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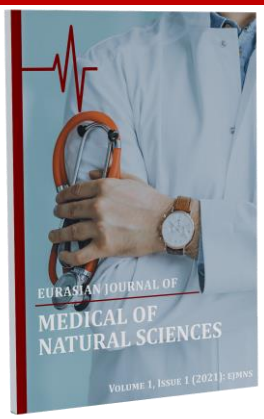

EPIDEMIOLOGY OF DISEASES OF THE DIGESTIVE SYSTEM OF COVID-19 ASSOCULATED FOOD AND COMPUTED TOMOGRAPHY IN PATIENTS WITH COVID-19

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ABSTRACT

In this article, the epidemiology of diseases of the digestive system of covid-19 assoculated food was to determine the importance and place of computed tomography in patients with COVID-19. The purpose of the study is devoted to the study of the speed and characteristics of the occurrence of X-ray manifestations of coronavirus infection, lung injuries in companion diseases. To this end, clinical examples were given from patients with COVID-19 during the study. In place of the conclusion, it should be said that the main importance of CT in the context of the new coronavirus infection pandemic is very important when diagnosing COVID - 19 in conditions when it is not possible or negative to carry out SARS-CoV - 2 RNA analysis and determining the severity of the disease. Monitoring the condition of lung tissue in dynamics in COVID-19 disease using CT is important in correcting therapy. In clinical practice, the CT method allows differential diagnosis of non-pulmonary and non-pulmonary pathologies in patients with companion diseases, in addition to detecting changes specific to COVID-19.

Introduction. Until 2002, humanity looked at coronaviruses as seasonal O'RVI viruses that do not cause serious complications. In November 2002, an outbreak of "severe acute respiratory syndrome" (tors, SARS) with an 11% mortality rate caused by a new, previously unknown coronavirus in rural areas of Guangdong province (China) occurred. The causative agent was given the name SARS-CoV and was later classified as a type of Betacoronavirus, giving rise to a new type of coronavirus associated with severe acute respiratory syndrome [5].

In September 2012, cases of severe respiratory illness known as "Middle East Respiratory Syndrome" (MERS) began to be reported in Middle Eastern states as a result of another previously unknown coronavirus (MERS-CoV) classified as a new species

(coronavirus associated with Middle East Respiratory Syndrome) within the betacoronavirus species [1,2]. As of the end of may 2020, 6.1 million worldwide.more than 370,000 SARS-CoV-1 infection patients were identified, of which more than 370,000 ended with a lethal outcome. The outbreak of the new infection was first observed in late 2019 among the indigenous people of Wuhan (China). Mortality in current COVID-19 epiidemia is much lower than in Severe Acute Respiratory Syndrome (SARS) or Middle East Respiratory Syndrome (MERS). However, the SARS-CoV-2 virus spreads much faster, with a relatively higher lethality than the SARS and MERS viruses. Genetic studies have shown that the etiological agent of COVID-19 is SARS CoV(2002-2003 gg.) is closely related and causes a case of severe acute respiratory syndrome belonging to the Betacoronavirus generation. Therefore, this virus SARS-CoV-2 is called (9). New coronaviruses spread around the world, causing some problems in the organization of emergency medicine. The world economy was in crisis. Therefore, researchers from different countries believe that the development of ways to dispel viral infections, the creation of diagnostic tests, preventive vaccines and drugs are the main factors that prevent the development of the disease. Retrospective studies in Wuhan have shown that the main clinical signs of COVID-19 are fever, cough, shortness of breath, wheezing. The less common symptoms of COVID-19 are sputum, headaches, blood spitting, and signs observed by the gastrointestinal tract. One of the main and most pressing problems of the health system is considered non-hospital acquired pneumonia, which is associated with high morbidity and mortality. Currently, the pandemic of the new coronavirus infection COVID - 19 again forces to turn to this topic, since the diagnosis of pneumonia and lung damage observed by the SARS-CoV-2 virus, analysis of treatment issues, is extremely important. At the same time, it should be noted that more than 3 million people die from pneumonia and influenza every year, according to the World Health Organization. Typically, these are elderly patients with chronic obstructive pulmonary disease (OOC), malignant tumors, diabetes mellitus, and other companion diseases [3,4]. The COVID-19 new coronavirus infection claimed more than half a million human lives, and the number of infected worldwide exceeded 10 million [6,7]. Coronavirus pneumonia occurs in several stages: 1. Viremia. The course of the disease is similar to an ordinary tummy, this period lasts from 7 to 9 days. 2. Breakage occurs between 9 and 14 days. The reason for this is due to damage to epithelial cells of the respiratory organs, the addition of a bacterial infection. 3. If pneumonia is not detected at an early stage, breathing provokes distress-syndrome. A person cannot breathe without the help of an artificial breathing device (IVL). Immunosuppression stage. If the disease is not stopped in the early stages, there is a loss of acquired and congenital immunity. 4. In coronavirus pneumonia, a pathogenic flora and fungal infection are often added to the main causative agent of a viral nature. Normally not breathing normally is the main difference between coronavirus pneumonia and other types of lung inflammation. Pneumonia in a Coronavirus infection is classified as non-atypical hospital pneumonia. In this disease, lung damage is added to the virus and a bacterial agent that is not one of the typical representatives of the hospital microflora. In the pathogenesis of any infection, the main etap human pathogenic and conditionally pathogenic microorganism biotope colonization is observed. Conditional on an invasive feature in the nasal larynx-the analysis of pathogenic microorganisms is important in the development of disease prevention. Microbiocenosis of the upper respiratory tract, as an

