Case Report

Aortic thrombus with multiple visceral and extremity emboli post Covid-19 with lung cancer

Abstract

The aim of the present study is to present a case report of a patient who developed aortic thrombosis with multiple embolizations to kidneys, spleen, superior mesenteric and extremities and a lung tumor mass. A 56-year-old patient, she reports that 45 days ago she had Covid-19 and no need for hospitalization. Now, she presented with abdominal pain and was hospitalized and underwent an angio tomography of the chest, abdomen, aortic thrombosis and emboli in several viscera and extremities. She was medically treated for visceral emboli, but one week later she had an extremity embolism that was treated with an embolectomy. And a lung biopsy revealed neoplasia. Post-Covid 19 aortic thrombus can result in multiple visceral and extremity embolic events, associated with lung cancer, an incidental finding can occur and serves as a warning to these patients.

Keywords: Aortic thrombus, multiple visceral, emboli, extremity, Covid 19, lung cancer

Volume 7 Issue 3 - 2022

Daniel Nobile,[1] Beatriz Camelini Moreno,[1] Amanda Fernandes Vidal da Silva,[1] Vinicius Menin Brandi,[1] Jose Maria Pereira de Godoy[2]

[1]Resident doctor of Vascular Surgery in Medicine School in Sao Jose do Rio Preto (FAMERP), Brazil

[2]Professor Adjunct, Cardiovascular Surgery Department in Medicine School in Sao Jose do Rio Preto (FAMERP); Professor of the Undergraduate Medicine Course and the Stricto Sensu Postgraduate Course (FAMERP) and CNPq (National Council for Research and Development), Brazil

Correspondence: Jose Maria Pereira de Godoy, Rua Floriano Peixoto 2950, São Jose do Rio Preto-SP, Brazil, CEP: 15020010, Email godoyjmp@gmail.com

Received: September 21, 2022 | **Published:** September 29, 2022

Introduction

Covid-19 is an infectious condition whose most serious complication is the involvement of the vascular system where arterial and venous thrombotic events can interfere with mortality, as well as viral variants.[1] Severe cases of arterial thrombosis, of the abdominal and thoracic aorta, have been reported associated with embolic events to the abdominal viscera and extremities has been reported.[2]

The coagulopathy responsible for venous and arterial thrombosis is well established from Covid-19. Thus, patients with covid19 should be monitored more closely for thromboembolic complications.[3] The presence of thrombi in the aortoiliac arterial system appears to be an indicator of poor prognosis for patients with active SARS-CoV-2 infections. Medical management of patients with asymptomatic aortoiliac thrombi may be considered, but further studies should be considered.[4] One of the options is isolated anticoagulants that may be effective against aortic thrombi in patients with Covid-19 and follow-up CT scan may allow for the early discontinuation of anticoagulant therapy to confirm thrombus disappearance.[5]

A review study shows that ninety-four percent of asymptomatic patients with aortic thrombus were medically treated. Three (23.1%) deaths occurred in the asymptomatic cohort; 14 (36.8%) deaths occurred in the symptomatic cohort. In-hospital mortality was 33.3% overall and 43.8% for patients with thrombi involving more than one iliac aorta segment.[6] The aim of the present study is to present a case report of a patient who developed aortic thrombosis with multiple embolization's to kidneys, spleen, upper mesenteric and extremities and a lung tumor mass.

Case report

A 56-year-old obese patient with diabetes mellitus, epilepsy and a history of smoking. She reports that 45 days ago she presented Covid-19 and does not need hospitalization. During this hospitalization, she reports that she began to have abdominal pain and laboratory evaluation revealed significant leukocytosis (36,000) and elevated C-reactive protein (CRP). An angio tomography of the chest and abdomen was performed, which revealed a hypoattenuating formation in the aortic arch measuring 2.7 cm, in addition to hypodense and hypo vascular areas in the splenic and renal parenchyma, upper lobe, lung, with 7 cm in its largest diameter and occlusion of the mesenteric artery. top, as shown in the figures. 1 to 4. Heparinization was started with subsequent improvement in pain. She underwent transbronchial biopsy of the right lung, whose anatomopathological examination revealed invasive squamous cell carcinoma.

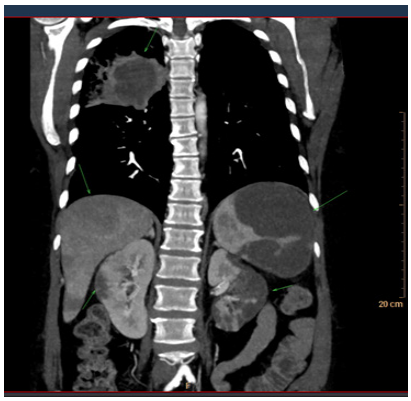

Figure 1 Showing pulmonary mass and visceral ischemia of the kidneys and spleen as indicated by the arrows.

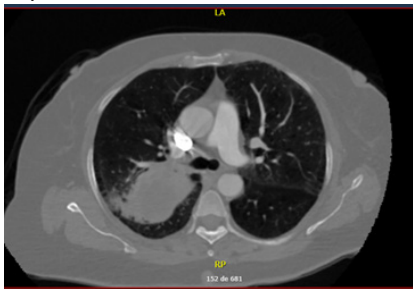

Figure 2 Showing a lungmass.

