

Clinical case of catatonic stupor developed as a result of acute respiratory disease COVID-19

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Abstract

The aim of this work is to demonstrate and analyze a clinical case of catatonic stupor as a consequence of the complex effect of the infectious process, namely systemic inflammation and direct neurotoxicity of the SARS-CoV-2 virus on the nervous system. A retrospective analysis of outpatient and inpatient medical records was performed. Analysis of clinical case proves the possibility of catatonic syndrome due to acute respiratory disease COVID-19. 2. Given that catatonia is an urgent condition, it is necessary to be vigilant about its occurrence.

Keywords

COVID-19, post-infectious catatonia, mental disorders, clinical case.

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Introduction

Despite the fact that COVID-19 primarily damages the respiratory system, as the pandemic continues, the number of patients in whom the infection affected the nervous system and neuropsychiatric disorders such as hyposmia, stroke, insomnia, neurotic disorders or delirium increases. One of the potential post-infectious disorders may be catatonia. Only sporadic cases of it are described, and reliable data on observations about it are absent. At the same time, careful attention is paid to post-infectious catatonia caused by COVID-19, because in the absence of timely recognition and treatment of this urgent condition there are serious complications that can be fatal.

The aim of the work

The aim of the work is to demonstrate and analyze a clinical case of catatonic stupor of post-infectious origin due to the acute coronavirus disease COVID-19 in patient P., 40 years old, who from 25.03.2021 to 30.04.2021 underwent examination, treatment and rehabilitation in Starokostiantyniv military hospital.

Materials and methods

A retrospective analysis of outpatient and inpatient medical records was performed.

Results and discussion

Catatonic stupor is a psychopathological syndrome characterized by immobility combined with lack of verbal contact and increase of muscle tone. Catatonia has traditionally been regarded as a sign of endogenous psychosis, especially schizophrenia. However, this syndrome is not nosologically specific and can occur in many diseases: up to 20-25% of its cases are somatogenously caused (Dunaievskiy, Kuznetsov, 2019). Constantine von Economo was the first who described catatonic syndrome after acute respiratory disease in detail in the structure of lethargic encephalitis, which affected some patients after the Spanish flu during the pandemic of 1918-1920. In May 2020, during the COVID-19 pandemic, Italian doctors were among the first to report an atypical curative case of "akinetik mutism". In retrospect, it was regarded as a catatonic stupor (Cooper, Ross, 2020). In the same month, British doctors reported a case of catatonia, manifested by stupor and accompanied by disorders of perception, in a man with COVID-19 (Caan, Lim, Howard, 2020). In the systematic review of the literature as of 20.04.2021, in addition to the above, there are 7 more relevant cases of catatonia due to COVID-19 (Schneider, Smith, Wohlleber, Malone, Schwartz, 2021). The authors consider its appearance as a consequence of the complex impact of the infectious process, namely systemic inflammation and direct neurotoxicity of SARS-CoV-2 virus on the nervous system, as well as psychosocial factors leading to post-traumatic stress, anxiety and depression. Differential diagnosis with hypokinetic delirium is proposed, which in particular consists in a rapid positive response to benzodiazepines: patients quickly, significantly improved after their prescription, which is not typical for delirium.

Below is our own clinical case of catatonic stupor, which developed in a patient as a result of COVID-19.

In the life history, the burden of heredity on mental illnesses is remarkable: the father is "commissioned" from armed forces after the transferred TBI on a line of psychiatry, the aunt on a line of the father suffers from depression. The patient underwent regular medical examinations during military service and was considered healthy. At work, family and friends are characterized positively. Patient does not smoke, denies the abuse of psychoactive substances.

Case history: from 08.03.2021 there was a general weakness, increased body T to 38.0 ° C. 10.03.2021 performed PCR with real-time detection, during study of nasopharyngeal lavage

revealed RNA of SARS-CoV-2 virus. Outpatient treatment was started: heparin, moxifloxacin, xarelto, pulmobriza, serrata, vitamin therapy, tonic therapy, physiotherapy. D-dimer from 12.03.2021 103.0 ng FEU / ml. CT of the chest from 16.03.2021: "CT signs of viral pneumonia. High probability of COVID-19. CT-I (area of the affected parenchyma up to 15%)". Antibiotic therapy was continued. Feelings began to improve, the body's T decreased, staying in the range of 35.9-36.5 ° C. From 21.03.2021 due to the fact that the condition was regarded as recovery, treatment was canceled.