integral part of the macroorganism microbiota, is an "organ" that actively participates in the protection and formation of the pathological process in the lungs [7,8,9,10].

The disease can also lead from mild to severe form in terms of severity (Covid-19) to pneumonia and death accompanied by respiratory failure. A significant increase in the number of patients with COVID-19 made it possible to accumulate experience in monitoring, diagnosing and treating patients with COVID-19. In the first generalizing study based on observations of 1,099 patients in the early period of the COVID-19 pandemic, the frequency of various clinical signs and changes in computed tomography (CT) of the chest organs was determined [7,12]. In particular, 86.2% of the 975 patients examined were diagnosed with changes in computed tomography (CT). At the same time, bilateral changes were described in 51.8% of patients, and the most common "dim window" symptom was 56.4%. The main point in CT Diagnostics was the division of changes into stages, depending on the days of the disease [8,13]. Later in various scientific publications, according to the stage of the disease in COVID-19 and the dynamics of disease development, different options for differentiating the results of CT were proposed (double-sided "dim glass", "stone coating", etc [9, 11]. In the case of COVID-19 during the pandemic, it became known in studies that simple chest X-rays are less sensitive to computed tomography. Due to the lack of correlation between the auscultative symptoms of pneumonia and the extent of lung damage, as well as false negative results in polymerase chain reaction (PZR) testing, CT has become the backbone of diagnosis in COVID-19. During the covid-19 disease pandemic, there are bronchopulmonary pathologies, including oncological diseases, tuberculosis [12, 13] in which patients from another group are naturally involved in the epidemic process, which indicates the need for a differential diagnosis for patients. As a result, in the process of diagnosing coronavirus pneumonia, radiologists and clinicians should distinguish it from other respiratory diseases, which can often be the background. A large number of scientific publications are devoted to the differential diagnosis of radiological signs in COVID-19 disease, their specificity, the frequency of occurrence in various variants of coronavirus infection, features of lung damage in other viral and bacterial pneumonia. Comorbid patients with radiological signs of other diseases in real clinical practice may also develop coronavirus pneumonia. Data dedicated to analyzing the frequency and characteristics of X-ray manifestations of COVID-19 disease are very rare in existing scientific publications. Diagnosis and comparative diagnosis of the disease in patients with COVID-19 are important not only clinically, but also epidemiologically, since timely competent interpretation of CT data allows the distribution of Patient Flow to various departments of medical institutions.

Research objective: to determine the importance and place of computed tomography in patients with COVID-19.

Research materials and methods. The material for the study is the results of a computer tomogram conducted in some groups of patients on the city of Fergana and their disease history protocols. Blood, urine, excrement were taken as the material of the examination, and general blood, urine, excrement, virological methods, ptsr, coagulogram, D dimer, ferritin, procalcitonin detection, MSKT were carried out as examination methods. Computed tomography was performed on the GE Optima-CT660 diagnostic Aparat with 128 cross sections taken. The results were analyzed in-depth statistics without retrospect.

