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Authors:
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SARS-CoV-2 and splenic infarction: a rarely described thromboembolic presentation

Daniel Alvarenga Fernandes[1] http://orcid.org/0000-0001-8138-1316

José de Arimatéia Batista Araújo Filho[2, 3] http://orcid.org/0000-0002-8627-366

Amélia Ribeiro de Jesus[4] https://orcid.org/0000-0001-8903-479X

1- Department of Radiology, School of Medical Sciences - University of Campinas - UNICAMP, Campinas, São Paulo, Brazil.
2- Department of Radiology, Sírio-Libanês Hospital, São Paulo, SP, Brazil.
3- Memorial Sloan-Kettering Cancer Center, New York, NY, USA.
4- Immunology Investigative Institute. Division of Immunology and Molecular Biology Laboratory, University Hospital/ Department of Medicine, Federal University of Sergipe- UFS, Aracaju, SE, Brazil.

Correspondence: daniel_alvafer@yahoo.com.br/ daniel_alvafer@icloud.com

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Dear Editor,

We report a case of a COVID-19 patient presenting fever, headache and dyspnea evolving with severe acute abdominal pain; contrasted computed tomography (CT) scan diagnosed splenic infarction. We emphasize the importance of seeking the identification of complications of SARS-CoV-2 infection, notably thromboembolic events, with the potential to reduce the morbidity and mortality of the disease. Studies on radiological aspects involving the spleen and splenic infarctions associated with COVID-19 are scarce.

CLINICAL CASE

42-year-old male patient, controlled hypertension, presenting fever, headache and dyspnea for five days, evolving after one day with severe pain in the left

hypochondrium and flank, tachycardia, tachypnea, lymphopenia and 1328 ng / mL D-dimer. RT-PCR for SARS-CoV-2 positive. Chest and abdomen CT showed bilateral pulmonary opacities, splenic arterial and venous thrombi and cuneiform splenic hypo attenuations compatible with areas of infarction (Figure 1). The patient received therapy following the current protocol, including enoxaparin 1 mg / kg for 12/12 hours. He had a good clinical evolution and was discharged from the hospital after 5 days.

DISCUSSION

There is a report of 2 cases in Brazil[1] of patients with COVID-19 presenting splenic and other organ thrombosis and 1 report in the United States[2], in which splenic thrombosis involved more than 50% of the parenchyma, and the diagnosis and treatment of thrombosis with anticoagulation contributed substantially to clinical improvement[2]. Another case report in Nepal described a 35-year-old patient who complicated with hemoperitoneum due to spleen thrombosis, in which case the diagnosis was also essential for therapeutic success[3].

In the current epidemiological context, physicians must be aware of thromboembolic events as a complication of COVID-19 [4, 5]. In patients with abdominal pain, this knowledge and targeted assessment can provide an earlier diagnosis and therapy for these events with potential reduction in morbidity and mortality.

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Fig 1. Computed Tomography. **a -** axial section of the thorax showing bilateral multifocal ground-glass parenchymal opacities and sparse consolidative opacities in a PCR-positive SARS-CoV-2 patient; **b-** arterial phase of the abdomen, Maximum Intensity Projection (MIP) reformatting - splenic cuneiform hypodense areas compatible with infarctions (dashed white arrow)- estimated at 50% of the parenchyma- and filling failures in arterial subsegmental branches compatible with

thrombi (white arrow); **c -** (axial, portal phase); **d -** (coronal, portal phase) - splenic infarction areas (dashed white arrows) and splenic vein thrombosis (black arrow).