinococcectomy using a mini-access in 61 cases. The size of the cysts ranged from 10 to 17 cm. In 2 (3.28%) cases, 3 cysts were removed, and in 3 (4.92%) 2 cysts were removed. The cavity was capitalized depending on the

configuration and volume of the cyst. With bilateral localization of cysts, 7 (63.64%) patients underwent step-by-step operations, and in 3 (36.36%) cases, simultaneous echinococectomy. In 11 (12.79%) patients, echinococectomy from the lung was performed from a wide thoracotomy access. Anterolateral thoracotomy was used in all patients. It should be recognized that echinococectomy from the lungs by thoracotomy was most often performed only in complex cases of echinococcosis. In uncomplicated echinococcosis of the lungs, only 14 (87.5%) of the 16 scheduled patients could have an echinococectomy performed purely thoracoscopically through trocar punctures. In 2 (12.5%) cases, intraoperative technical difficulties required the transition to a mini-thoracotomy. The size of the cysts varied from 5 to 8 cm. In 3 (21.43%) cases, partial pericystectomy was performed after thoracocystoscopy and, due to the absence of bronchial fistulas, Vishnevsky capitulation was performed. In 2 (14.28%) cases, the residual cavity was eliminated according to Vakhidov. And in the remaining 9 (64.29%) cases, the fibrous cavity was eliminated according to Bobrov. In general, 84 (97.67%) patients underwent organ-preserving operations with the elimination of the residual cavity in the lung by suture plastic surgery in various modifications. In 2 (1.52%) patients with marginal location and pneumocystosis, marginal lung resection with an echinococcal cyst was performed.

28 patients were operated on with a cyst breakthrough into the bronchi, without obvious signs of suppuration. In 12 (42.86%) patients, cysts were localized in the right, in 9 (32.14%) - in the left lung and in 7 (25%) cases, a bilateral location of cysts was noted. 2 patients were diagnosed with 3 cysts in one lung and 5 with 2 cysts. In 25 (89.29%) patients, operations were performed using a mini-thoracotomy method. In this category of patients, due to possible complications, a mini-check was performed without prior thoracoscopy. In 2 (8%) cases, 3 cysts from one lobe were removed from the mini-access, and in 4 (16%) patients, 2 cysts from two lobes were removed. In 7 cases, the localization of cysts was bilateral. In 4 (16%) patients, operations were performed on the side of a complicated cyst at the first stage. In 3 patients, a single-stage operation was performed through mini-accesses. All cases were diagnosed radiologically.

In our patients, in 16 cases, an X-ray examination revealed a hydropneumothorax. In all patients, the operation was performed through a mini-thoracotomy after a preliminary thoracoscopy, where an echinococcal cyst burst into the pleural cavity.

Radiologically, cysts up to 5 mm in diameter were detected in the lungs of 15 patients diagnosed with echinococcosis of the lungs aged 18 to 25 years and they

were diagnosed as incipient echinococcosis. A three-time course of treatment of such patients with albendazole did not give positive results.

A new immunological method, the reaction of antigen binding of lymphocytes (ABL) to pecilomycosis in these patients, revealed a severe form of pecilomycosis of the lungs. Echinococcosis is excluded by ABL for the diagnosis of helminthiasis and the scolexoprecipitation reaction (SPR). Proper treatment is continued with fungicides.

.Conclusions. Thus, the differential diagnosis of echinococcosis and pecilomycosis of the lungs is very important for choosing the right treatment and prognosis of the patient. It is based on symptoms, X-ray examinations and laboratory data. The accuracy of diagnosis is ensured by the use of various methods, including immunoserological, mycological and molecular biological approaches. The treatment of these diseases varies and requires an individual approach to each patient. So. The treatment of echinococcosis and pecilomycosis of the lungs differs. Echinococcosis usually requires surgery to remove cysts and antimicrobial therapy to kill the parasite. Pecilomycosis of the lungs may require treatment with antifungal drugs such as fluconazole or amphotericin B, and the duration of the course is determined depending on the patient's response to drug therapy

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