Research discussion: based on the analysis of the results of clinical laboratory examination methods conducted in patients with COVID-19 in the city of Fergana. During the observation, it made it possible to divide patients into several unequal groups based on Radiological signs identified in patients with COVID-19: patients with symptoms of coronavirus pneumonia only, patients with a combination of COVID-19 and various comorbid diseases, patients with COVID-19 symptoms and its complications (pleurisy, secondary bacterial pneumonia, destriction, pneumothorax), patients with other pathologies or patients with CT Below are clinical examples showing the role of CT in the diagnosis of COVID-19, its complications and chest examination in joint diseases.

1-clinical example.

Patient X.,23. On the 8th day of the disease, he was admitted to the hospital with the following diagnosis: "infection with a new coronavirus. Bilateral polysegmentary pneumonia, ne 2 levels". Companion: Level II of arterial hypertension. Obesity level II.

Computed tomography summary at the time the patient was admitted: many separate or fused foci in the form of "pale glass", located almost symmetrically, with peribronchascular and subpleural distribution in all areas of the lungs. Fused foci (up to 6-8 CM) have been recorded in the apical, middle patch, as well as the lower basal segments of both lungs. Against their background, a reticular component and a linear junction are determined, consolidation is not observed. The size of the injury is 50-75% (according to version 10 of the temporary recommendation for the conduct and treatment of patients with COVID-19, KT-3 corresponds to the severity level). In polymerase chain reaction (PTSR) investigation, RNA SARS-CoV-2 was tested positive. Due to increased intoxication and respiratory failure (ne), the patient was transferred to the intensive care unit. High-flow oxygen therapy was given, treatment measures were carried out on the basis of the protocol. However, despite treatment measures, on the 11th day of the disease, the patient was transferred to artificial ventilation of the lungs (OSV). On the 12th, a puncture was performed, as the patient was diagnosed with pneumothorax, subcutaneous emphysema. The patient had a fever for a certain period of time. On the 16th day of the disease, an X-ray was performed. In this case, an increase in radiological signs was found. The size of the injury was more than 75% (KT-4). Acute respiratory distress syndrome (Ducks) was observed in the patient. On 18 days of the disease, a repeated ptsr examination obtained a negative result of RNA SARS-CoV-2. During this period, the patient was found to have an increase in the amount of procalcitonin in the patient. A bacteriological examination revealed Klebsiella. Subsequently, a stabilization of the patient's condition was noted against the background of a change in antibacterial therapy, taking into account the sensitivity of the microflora. But on the 30th day of the disease, on a CT scan, against the background of an increase in the volume of alveolar consolidation in the upper and lower parts of the right lung, new small foci of consolidation appear in the upper part of the lungs. The formation of an air gap of 14 mm (abscess-abscess formation), surrounded by a ring-shaped consolidation, was observed in the middle segment of the left lung, right lung. On the 39th day of the disease, the volume of areas of alveolar consolidation in the lungs decreased significantly with the preservation of "dim glass" areas, no new foci of consolidation were detected. A 17 mm air gap is preserved in the middle segment of the right lung. A small amount of pleural fluid was detected in the right pleural space. Despite the

ongoing treatments, the patient was diagnosed with changes by the cardiovascular system. Resuscitation measures were carried out successfully, but under the influence of strong hypoxia, vegetative disorders were observed in the patient. Since RNA SARS - CoV-2 has not been detected in the positive dynamics of clinical and instrumental-laboratory results, bilateral abscessed pneumonia and oropharyngeal surtma, the patient was transferred to another medical institution for rehabilitation. Thus, a periodic radiography and CT scan in dynamics in a patient with severe coronavirus pneumonia, which requires the introduction of an immunosuppressive drug, made it possible to determine the diagnosis of the addition of a secondary bacterial infection over time (CT data of the chest at the time of taking the patient: diffuse thickening of interlobular intervals in both pulmonary parenchyma (interstitial edema), as well In parenchyma, foci in the form of "pale glass" were detected mainly, basal and on the right (on the right - 50-75%, on the left - 25-50%, KT-3, CORADS 4). There are also infiltration sites measuring approximately 14 mm. The pleural fluid layer thickness is 3 cm on the left and 1.3 cm on the right. Cardiomegaly was observed.