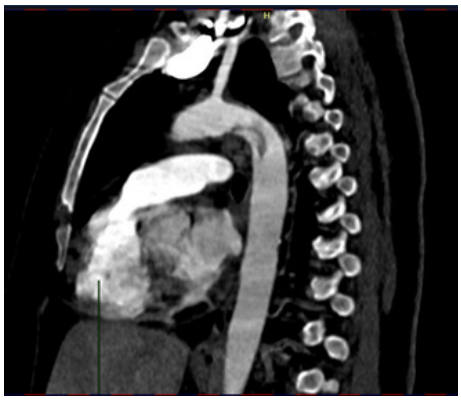

Figure 3 Showing a thrombus in the aorta.

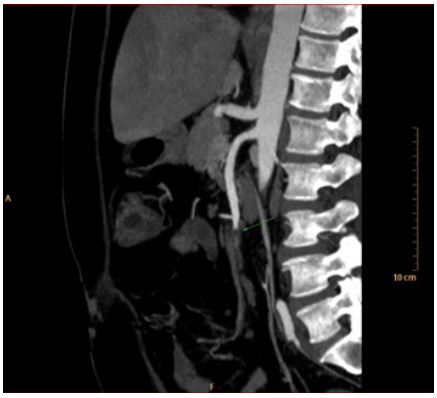

Figure 4 Showing occlusion in the superior mesenteric artery.

Nine days after admission, the patient presented acute arterial occlusion in the left upper limb, with complete resolution after arterial embolectomy. Full anticoagulation with coumarin was chosen and the transition was performed with unfractionated heparin.

She was discharged from hospital with improvement of abdominal pain, left upper limb compensation and full anticoagulation with warfarin.

Discussion

The present study reports a case of thoracic aortic thrombosis that embolized to several abdominal viscera and extremity. An Angio tomography evaluation revealed a lung mass that, on biopsy, showed to be a lung neoplasm. The literature reports some cases of aortic thrombus,[5,6] but this is the first one associated with lung cancer, as an examination finding.

The management in these cases has no consensus in the literature, but anticoagulation, surgical and endovascular treatment has been reported 5. In this patient, the initial management, with visceral thrombi, was clinical with anticoagulation, but she developed an embolism to the extremities that was treated afterwards. The patient was then referred to the oncologist for cancer treatment. At the institution, more than 8000 patients were treated hospitalized with covid, more than 4000 in intensive care units and about 500 patients with deep vein thrombosis and about 25 cases of distal arterial thrombosis 1 were performed. in three patients, but many may have died without time to make the diagnosis.

The literature has been based on case reports and a review study shows that the treatment options were clinical and some cases were surgical, however endovascular is an option to be considered. The clinical picture associated with the thrombotic event is fundamental in predicting prognosis, where often, the clinical severity does not allow the main therapeutic approach to be carried out. Lung neoplasm associated with aortic thrombotic and embolic events has not been observed in the literature, therefore, another aggravating factor to be analyzed.

Conclusion

Post-Covid 19 aortic thrombus can result in multiple visceral and extremity embolic events, associated with lung cancer, an incidental finding can occur and serves as a warning to these patients.

Conflict Interest and financial support

The authors declared no have financial support and conflict interest.

Author Contributions

Design and conduct of the study: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Collection data: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Management: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Analysis and interpretation of the data: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Preparation: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Review: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

Approval of the manuscript: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM,

Godoy JMP.

Decision to submit the manuscript for publication: Nobile D, Camelini Moreno B, Da Silva AFV, Brandi VM, Godoy JMP

All authors agree the manuscript.

References

1. Pereira de Godoy JM, Da Silva Russeff GJ, Hungaro Cunha C, et al. Mortality and Change in the Prevalence of Deep Vein Thrombosis Associated With SARS-CoV-2 P.1 Variant. *Cureus.* 2022;14(7):e26668.
2. Brem FL, Tayef TAA, Rasras H, et al. Concomitant renal and splenic infarctions in a COVID-19-patient with a catastrophic thrombotic syndrome. *Radiol Case Rep*. 2022;17(10):4030-4033.
3. El Mesnaoui R, Nikiema S, Massimbo D, El Mesnaoui A. An acute lower limb ischemia revealing a covid-19 infection: A case report. *Ann Med Surg (Lond)*. 2022;81:104445.
4. Tohmasi S, Kabutey NK, Maithel S, et al. Management of acute aortoiliac arterial thrombosis in patients with the novel coronavirus disease 2019: A case series and systematic review of the literature. *Ann Vasc Surg Brief Rep Innov*. 2022;2(3):100105.
5. Miyawaki N, Kinoshita M, Furukawa Y. Successful treatment of ascending aortic thrombosis associated with coronavirus disease 2019: Case report. *J Cardiol Cases*. 2022.
6. Tohmasi S, Kabutey NK, Maithel S, et al. Management of acute aortoiliac arterial thrombosis in patients with the novel coronavirus disease 2019: A case series and systematic review of the literature. *Ann Vasc Surg Brief Rep Innov*. 2022 Sep;2(3):100105.