During the illness there was a pronounced somatopsychic asthenia, in particular, weight loss of 7 kg, complained of fatigue, patient was weak, lethargic, anxious, suspicious, for example, many times a day measured the saturation of oxygen in the blood. Despite the improvement in somatic condition, general weakness, fatigue and anxiety aggravated. Obvious changes in mental status from 22.03.2021: he spoke in a quiet, hoarse voice, became retarded, tense, reacted sluggishly to others, decreased appetite, and almost stopped sleeping at night. On March 23, 2021, due to the expiration of the term of outpatient treatment, he tried to start military service, due to severe asthenia; his release from duty was extended. On March 24, 2021, stereotypical movements appeared the patient stared straight ahead, could not pay attention to anything. 25.03.2021 consulted a psychiatrist, recommended MRI of the brain. In the process of preparation for MRI in the X-ray room finally stopped moving, did not respond to painful stimuli, and did not respond to the spoken language. MRI of the brain from 25.03.2021: "MR data for the presence of changes in the volume of the substance in the brain at the time of the examination was not detected. MR signs of focal process of the brain, most likely against the background of neuroinfection. Hospitalization with a diagnosis of catatonic syndrome is recommended. On admission to the hospital, examined while lying on a couch, his face tense, with his eyes tightly closed, he resisted the attempt to open them. On the language, painful stimuli did not respond; muddy. He showed waxy flexibility in the muscles of the upper extremities, there were elements of passive submission: he allowed himself to sit on the couch, stuck in this position with his arms outstretched. Body T = 37.4 ° C, blood pressure = 130/100 mm PC, Ps = 120 / min., Sp O2 = 97%. Laboratory tests within normal limits (leukocyte count 7.9 x 10⁹ cells / l). Delivered to the department on a stretcher. Introduced solution of Diazepam 5 mg / ml 4.0 ml v./m. About 30 minutes after the injection of Diazepam, opened

his eyes, followed the interlocutor's gaze, responded to the spoken language, and made verbal contact. The patient answered in terms of the respondent, but in one word, in a quiet, low-modulated voice. Attention is unstable, exhausting. Oriented comprehensively enough, productive psychotic symptoms, gross cognitive impairment did not show. Patients followed the instructions as much as possible. According to the Bush-Francis catatonia scale, the patient scored 20 points, which convincingly indicates the presence of catatonia. Subsequently, on the background of treatment and rehabilitation, the patient's condition continued to improve, followed by discharge in a state of stable compensation.

Conclusions and suggestions

1. Analysis of the above clinical case proves the possibility of catatonic syndrome due to acute respiratory disease COVID-19. 2. Given that catatonia is an urgent condition, it is necessary to be vigilant about its occurrence. Based on this case, it is necessary to consider the possibility of its occurrence not only at the height of the infectious process, but also as it resolves, i.e. to show increased vigilance to convalescents and not leave them unaccompanied in outpatient and family medicine. If catatonic stupor is suspected, it should be diagnosed with other similar conditions, including hypokinetic delirium, taking into account the difference in subsequent treatment tactics. Patients with pre-existing psychiatric pathology are likely to be at risk, especially if catatonic syndrome is present. It is

possible that the development of catatonia in the patient described by us contributed to the burden of heredity in psychiatry, which was realized after the transferred somatopsychic extreme factor. 3. Prevention of anxiety among the population should be carried out, as the neurotization of society on the background of a pandemic comes up with to the emergence of mental disorders. Obviously, that the characterological anxious thinking of the patient, considered in the clinical case, in stressful conditions was one of the factors that led to the deterioration of the mental state.

Conflict of interest

The author declares that she has no conflict of interests.

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