Taking into account severe cardiac pathologiya cardiologist, pulmonologist, therapist examination was prescribed and treatment procedures were recommended. On the 11th day of the disease, a repeated CT scan of the chest revealed a decrease in the volume and number of air in both lungs in the form of consolidation / "pale glass" by up to 35% (CT-2). At the same time, the decrease in the size of the subpleural zone due to fibrosis of the lower parts of the lungs identified. The patient's treatment was enhanced (diuretic therapy, intravenous administration of albumin, taking into account hypoalbuminemia). On the 18th day of the disease, repeated chest X - rays showed a decrease in the size and number of consolidation / "dim glass" areas in both lungs by up to 25%. It was observed that there was a decrease in dimming within the framework of a small circulation, but a slight increase in the amount of fluid in the pleural spaces. The patient has a significant decrease in nausea (SpO2 98%), stable hemodynamics (Ecgda - heart rate 78 beats per minute, sinus rhythm, AQB 90/60 mm wire ust.ga Equal), s reactive protein (SRO) levels range from 49.9 to 1.6 mg/l. a decrease was found. SARS-CoV-2. RNA analysis gave two negative results. Subsequently, the patient underwent cardiac resynchronization therapy in a planned manner.

In this clinical case, CT made it possible to make a comparative diagnosis from the symptoms of pulmonary parenchyma infiltration in a Coronavirus infection with severe heart failure as a result of circulatory disorders in the lungs.

Thus, taking into account the duration of complaints in the patient, negative results of SARS - CoV-2 RNA analysis and CT data, it can be assumed that the patient was infected with coronavirus more than a month ago, the disease passed asymptomatic. Replication had already stopped when the patient was hospitalized. However, changes in the lungs caused by the coronavirus infection detected by CT remained. For all patients suspected of COVID-19, it is recommended to carry out preliminary computed tomography, if there is no clinical improvement during treatment for 7 days or if the clinical laboratory indicators deteriorate, repeated conduct is recommended (Table 2).

Conclusion. In place of the conclusion, it should be said that the main importance of CT in the context of the new coronavirus infection pandemic is very important when diagnosing COVID-19 in conditions when it is not possible or negative to carry out SARS-CoV-2 RNA

analysis and determining the severity of the disease. Monitoring the condition of lung tissue in dynamics in COVID-19 disease using CT is important in correcting therapy. In clinical practice, the CT method allows differential diagnosis of non-pulmonary and non-pulmonary pathologies in patients with companion diseases, in addition to detecting changes specific to COVID-19.

References:

1. Национальная 10-я временная декларация. Министерства здравоохранения Республики Узбекистан по диагностике и лечению Covid-19. Ташкент 2022.
2. Узакова Г.З., Ярмухамедова Н.А., Джумаева Н.С. Болаларда коронавирус инфекцияси кечишининг узига хос хусусиятлари.-Самарканд: Журнал гепато-гастроэнтерологических исследований, 2021 гг. II - том. С.-126-129.
3. Джумаева Н.С., Ярмухамедова Н.А., Узакова Г.З. Амалиётдан бир ҳолат Covid-19 касаллиги ҳамроҳ касалликлар билан кечиш хусусиятлари.- Самарканд: Журнал гепато-гастроэнтерологических исследований, 2021 гг. I- том. С.-47-50.
4. Орзиқулов А.О., Рустамова Ш.А., Караматуллаева З.Э., Ибрагимова Э.Ф. Covid-19 инфекциясини даволашда антикоагулянтлар ўрни ва аҳамияти. – Фаргона: Достижения современной медицины в изучении эпидемиологии инфекционных болезней. Материалы международной научно-практической конференции с участием международных партнерских вузов 10-июня 2021 год. С.206-215
5. РАХИМОВ Н. М. и др. КЛИНИКО-РЕНТГЕНОЛОГИЧЕСКАЯ И КОМПЬЮТЕРНО-ТОМОГРАФИЧЕСКАЯ ХАРАКТЕРИСТИКА ТИМОМЫ //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. 2022. Т. 7. №. 2.
6. D.A. Khavkina, P.V. Chuliaev, N.A. Yarmukhamedova, D.B. Mirzajonova, A.A. Garbuzov, J.J.Janibekov, T.A. Ruzhentsova INFECTIOUS SAFETY IN THE CONTEXT OF THE COVID-19 PANDEMIC: INTERSTATE EXPERIENCE OF INTERACTION (Turkish Journal of Physiotherapy and Rehabilitation; 32(2) ISSN 2651-4451 | e-ISSN 2651-446X) 4165-4167.
7. Pan F., Ye T., Sun P., Gui S., Liang B., Li L. Time course of lung changes on chest CT during recovery from 2019 novel coronavirus (COVID-19) Pneumonia. Radiology. 2020 doi: 10.1148/ radiol.2020200370.
8. ЗЕЙНИТДИНОВА З.А., РИЗАЕВ Ж.А., ОРИПОВ Ф.С. СТЕПЕНЬ ЦИТОЛОГИЧЕСКОГО ПОРАЖЕНИЯ ЭПИТЕЛИЯ СЛИЗИСТОЙ ОБОЛОЧКИ ЩЕКИ ПРИ COVID-19 //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. – 2022. – Т. 7. – №. 2.
9. Rizaev J.A., Rizaev E.A., Akhmadaliev N.N. Current View of the Problem: A New Approach to Covid-19 Treatment// Medigo-legal update An Internasional journal. 2020, vol 20, N4 India, C1103-1109.
10. Boltaboev Alisher Murodilovich //COVID-19 INFECTIOUS DISEASES PRINCIPLES FOR TREATING SALICIES DURING A PANDEMIC// EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. Volume 3. Issue 5, May 2023. 262-266 pages.
11. M.T.Mamatqulova, Y.R.Rosibayeva, S.T.Yulchieva, H.A.Rakhimova //Pregnancy During a Pandemic of Coronavirus Infektion Covid-19 Risks and Effects on the Unborn Child// 2023 International Conferense February 19-23, San Francisco, CA. record number #4222350

