WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 4, Issue 4, April., 2023

NERVE AND CARDIOVASCULAR OF THE COVID-19 VIRUS IMPACT ON SYSTEMS. CT AND MSGT METHODS IN DETECTING COVID-19 MODERN INFORMATION TECHNOLOGY ROLE IN MEDICINE

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Abstract
The article details the effects of the COVID-19 virus on the nervous and cardiovascular systems. Also, CT and MSGT methods for detecting COVID-19 modern information technology Its role in medicine has been researched.

Keywords: covid-19, virus, Cardiovascular, Innovation, modernization, information technology, innovation in medicine.

INTRODUCTION

The effect of the COVID-19 virus on the nervous system. Jeremy Rossman, a virisologist at the University of Kent, great Bruitania, found out howmuchthe coronavirus can affect the human brain and cause neurological symptoms. Accordingtothescientist, in most cases, COVID-19 refers to a respiratory infection that causes fever, sorethroat, cough, and in more severe situations-respiratory distress and respiratory diseases. However, symptoms such as Carona virus recording, diarrhea, heart function and blood transfusionscanalso cause damage to other organs by triggering the disease. The infection also damagesthebrain. Patients with COVID-19 have been reported to have developed Guillain-Barré syndrome. Indoing so, the immune system is affected by the infection and begins to mistakenly attackperipheral nerve cells. In doing so, the muscle weakens at first and then leads to paralysis. Inother cases, the caronavirus causes pain encephalitis associated with swelling and inflammation of the brain, as well as acute circulatory disorders in the brain tissue (stroke).

MAIN PART

Ingeneral, neurological symptoms of varying degrees were observed in 36% of patients. Theycomplained of dizziness, dizziness, loss of sense of smell and tam cognition, vascular tractionand hallucinations. These cases were often observed when the disease was a thief and remained even after recovery. SARS-CoV-2 can directly

damage the head brain by passingthrough a hematoensafalite barrier that separates the blood and central nervous system. Neurological symptoms are caused by the direct impact of the virus on nerve tissue or by over- activation of the immune system. The olfactory neurons in the nose can also cause the infection to enter the brain. The brain can also be damaged by other pathogens, including the flu virus, measles, respiratory-syncytial viruses, and seasonal coronaviruses, such as HCoV-OC43. However, it is relativelyrarefor an infection to enter the central nervous system. One third of 214 patients tested with COVID-19 experience neurological symptoms includingdizziness, headaches, and cognitive impairment. Existing theories focus on howthe virusaffects neurons – nerve cells. It was also mentioned about loss of taste and sense of smell, inflammatory processes (thehuman immune system responds to the virus in this way) and the lack of kislarod observedinsome patients.

Cognitive impairments may be due to patients in intensive care settings, acondition also known as temporary clouding of consciousness or Deliria when a personhasgliutsinations, but this is often observed in older people. Although the symptoms usually go away over time, some of them can still remain. Accordingtodoctors, the recovery of cognitive functions in patients with coronavirus is closely relatedtoage, comorbidity (that is, the presence of two or more diseases or disorders in the patient) andtherate of course of the disease. Linn Terner-Stokes, professor of medical rehabilitation at the Royal College in London, notedthat the virus can even infect the brain of patients with a mild form of the disease. According to professor Ed Bullmore of the University of Cambridge, however, there are goodreasons to assume that SRS-CoV-2 causes a “neurotoxic disorder” that leads to “different changes in the patient's mental state.” ‘We don't know what exactly causes this neurotoxicity.

