

## COVID-19 ON BEHÇET'S DISEASE PATIENT: SHED LIGHT ON SHADOWS (CASE REPORT)



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### ABSTRACT

A new family type of coronavirus (SARS-CoV-2) was first seen in Wuhan, China name coronavirus disease 2019 (COVID-19). COVID-19 primarily attacks the respiratory system, but several studies have shown that infection with SARS-COV-2 can cause thrombosis and have therefore considered COVID-19 to be a prothrombotic disease.

Behçet's disease (MB) is a systemic vasculitis. Its ethiopathogeny is still poorly understood. Blood vessels of any caliber can be affected. Arterial involvement, such as thrombosis and / or aneurysm, is possible.

This article reports the case of SARS-COV-2 infection in a patient with behcet's disease.

## 1. INTRODUCTION

A new family type of coronavirus (SARS-CoV-2) was first seen in Wuhan, China name coronavirus disease 2019 (COVID-19). It spread very quickly around the world and was accepted as a pandemic on March 11, 2020. Although COVID-19 primarily attacks the respiratory system, but Several histopathology reports and clinical case series have shown thrombosis associated with SARS-COV-2 infection and thus COVID-19 is considered to be a prothrombotic disease [1].

Behçet's disease (MB) is a systemic vasculitis. Its ethiopathogeny is still poorly understood. Blood vessels of any caliber can be affected. This vasculitis can affect the venous and arterial territories. Arterial involvement, such as thrombosis and / or aneurysm, is possible. Lower extremity veins are frequently affected followed by iliac veins

and vena cava. The treatment for behcet's disease is based on immunomodulatory and immunosuppressant drugs, colchicine is one of the most preferred treatment agents of Behçet's disease [2].

Herein, we report the case of covid-19 pneumonia in a patient with behcet's disease and treated with colchicine.

## 2. CASE REPORT

76-year-old patient, type 2 diabetic under insulin therapy, hypertensive, suffering from behcet's disease for 20 years under colchicine. The history of the disease dates back to a week with the onset of dry cough, fever and flu-like syndrome. The patient was admitted for the first time to the emergency room where a thoracic scan was performed, which revealed a frosted glass appearance in favor of a viral attack (figure 1) as well as the rt-PCR for SARS-COV-2 which came back positive. In front of the worsening from the symptomatology, the patient was transferred to intensive care unit.

On admission, the patient was conscious, his blood pressure was 144/75 mmHg and his heart rate was 77 beats / min, his respiratory rate was 30 cycles / min. He was suffering from hypoxemia, his pulse oximetry was 85% in the ambient air which increased to 95% with a high concentration of oxygen. He had dyspnea with a respiratory rate of 38 cycles per minute. His body temperature was 37.5 ° C.

The electrocardiogram showed a regular sinus rhythm at 74 bpm, a fixed PR space of 0.16 seconds, a fine QRS, a QT measured at 400 ms and a QT corrected at 447 ms with no repolarization disturbances.

The biological findings were as follows: CRP at 62.4 mg / L, hemoglobin at 13 g / dl, leukocytes at 10330 /  $\mu$ L, polymorphonuclear neutrophils at 940 /  $\mu$ L, lymphocytes at 150 /  $\mu$ L and platelets at 181000 /  $\mu$ L. Urea at 3.3 mmol/l, creatinemia at 52  $\mu$ mol/l, AST at 22 UI/L, ALT at 39 UI/L, natremia at 134 mmol / l, kaliemia at 4.5 mmol / l, fibrinogen at 5.95 g / L, activated partial thromboplastin time at 23 seconds, the the prothrombin ratio at 92%, troponin at 3  $\mu$ g/L, D-dimers at 1250  $\mu$ g / l.

Arterial gas monitoring shows first time at ambient air, pH at 7.34, PaCO<sub>2</sub> at 52 mmHg, PaO<sub>2</sub> at 61.1mmHg, HCO<sub>3</sub> at 25.5 mEq/L with a PaO<sub>2</sub> / FiO<sub>2</sub> ratio at 119.8.

Transthoracic echocardiography noted a left ventricular of normal size and function with an estimated ejection fraction of 60%, no valve disease, an undilated right ventricle, and no pericardial effusion.

An ophthalmic examination with an eye fundus was performed as part of the pre-therapeutic assessment and did not reveal any abnormalities

The therapeutic management included oxygen therapy, the combination of hydroxychloroquine 200 mg three times a day added to azithromycin 500 mg the first day then 250 mg per day and methylprednisolone at 80 mg per day for 7 days, vitamin C 1 gram per day and zinc 90 mg per day, low molecular weight heparin 0.8UI twice a day and suspension of treatment with colchicine.

Doppler ultrasound of the lower limb was performed, showing no evidence of deep vein thrombosis. a computed tomography angiogram was performed does not reveal any abnormalities.

