

Case report, COVID-19 related vasculitis

COVID-19 ilişkili vaskulit olgu sunumu

İbrahim Karaduman

Department of Internal Medicine, Faculty of Medicine, Cumhuriyet University, Sivas, Turkey

Corresponding author: İbrahim Karaduman, MD, Department of Internal Medicine, Faculty of Medicine, Cumhuriyet University, Sivas, Turkey

E-mail: i.karaduman@cumhuriyet.edu.tr


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SUMMARY

This disease, which is called COVID-19 disease due to the SARS COV2 virus, which emerged as a result of the mutation of the coronavirus in China in 2019, and caused significant morbidity and mortality all over the world due to the pandemic it created, has become the world's most important health problem. COVID-19 clinic emerges in a wide spectrum from mild viral infection to severe respiratory failure. COVID-19 is thought to be a syndrome that involves multiple organs and systems in various ways, especially endothelial damage. With this case, we wanted to emphasize that this virus is not only isolated in the respiratory system and should be kept in mind in today's conditions among the rare causes of vasculitis.

Keywords: COVID-19, vasculitis, fever

 İbrahim Karaduman

ORCID IDs of the authors:
İ.K. 0000-0003-4639-7464

ÖZET

2019 yılında Çin'de koronavirüsün mutasyona uğraması sonucu ortaya çıkan SARS COV2 virüsü nedeniyle COVID-19 hastalığı denilen ve yarattığı pandemi nedeniyle tüm dünyada önemli morbidite ve mortaliteye neden olan bu hastalık dünyanın en önemli sağlık sorunu haline gelmiştir. COVID-19 kliniği hafif viral enfeksiyonundan ağır solunum yetmezliğine bağlı çok geniş bir spektrumda karşımıza çıkmaktadır. COVID-19' un başta endotel hasarı olmak üzere çeşitli yollarla birden çok organı ve sistemi tutan bir sendrom olduğu düşünülmektedir. Biz de bu vaka ile COVID-19 ilişkili vaskülit vaka örneği ile bu virüsün sadece solunum sisteminde izole olmadığı ve nadir vaskülit nedenleri arasında günümüz şartlarında akılda tutulması gerektiğini vurgulamak istedik.

Anahtar sözcükler: COVID-19, vaskülit, ateş

INTRODUCTION

COVID-19 is a disease caused by SARS COV2, a member of the corona virus family, which is pathogenic for humans and animals ¹. After emerging with pneumonia cases in Wuhan, China at the end of 2019, it spread all over the world and was evaluated as a pandemic ². It was understood that COVID-19 does not only cause pneumonia, but is a syndrome that involves multiple organs and systems in various ways, especially endothelial damage ³.

Vasculitis is a pathological process that develops as a result of the activation of inflammatory leukocytes in the vascular wall and progresses with

local and/or systemic organ involvement depending on the involved vessel. Due to vascular involvement; bleeding, thrombosis, stenosis, aneurysm, and rupture may be seen. There are studies showing that it has adverse cardiac effects ⁴. It causes symptoms in target organs due to these reasons ⁵.

Vasculitis can be due to primary (idiopathic) and secondary causes. In this case report, we will talk about the causes of vasculitis secondary to infection, and a vasculitis clinic associated with COVID-19, which is a popular viral infection today.

CASE

A 55-year-old male patient with known diabetes mellitus (DM) and benign prostatic hyperplasia (BPH) came to the internal medicine outpatient clinic with complaints of weakness, fatigue, head and neck pain that had lasted for the last 10 days, common joint pain and night sweats. On physical examination, the patient who had no pathological finding so ther than 38 degrees fever and bilateral axillary lymphadenopathy, whose laboratory parameters had leukocyte: 14100, 70% neutrophils, sedimentation: 115, crp: 330, was admitted to the internal medicine service to investigate the etiology of acute phase reactant height. Blood culture, urine culture, tumor markers, ANA, Anti-ds DNA, p-ANCA, c-ANCA, peripheral smear, brucella rose-bengaland Wright test, viral respiratory panel and COVID-19 PCR were sent from the patient.

