Revista da Sociedade Brasileira de Medicina Tropical
Journal of the Brazilian Society of Tropical Medicine
Vol.:53:e20200307: 2020
doi: 10.1590/0037-8682-0307-2020

Images in Infectious Diseases

Cerebral Infarction in an Elderly Patient with Coronavirus Disease

***Handan Alay*[1], *Fatma Kesmez Can*[1] *and Elif Gözgeç*[2]**

[1]. Ataturk University, Faculty of Medicine, Department of Infectious Diseases and Clinical Microbiology, Erzurum, Turkey.
[2]. Ataturk University, Faculty of Medicine, Department of Radiology, Erzurum, Turkey.

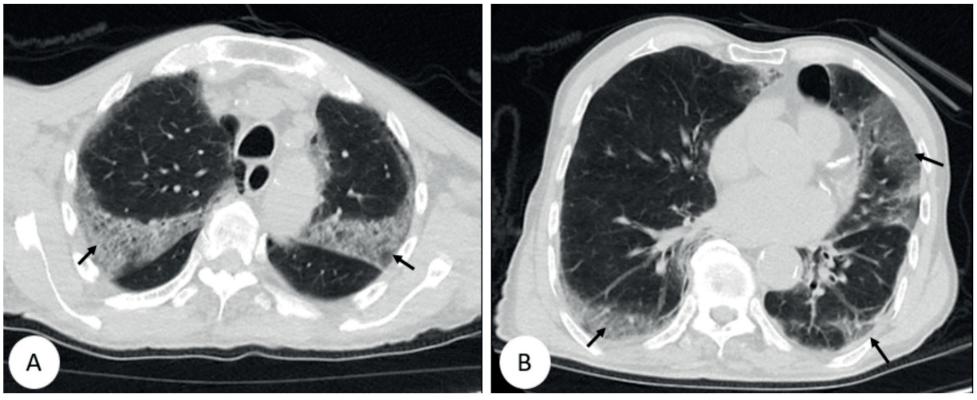

FIGURE 1: Axial section non-contrast computed tomography showing widespread ground-glass opacities and crazy paving patterns in the bilateral lungs (arrows).

An 82-year-old man presented with cough and weakness and admitted to our clinic. His body temperature was 38^0 C, heart rate 93 beats/min, respiratory rate 22 breaths/min, blood pressure 100/60 mmHg, and oxygen saturation 86% (oxygen mask 5 L/min). His blood leukocyte, neutrophil, lymphocyte, D-dimer, fibrinogen, c-reactive protein, ferritin, and procalcitonin levels were 8.56 x 10^3/μL, 7.4x10^3/μL, 0.62x 10^3/μL, 2304 ng/mL, 638 mg/dL, 183 mg/L, 720 ng/mL, and 0.2 ng/mL, respectively. Computed tomography of the thorax revealed a suspected diagnosis of coronavirus disease (COVID-19) (**Figure 1**). Antiviral (Favipavir 2 x 1600 mg loading, 2 x 600 mg maintenance) and antibacterial (levofloxacin 500 mg/day) therapies were initiated. The patient's oronasopharyngal swab specimen was positive for severe acute respiratory syndrome coronavirus 2 nucleic acid. Weakness and loss of muscle tone developed in the left arm on day 3 of treatment. Brain diffusion magnetic resonance imaging showed multiple advanced stage infarctions (**Figure 2**). Enoxaparin 0.5 mg/kg once every 12 hours and acetylsalicylic acid 100 mg 1x1 were added to treatment. The laboratory parameters improved. The patient was discharged on day 20.

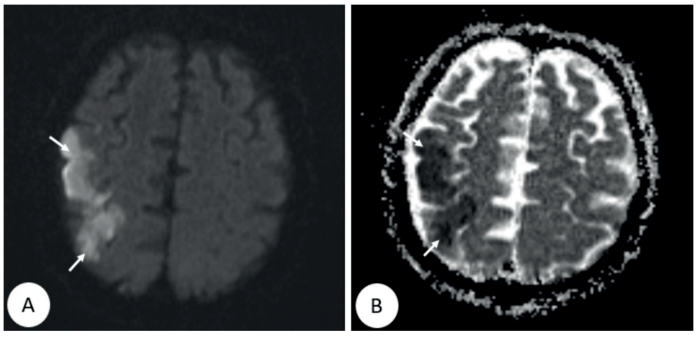

FIGURE 2: Brain diffusion magnetic resonance imaging showing areas of restricted diffusion compatible with hyperintense infarction in the right frontal lobe **(A)**, and hypointense infarction on apparent diffusion coefficient mapping **(B)** (arrows).

Corresponding Author: Dr. Handan Alay.
e-mail: alayhandan@gmail.com
0000-0002-4406-014X
Received 14 May 2020
Accepted 25 May 2020

COVID-19 can result in cerebral infarction and death in the elderly[1, 2]. Anticoagulants are useful in elderly patients with high D-dimer due to the risk of coagulation dysfunction and cerebral infarction[3]. Thromboembolic complications must be considered in COVID-19 patients with known risk factors and abnormal laboratory findings.

AUTHORS' CONTRIBUTION

HA: Conception and design of the study, analysis and interpretation of data, acquisition of data, writing, supervision, and final approval of the version to be submitted. **FKC:** Conception and design of the study, analysis, and interpretation of data, and supervision. **EG:** Conception and design of the study, analysis, and interpretation of data, and supervision.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

REFERENCES

1. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study[J]. Lancet, 2020, 395(10223): 507-13.
2. He J, Cheng G, Xu W, Zhang L, Zeng Z. Diagnosis and treatment of an elderly patient with secondary cerebral infarction caused by COVID-19. Nan Fang Yi Ke Da Xue Xue Bao. 2020 Mar 30;40(3):351-352.
3. Kollias A, Kyriakoulis KG, Dimakakos E, Poulakau G, Stergiou GS, Syrigos K. Thromboembolic risk and anticoagulant therapy in COVID-19 patients: emerging evidence and call for action. Br J Haematol. 2020 Apr 18. doi: 10.1111/bjh.16727. [Epub ahead of print]