Perhaps the virus infects the brain, but the immune system's reaction to the virus can damage neurons, or it's all about blood tothebrain. So far, all this interpretation is likely,” says professor Bullmore. Effects on the cardiovascular system While doctors are trying to assess the damage that COVID-19 causes to various organs of patients: lung, heart, kidney or blood diseasesign people were usually the first victims of thecoronavirus, and the disease often continued in them in a serious way. Therefore, it is not always possible to find out what caused the virus and what was the case before it. But one thing is clear: when the symptoms of infection begin to be namayon, the activity of many learnings is disrupted, a malfunction in one leads to the failure of others. Acute inflammation, which leads to stroke and infarctionthe healing process also plays its role. According to the March 2020 report, the JAMA Cardiologist published in the specializedmedical journal, 20% of 416 patients who were examined

in Uhan hospitals had a heart muscle injury. Hudi reported arrhythmias in 44% of 36 patients in intensive care units in the same location.

The doctor associates this with hypersitokinemia or cytokine storm, which is a destructivereaction of the body that provokes uncontrolled activation of immune cells, which leads tothedestruction of the tissues of the focus of inflammation. The reaction is observed in somepatients with coronavirus. In particular, inflammation of the heart muscle (myocardium) occurs, which interferes withelectrical impulses, leads to arrhythmias and disrupts blood circulation, causing shortnessof breath. Complications of the cardiovascular system are not typical only for COVID-19: many viral diseases can lead to myocarditis.

Although most patients recover, some cases of heart muscledamage cannot be repaired. In addition, COVID-19 has a negative impact on your blood itself. In the Netherlands, an increasein blood clotting was found in 38% of 184 patients who fell into intensive care, and almost athird of them had thrombi. Kidney Although the coronavirus primarily damages the lungs, but in some patients the infectionalsospreads to the kidneys. According to the results of a sample study in China, 27% of 85 patients who applied to Uhanhospitals with coronavirus had kidney problems.

According to another study, when the urine of almost 200 hospitalized patients in Hubei andSichuan provinces was examined, a protein confirming infection was detected in 59%of casesand blood signaling severe renal concussion in 44% of cases, in addition, the risk of deathinpatients with acute renal failure (O'bye) was five times higher than in ordinary patients withCT and MSKT methods in determining the diagnosis of pneumonia with coronavirus. Computed tomography (CT) is a good method of detecting any changes in the lungs, includingpneumonia in coronavirus infection. At the first stage, changes can be missed when an X-rayisperformed, especially if these are old models, and not modern digital hardware. However, if inflammatory neck changes are a condition that requires treatment X-ray shows themMSKT, made on a sufficiently high-quality apparatus, indicates structural changes in the lungs. There are certain signs characteristic of pneumonia with coronavirus. But there is no way tosaywith 100% certainty that this is exactly him. Like any research method, MSgt is comparedwith data on clinical conditions in patients, the duration of the disease and the yield of the courseitself, and, of course, with epidemic status data. Now it is considered that all such pneumoniaismost likely caused by coronavirus.

The question may arise as to how CT (computed tomography) and MSgt (multispiral computedtomography) differ from one another. Both methods allow you to get the

body of a person'sbody, separated into layers, the only difference is that the examination work in CT is carriedout using one detector, and in MSCT-using several detectors. At the expense of the presenceof several detectors tomograph step, that is, the distance between the sections of tissues under examination is reduced. If it was considered a good quality to have 5 mm between the previously examined areas, now these parameters have become much smaller. Thanks tothis, we will have images with high resolution and the research time will be significantly reduced. At the same time, it is necessary to remember the sufficient kata load that the patient receivesat MSKT. For this reason, the person does not need to undergo an examination to calmhimself down.

CONCLUSION

If the study is done excessively early, fearing to miss the development of the disease, there is a possibility that nothing will come of it. It is not recommended to repeat the procedurein CT in a short time. Three advantages of MSKT research can be distinguished. It makes it possible to identify eventhe first forms of pneumonia, to assess the size of the lesion, which is one of the criteriafor theseverity of the disease. The role of computer technology in medicine. Today, one of the areas in which information technology has actively entered is medicine. Fromthe need for diagnostic treatment and preventive examinations, computer aparaturas arewidelyused. For example, computed tomography is one of the X-ray studies based on nuclear medical diagnosis, microcomputer technologies.

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