PNEUMOCYSTIS PNEUMONIA: CLINICAL AND LABORATORY DIAGNOSTIC ALGORITHM

Berdiyarova Shohida Shukurullayevna *- Department of Clinical and Laboratory Diagnostics with the Course of Clinical and Laboratory Diagnostics of the Faculty of Postgraduate Education Samarkand State Medical University*

Murtazayeva Nasiba Komiljonovna *– Department of Biochimistry, Samarkand State Medical University*

ПНЕВМОЦИСТНАЯ ПНЕВМОНИЯ: КЛИНИКО-ЛАБОРАТОРНЫЙ ДИАГНОСТИЧЕСКИЙ АЛГОРИТМ

Бердиярова Шохида Шукуруллаевна - ассистент кафедры клинико-лабораторной диагностики с курсом клинико-лабораторной диагностики ФПДО Самаркандский Государственный медицинский университет.

Муртазаева Насиба Комилжоновна – ассистент кафедры биохимии, Самаркандский Государственный медицинский университет.

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References. Pneumocystosis is one of the most common infections in the world and the importance of this problem has been increasing in recent years. Numerous studies on pneumocystic infection in patients with various pathologies indicate that pneumocystosis is widespread everywhere.

In the domestic literature, information about P.carinii is disproportionately small compared to the huge social danger of pneumocystis infection. The issues of the clinic, diagnosis and treatment of pneumocystosis in the Republic of Uzbekistan have not been studied at all. Taking into account the fact that pneumocystic infection is little known to practical doctors in our country, and in many hospitals, the study of pneumocystosis is not only not included in the number of mandatory tests, but is not carried out at all, the diagnosis of this disease becomes extremely important.

Method and research. Given that the clinical manifestations of pneumocystis pneumonia are not very specific, and a detailed clinical and radiological picture appears much later from the onset of the disease (especially with AIDS), early etiological diagnosis is of great importance, as it allows timely initiation of appropriate treatment. Diagnosis of pneumocystis pneumonia is based on clinical and laboratory data. A number of circumstances make it very difficult to diagnose pneumocystosis [1,2]: an erased clinical picture in the presence of a carrier or chronic infection; absence of pathognomonic symptoms; strict tropism of the pathogen to the lung tissue and, as a

result, the absence of the parasite in various biological fluids, except for bronchial secretions; the difficulty of obtaining material for researchClinical diagnostics, which includes the study and analysis of the history of the disease and the life of the patient, as well as an objective examination, does little to verify this pathology. Laboratory diagnosis of pneumocystosis consists of the results of serological and parasitological studies. The main steps in establishing the diagnosis of pneumocystis pneumonia are:

x-ray examination,
scanning with gallium-67,
induced sputum testing for P.
bronchoalveolar lavage,
serological methods [1,2,8].

Various criteria and algorithms (Fig.) have been developed for examining patients in order to diagnose pneumocystis pneumonia [3]. So, in the Central Hospital of Samarkand, a patient is examined for the presence of pneumocystis in the following cases: HIV infection (or suspicion of it) or any other pronounced immunodeficiency state; clinical respiratory symptoms; at least one of the evidence of lung damage - radiographic data, a decrease in CO2 diffusion, or a change in the accumulation of gallium citrate in the lungs - 67.

Various clinical material can be used to detect P.carinii:

loose sputum,
induced sputum,
bronchoalveolar lavage fluid
tracheal aspirate,
transbronchial biopsy,

Many indirect diagnostic tests and algorithms have been developed, for example, determining the level of lactate dehydrogenase activity, pO2 changes, various scanning methods, functional tests. However, for an accurate diagnosis, visualization of the microorganism in the clinical material is necessary [4]. It is not enough to obtain biological material; it is also necessary to confirm or refute the presence of P. carinii in it. Traditionally, impregnation with methenamine-silver nitrate according to Gomory or silver according to Grocott is used to detect pneumocysts. Recently, for the identification of pneumocysts, toluidine blue staining, Gram and Schiff stains, the Romanovsky–Giemsa method, and crystal violet staining according to M.V. Lavdovskaya, stained with acridine orange [1–3].

Each individual method has certain advantages and disadvantages, its sensitivity varies greatly depending on the type of clinical material and the method of its pre-treatment. Therefore, optimal results can be obtained with the parallel use of several staining methods, which makes it possible to identify the causative agent of pneumocystosis in almost 100% of patients. In connection with the need to use a non-

invasive, and therefore less traumatic method for establishing pneumocystis infection, immunological methods have become especially widely used in recent years. A new diagnostic test system PneumocystoTest has been developed, which can be used to determine anti-pneumocystic IgM and IgG. Antigens are prepared from pneumocystis isolated from the lungs of minipigs infected with P. carinii [1,2].

With the help of a new diagnostic test system, we conducted a serological examination of 21 sick children with various diagnoses who were treated in the intensive care unit of the Samarkand Children's Center. We had the opportunity to study the clinical histories of hospitalized children and revealed the relationship between detected serological cases of pneumocystis infection (presence of anti-pneumocystic IgM) and clinical manifestations in seropositive individuals. In other words, we stated the reliability of the new test system, which passed the test of retrospective clinical analysis. Research in this direction is ongoing.

Bibliography

1. Душанова Г.А., Набиева Ф.С., Садинова М.Ж., Нурматова Д.М. Анализ взаимосвязей параметров иммунного гомеостаза с состоянием системы ПОЛ-АОС / Вестник науки и образования 2021. № 2 (105) часть 2 Москва. - 63-69 С.101

2. Кудратова З. Э. и др. Атипик микрофлора этиологияли ўткир обструктив бронхитларининг ўзига хос клиник кечиши //Research Focus. – 2022. – Т. 1. – №. 4. – С. 23-32.