The patient's tumor markers were within normal limits and there was no growth in the blood and urine culture. ANA negative (-), c-ANCA negative, p-ANCA negative, ANA profile negative, complement c3 negative, c4 negative, Rheumatoid Factor negative, Anti-CCP negative, PPD negative, brucella negative, respiratory panel and COVID-19 PCR negative In the patient who had monocytosis and spherocytosis in the peripheralsmear, superficial ultrasonography showed fusiform lymphadenopathy with 36x13mm echogenichilus on the right in both axillary regions. Rheumatology and hematology consultations were requested from the patient. PET-CT was performed to the patient with pre-diagnoses of lymphoma and vasculitis. Increased 18f-fdg uptake identified in the femoral and popliteal arteries region in the bilateral lower extremity in PET-CT was evaluated as vasculitis in theforeground (Figure 1).

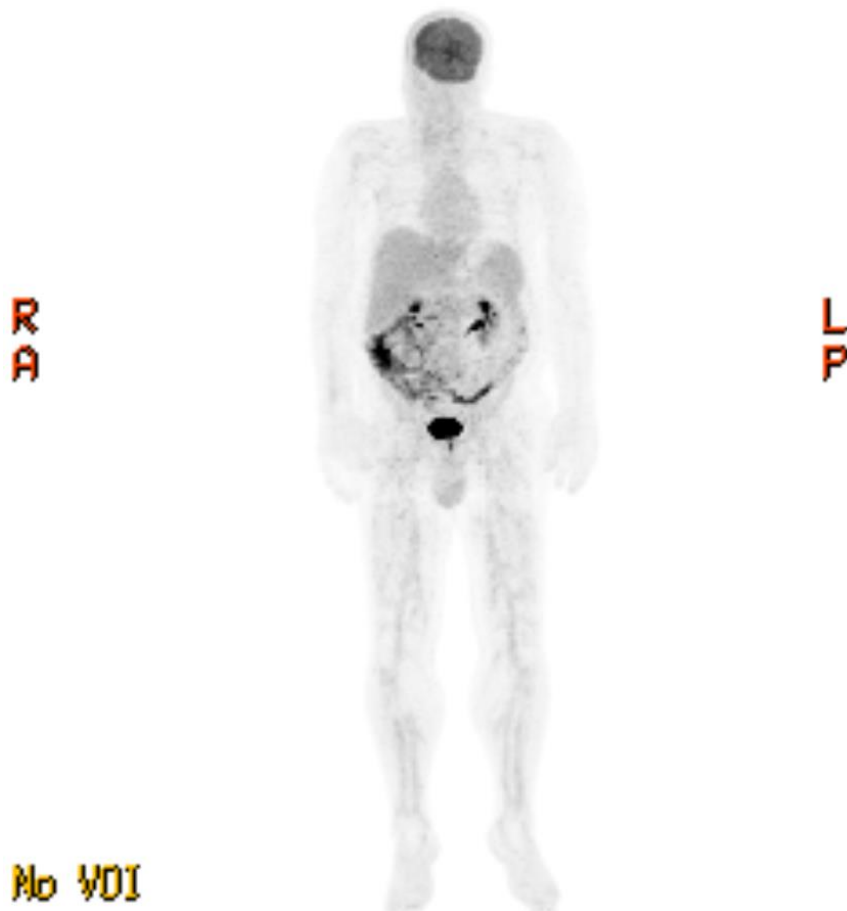


Figure 1: PET-CT image of vascular involvement in the femoral artery and distal arteries after COVID-19 infection.

With the pre-diagnosis of vasculitis, 1 g pulse steroid treatment was planned for 3 days. On these condday of thetreatment, the patient's fever

regressed, the CRP value decreased to 110, and then the steroid dose was reduced to 100 mg. When the patient's complaints completely regressed with

prednol 16 mg, he was excluded. When the patient came for control, the leukocyte count was: 17100, 90% neutrophils, CRP: 4 sedimentation decreased to 43, and all complaints of the patient who applied were completely resolved.

DISCUSSION

Interms of the relationship between COVID-19 and vasculitis, there are similar limited number of publications in the literature, and 3 different reasons have been suggested in the etiopathogenesis of vasculitis. These;

- 1) Inflammatory mediator targeting the endothelial cell
- 2) Endothelial damage caused by histone proteins
- 3) Endothelial damage caused by neutrophil activation ⁶.

As a result of thromboinflammatory processes induced by theafore mentioned ways, vascular inflammation and thrombus that can involve all types of vessels, including arteries, veins and capillary vessels of any diameter, occurs in patients, and as a result, systemic vasculitis can be seen ⁷.

CONCLUSION

In today's conditions where COVID-19 disease affects the whole world and pandemic conditions are considered, COVID-19 should be kept in mind in the etiology of vasculitis.

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