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Case report

Persistent hiccup: A rare presentation of COVID-19

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ABSTRACT

Background: Hiccups are involuntary diaphragmatic muscle contractions with early glottis closure terminating inspiration. They are classified into two types: acute (<48 hours) and persistent (>48 hours). COVID-19 is the defining health crisis of our generation. Although there are common symptoms of the disease (e.g. fever, cough), several atypical presentations have appeared as the pandemic has evolved. Here, we present a patient with COVID-19 presenting with fever, sore throat, and persistent hiccups.

Methods and results: A 48-year-old man presented to the hospital with a seven-day history of persistent hiccups, fever, and sore throat. Physical examination was unremarkable and abdominal ultrasound showed gaseous abdominal distension. Laboratory values were remarkable for elevated C-reactive protein, ferritin, and lactate dehydrogenase levels. Computed tomography of the chest showed bilateral subpleural areas of ground-glass attenuation and crazy-paving pattern. A COVID-19 test was positive, and hydroxychloroquine, oseltamivir, baclofen, and symptomatic treatment were initiated. The hiccups improved, and the patient was discharged home after ten days.

Conclusion: Physicians should maintain a high level of suspicion and be aware of atypical presentations of COVID-19.

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1. Introduction

The novel coronavirus disease (COVID-19) was declared a global pandemic by the world health organization (WHO) in March 2020 [1]. To date, over fifteen million persons have been infected worldwide [2]. Presenting symptoms of infection include, but are not limited to, fever, dry cough, tiredness, body aches, sore throat, diarrhea, and loss of taste and smell [1,3]. Some patients, however, are asymptomatic, and some present with atypical symptoms such as hiccups [4]. No definitive treatment or vaccine is yet available; therefore, prevention of spread is essential to reduce infection rates and consequently deaths [1]. Mass testing to detect asymptomatic patients and a high level of suspicion for atypical symptoms are therefore crucial in the management of this pandemic [1].

Hiccups are involuntary diaphragmatic muscle contractions with early glottis closure terminating inspiration [5]. They are classified into two types: acute (<48 hours) and
persistent (>48 hours) [6]. Most identified potential causes of hiccups involve metabolic and gastrointestinal abnormalities. Treatment of the underlying cause is usually sufficient to resolve hiccups in these cases. Nevertheless, idiopathic cases are also common with varying degrees of success in their treatments [6]. Herein, we report a case of COVID-19 infection presenting with persistent hiccups.

2. Case report

A 48-year-old man with a medical history of hypertension presented to our hospital with a chief complaint of persistent hiccups and sore throat. Seven days earlier, the patient had developed fever with no localizing symptoms followed by the onset of hiccups. He had no recent travel or sick contacts, no history of cigarette smoking, chest pain, or shortness of breath. His fever partially improved with over-the-counter symptomatic treatment; however, the hiccups persisted and increased in severity and frequency. The patient underwent an abdominal ultrasound examination, which was unremarkable apart from gaseous colonic distension. He then developed a sore throat and presented to the ER for worsening hiccups and sore throat.

On arrival at the ER, he was febrile to 39.3 °C with a heart rate of 92 beats per minute, blood pressure of 140/90 mmHg, respiratory rate of 25 breaths per minute, and oxygen saturation of 98% on room air. Lung examination revealed clear bilateral breath sounds, and the remainder of the examination was also unremarkable. Computed tomography (CT) scan of the chest showed bilateral subpleural areas of ground-glass attenuation and crazy paving pattern (Fig. 1). Laboratory values were remarkable for elevated C-reactive protein (51 mg/L), ferritin (2600 ng/mL), and lactate dehydrogenase (LDH) (856 U/L) levels. The patient was managed as a potential COVID-19 case, and a nasopharyngeal swab was performed. He was transferred to an isolation room in a specialized hospital for COVID-19 patients and received ceftriaxone 2 g and azithromycin 500 mg intravenously. When the swab test was returned as COVID-19 positive, the following medications were added: hydroxychloroquine 400 mg/12 h for one day, followed by 200 mg/12 h for 10 days; oseltamivir 75 mg/12 h for 10 days; prophylactic anticoagulation; ascorbic acid; zinc; and antipyretics.

The hiccups were frustrating to the patient, especially while attempting deep breathing; therefore, proton pump inhibitors, domperidone, and baclofen were added to the treatment. The patient slowly improved after the baclofen dosage was increased to 15 mg three times daily. His nasopharyngeal swab ten days after admission was negative for COVID-19, and he was discharged from the hospital in stable condition.

3. Discussion

The COVID-19 pandemic is the defining health crisis of our generation, and as the number of infections continues to increase, more atypical presentations are revealed. Identifying patients with atypical presentations is imperative, as they can unpredictably spread the infection. We believe our case of a 48-year-old male patient with persistent hiccups could be a possible rare presentation of COVID-19.

The first case of a COVID-19 infection presenting with persistent hiccups was reported by Prince et al. [4]. Their patient’s condition improved after three days of symptomatic treatment and was discharged in stable condition. In our case, the hiccup attacks were more severe and prolonged (from one week before admission to one week afterward). The patient showed improvement after a baclofen dosage increase towards the end of his first week after admission, and he later proved to be COVID-19 negative. The exact correlation between COVID-19 and the hiccups is hard to explain. Whether it is a direct effect of the infection or a coincidence is to be further assessed if more cases arise. It should be noted that several infectious disorders (e.g. influenza, tuberculosis) have been implicated in hiccup attacks without clear explanation [7,8]. Thus, the major limitation of this report is that a causal relationship between COVID-19 infection and hiccups cannot be confirmed. Nevertheless, our case highlights the importance of maintaining a high level of suspicion and the use of personal protective equipment even with patients presenting with uncommon COVID-19 symptoms.

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Fig. 1 – CT scan of the chest shows bilateral subpleural areas of ground glass attenuation and crazy paving pattern affecting both lung fields (arrows).
Conflict of Interest

The authors have no conflicts of interest.

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