3. Набиева Ф.С., Ибрагимова Н.С., Умарова С.С. Инструментальные и лабораторные методы исследования для ранней диагностики эхинококкоза //Вестник науки и образования, 2020

4. НС Ибрагимова, ШХК Келдиёрова, ГШ Назарова Значение фолиевой кислоты, гомоцистеина и эндотелина-1 при развитии синдрома поликистозных яичников у женщин репродуктивного возраста // Central Asian Research Journal for Interdisciplinary Studies (CARJIS) 2 (10 …, 2022

5. Даминов Ф. А., Хурсанов Ё. Э., Карабаев Х. К. Наш опыт профилактики и лечения полиорганной недостаточности у тяжелообожженных //Research Focus. – 2022. – Т. 1. – №. 3. – С. 143-151.

6. Даминов Ф. А., Хурсанов Ё. Э., Карабаев Х. К. Наш опыт профилактики и лечения полиорганной недостаточности у тяжелообожженных //Research Focus. – 2022. – Т. 1. – №. 3. – С. 143-151.

7. Mansurov T. T., Daminov F. A. Analysis of the results of the possibility of videolaparoscopy in the diagnostics and treatment of acute intestinal obstruction //Art of Medicine. International Medical Scientific Journal. –2022. –Т.2.–№.1.

8. Даминов Ф. А. и др. Синдром кишечной недостаточности и его коррекция у тяжелообожженных //Журнал Неотложная хирургия им. ИИ Джанелидзе. – 2021- №. S1. – С. 20-21.

9. NS Ibragimova, BF Ibragimov, SS Berdiyarova, IA Yulayeva Clinical picture of hypoxic-ischemic encephalopathy in newborn with different gestation date // TJM-Tematics journal of Microbiology ISSN, 2277-2952, 0

10. IN Sabirovna, IB Fikriyevich, KG Berdirasulovich Clinical symptoms of hypoxic-ischemic encephalopathy in newborn with different gestation // Web of Scientist: International Scientific Research Journal 3 (9), 286-289, 2022

11. Abdikadirova N. Y. et al. Clinical and laboratory parameters in children with urolithiasis and the Quality of laboratory tests at the stage of stationary treatment //Annals of the Romanian Society for Cell Biology. – 2021. – С. 7002-7012.

12. НС Ибрагимова, НА Юсупова, МАК Мамадиёрова Клиническая картина гипоксически-ишемической энцефалопатии у новорождённых с разным сроком гестации // European science, 14-16, 2021

13. Acute hematogenic osteomyelitis in children. SH Isroilovich, KM Bakhodirovna, BS Shukurullaevna, TSB Ugli, Research Focus, 2022

14. Даминов Ф. А. и др. Хирургическая тактика лечения диффузно-токсического зоба //Академический журнал Западной Сибири. – 2013. – Т. 9. – №. 1. – С. 21-21.

15. Клинико-лабораторная диагностика внебольничных пневмоний у детей ШШ Бердиярова, НА Юсупова, ХИ Ширинов, Вестник науки и образования, 2021

16. Nabieva F.S. et al. Prospects for Developing Modifications of Methods for Producing Conjugates for Elisa //Annals of the Romanian Society for Cell Biology. – 2021. – С. 4120-4125.

17. Nabieva F. S., Mamatkulova F. Kh. - Significance of Enzyme Immune Analysis in the diagnosis of infectious diseases. Thematics Journal of Microbiology, 2022

18. Бердиярова Шохида Шукуруллаевна, Юсупов Шухрат Абдурасулович, and Юсупова Наргиза Абдикодировна. "Клинико-лабораторная характеристика хронического гематогенного остеомиелита." //*Вестник науки и образования* 10-2 (113) (2021): 63-66.

19. Юсупова, Н. А., Бердиярова, Ш. Ш., & Юлаева, И. А. (2021). "Гематологические характеристики факторов риска и оценка прогноза при covid-19". // *Вестник науки и образования*, (5-2 (108)), 25-29.

20.Кувандиков Г. Б. и др. Проблемы достоверности результатов лабораторной диагностики инфекций, передаваемых половым путем //European research: innovation in science, education and technology. – 2020. – С. 79-82.

21. O'G T. F. O. K. et al. Assessment of carbohydrate metabolism in patients with diabetes and covid-19//Research Focus. – 2022. – Т. 1. – №. 4. – С. 52-55.

22. Yusupova N., Firdavs O. Energy drinks. The composition of energy drinks and the effect on the body of their individual components //Thematics Journal of Microbiology. – 2022. – Т. 6. – №. 1.

23. N Ibragimova, B Ibragimov Role of folic acid in women's reproductive health with polycystic ovarian syndrome // Scientific research results in pandemic conditions (COVID-19) 1 (05), 106-109, 2020

24. Кудратова З. Э., Умарова С. С., Юлаева И. А. Современные представления о микробиоте влагалища в детском возрасте //Наука, техника и образование. – 2020. – №. 5 (69). – С. 84-86.

25. Kudratova Z. E, Normurodov S. Etiological structure of acute obstructive bronchitis in children at the present stage - Thematics Journal of Microbiology, 2023. P.3-12.

26.Kudratova Z. E., Tuychiyeva S. K. Atipik mikroflora etiologiyali o'tkir obstruktiv bronxitlar etiopatogenezining zamonaviy jixatlari. Research Focus, 2023, B. 589-593.

27.Kudratova Z. E., Karimova L. A. Age-related features of the respiratory system. Research Focus,Tom 2, P. 586-588.