IMAGING IN INTENSIVE CARE MEDICINE

Fatal cerebral venous sinus thrombosis after COVID-19 vaccination

Matthieu Jamme^{1,2*} , Elie Mosnino¹, Jan Hayon¹ and Guillaume Franchineau^{1,3}

© 2021 Springer-Verlag GmbH Germany, part of Springer Nature

A 69-year-old woman with arterial hypertension treated daily by hydrochlorothiazide and angiotensin receptor antagonist received a first dose of Oxford–AstraZeneca vaccine.

Eleven days after the vaccination, the patient developed headache associated with behavioral symptoms. At day 13, her daughter found her unconscious. Physical examination revealed a coma Glasgow 4/15, right mydriasis,

Fig. 1 Cerebral venous thrombosis with bilateral frontal intraparenchymatous hemorrhage. **A** T2 FLAIR sequencing revealed bilateral left (80 × 53 mm) and right (56 × 23 mm) intra parenchymatous frontal hemorrhage. **B** Venous phase contrast MRI study showed an absence of venous blood flow in sigmoid and superior sagittal sinus

*Correspondence: matthieu.jamme@ght-yvelinesnord.fr

¹ Service de Réanimation polyvalente, Centre hospitalier intercommunal de Poissy Saint Germain en Laye (CHIPS), 10 rue du champ Gaillard, 78300 Poissy, France

Full author information is available at the end of the article

bilateral Babinski reflex without hemodynamic instability or respiratory failure. She was intubated and transferred in our intensive care unit.

Immediate CT scan followed by MRI highlighted a severe bilateral frontal hemorrhage with brain herniation complicating a cerebral venous thrombosis of the left internal jugular vein, sigmoid sinus and superior sagittal sinus (Fig. 1). Moreover, thoracic CT scan showed concomitant segmentary pulmonary embolism. Blood analysis at admission revealed an isolated thrombopenia measured at 18G/L with positive anti-PF4 antibodies.

Evolution was dramatically poor in the next few hours with brain death, leading to an organ donation procedure.

Author details

¹ Service de Réanimation polyvalente, Centre hospitalier intercommunal de Poissy Saint Germain en Laye (CHIPS), 10 rue du champ Gaillard, 78300 Poissy, France. ² INSERM U1018, Centre de recherche en épidémiologie et santé des

populations (CESP), Equipe "Rein et Cœur", Université Paris Saclay, 16 avenue Paul Vaillant Couturier, 94800 Villejuif, France. ³ INSERMUMRS_1166-iCAN, Institute of Cardiometabolism and Nutrition, Sorbonne Universités, UPMC Univ Paris 06, 75651 Paris Cedex 13, France.

Author contributions

MJ, EM, JH and GF wrote the manuscript.

Declarations

Conflicts of interest

The authors have no conflict of interest to declare.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 22 April 2021 Accepted: 27 April 2021

Published online: 13 May 2021