

Letter to Editor

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Headache as the onset and main symptom of COVID-19 infection

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Abstract

This is a case report of a COVID-19 infection in a young male, previously healthy. The infection evolved with intense headache as the main symptom for 2 weeks. The headache was throbbing, severe, continuous, and worsened with efforts such as coughing. The patient presented no meningeal signs and neurological examination was normal. This is the first report of severe headache at the onset and main symptom of COVID-19 infection.

Keywords: Coronavirus, headache, pain, COVID-19

Dear Editor,

The year 2020 started with a pandemic coronavirus infection that is expected to change human behavior for years to come. The initial cases started in late 2019, and this is the second coronavirus to lead to severe acute respiratory syndrome (SARS); thus, it has been named COVID-19 or SARS-CoV-2^[1]. The clinical manifestations of COVID-19 vary from none to mild, moderate, severe, and rapidly progressive and fulminant disease. Its main symptoms include fever (up to 98% of cases), dry cough (68%-76%), dyspnea (circa 55%), and myalgia or fatigue (35%-44%)^[2]. Anosmia, ageusia, and diarrhea are now recognized as symptoms of the disease. Headache has been reported as affecting 8%-13% of patients^[2,3]. However, headache has not been described as the most disabling symptom of COVID-19 yet. We would like to report a case recently seen in our Neurology Unit.

A healthy and athletic Brazilian male aged 29 years, who did not suffer from headaches, gave consent for his case to be reported. In mid-March 2020, the patient woke up with bitemporal throbbing headache of severe intensity. He could not tolerate light and noise and presented low fever (37.8 °C). This headache persisted



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for 3 days, as did the increased temperature. No analgesic or anti-inflammatory drug affected the intensity of the headache. On the fourth day, his temperature returned to normal and a persistent dry cough started. The intensity of headache during the episodes of cough increased. The patient slept for many hours a day and remained in a dark, silent bedroom. PCR was positive for COVID-19. His parents tested PCR-positive for COVID-19 a week later. His father, who is a medical doctor, had moderate symptoms of the viral infection while the mother remained asymptomatic. Two weeks after the patient's initial symptoms, he recovered fully and had no more headaches. At no time did he have abnormalities in his neurological examination, including meningeal signs. He has been followed for 6 weeks now and has returned to his usual healthy condition.

To the best of our knowledge, this is the first report of severe headache as the onset and main symptom of COVID-19 infection. It can be classified as "9.2.2.1-Acute headache attributed to systemic viral infection"^[4]. Physicians at the front line of COVID-19 management should be aware of severe headache as a possible main symptom of this infection. This patient had a migraine-like headache, but he had high temperature and no previous history of migraine. Although neurological examination was normal, we must consider the possibility of meningeal involvement in the inflammatory process. The intolerance to light and sound, the worsening with coughing, and the throbbing characteristic of the headache which was irresponsive to treatment suggest meningeal vascular involvement. Although a case of meningitis and encephalitis by COVID-19 has been recently published, the clinical presentation of that patient was a lot more serious and life-threatening^[5]. In our case, we emphasize that patients seen at the Emergency Department complaining of severe headache might be dismissed without a COVID-19 hypothesis.

DECLARATIONS

Authors' contributions

The author contributed solely to the article.

Availability of data and materials

Not applicable.

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Conflicts of interest

The author declared that there are no conflicts of interest.

Ethical approval and consent to participate

This report was approved by the Ethics Committee at Universidade Metropolitana de Santos, under the number CAAE 56332016.4.0000.5509.

Consent for publication

Not applicable.

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