7 days later, oxygen requirements decreased with progressive resolution of respiratory symptoms. On day 11 the patient left the intensive care unit.

## 3. DISCUSSION

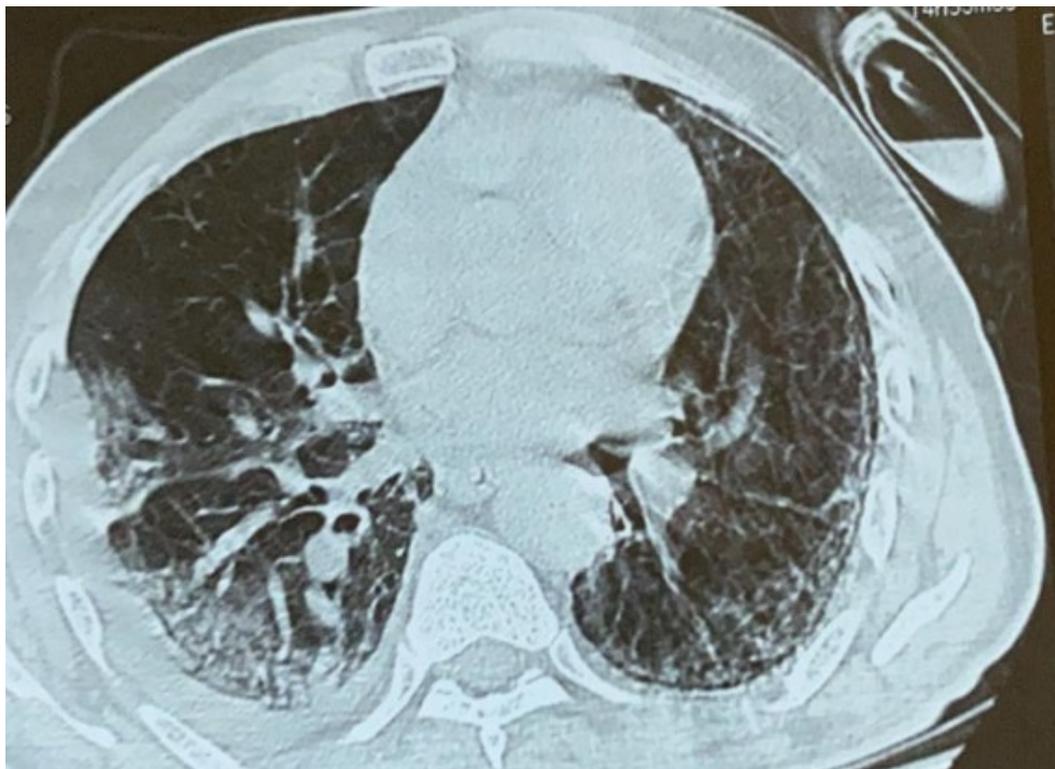
Behçet's syndrome (BS) is a complex disorder of unknown etiology, characterized by recurrent skin mucosa lesions and uveitis. The usual onset is in the third decade. There is relapsing remitting course while the severity abates as the years pass [3]. Vascular involvement affecting both venous and arterial system is almost always associated with intensive thrombosis of inflammatory nature and can occur in up to 40% of cases [4]. Lower extremity veins are frequently affected followed by iliac veins and vena cava. Central nervous system (CNS) and joints may also be involved. Immunosuppressive agents along with colchicine are the mainstay of treatment [5]. Very few controlled and randomized studies have tackled its treatment. Therapy, therefore, depends on clinical manifestations and should be personalized.

The association "Behçet's disease – Covid19" and its therapeutic care has rarely been cited.

Hydroxychloroquine is an antimalarial molecule with anti-inflammatory action, and has been used in treating many auto immune diseases such as Behçet's disease in the eighties [6]. However, its retinal toxicity has been proven

in numerous studies, making its prescription harder for Behcet's patients [7]. The hydroxychloroquine is also recommended for treating COVID-19 in Behcet patients after excluding an ocular lesion [8], [9].

Colchicine is one of the most preferred treatment agents for Behcet's disease, and some authors suggest that colchicine has a beneficial effect in patients with COVID-19 [10], but given the lack of absolute information on the positive effects of colchicine on patients with COVID-19 and for fear of the potential molecular interactions between colchicine and hydroxychloroquine which could lead to neuromuscular toxicity [11]. we recommended discontinuing colchicine treatment in our patient and using the combination hydroxychloroquine and azithromycin.



**Figure 1** : Axial section of the computed tomography scan with lung parenchyma window showing a frosted glass appearance.

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#### **CONFLICT OF INTEREST**

The author have declared that no competing interests exist.

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None.

#### **AUTHORS' CONTRIBUTION**

All the authors contributed equally in drafting of the manuscript. All the authors read and agreed to the final manuscript.

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