12. Mamatkulova Makhbuba Tojalievna, Rosibayeva Yorkinoy Ravshanovna //Pregnancy during a pandemic of coronavirus infection COVID-19 risks and effects on the unborn child// Texas Journal of Medical Science. Volume 18. 08-03-2023. 1-5 pages.
13. Abdumannabovna A.K., Asadullaevna K.S. //DISEASE WITH POSTCOVID GASTRODUODENITIS AND THE ROLE OF DIET IN TREATMENT// EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE. - 2022. - Т. 2. - №. 3. - С. 52-55.
14. Akhundjonova Khakima Abdumannabovna Tillaboeva Surayo Zakirjonovna Ibragimova Nargizakhan daughter of Pakhlavonzhon //NUTRITION RATES IN PATIENTS WITH COMPLICATIONS OF CORONAVIRUS INFECTION// Международный научный журнал «Научный импульс» № 5 (100), часть 2 Декабрь, 2022. 204-206 стр.
15. Alimova Iroda Anvarovna //PNEUMONIA IN 1-YEAR-OLD CHILDREN: SYMPTOMS, TREATMENT AND PREVENTION// SCIENTIFIC JOURNAL OF RESEARCH IN MEDICINE (SJRM) Vol. 1 No.4 (2022). 9-12 pages.
16. Алимова Ирода Анваровна, Ахмедова Матлуба Мухаммаджоновна, Абдухалилова Гулчехра Мамировна, Пулатов Рузимухаммад //КЛИНИЧЕСКИЕ ОСОБЕННОСТИ, ТЕЧЕНИЕ КОРОНОВИРУСНОЙ ИНФЕКЦИИ, ОСЛОЖНЕНИЯ И ХАРАКТЕР ПОСТКОВИДНОГО СИНДРОМА У ДЕТЕЙ Г. ФЕРГАНЫ.// Международный научный журнал «Научный импульс» № 4 (100), часть 2. Ноябрь, 2022. 61-69 стр.
17. Alimova Iroda Anvarovna, Babadjanova Khursanoy Melibaevna //JUVENILE IDIOPATHIC ARTHRITIS// SCIENTIFIC JOURNAL OF RESEARCH IN MEDICINE (SJRM). Volume 1. Issue 4. October 2022. 6-8 pages.
18. Rayimova Zulfiyaxon Mahamatjonovna, Ibragimov Obidjon Baxtiyor o‘g‘li //KEKSA INSONLARDA ERITROSITLARNI KAMAYISH SABABLARI// Научный журнал «Студенческий вестник» № 20(165). 65-67 стр.
19. Райимова З.М, Холматова Е.Н, Эшонов Р.М, Умирзаков О.Э //БОРЬБА С НОВОЙ ЭПИДЕМИЕЙ КОРОНАВИРУСА ВО ВСЕМ МИРЕ И В УЗБЕКИСТАНЕ// "Экономика и социум" №4(83) 2 2021. 328-331 стр.