



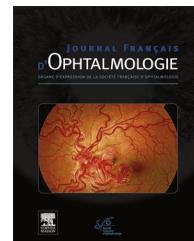
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Disponible en ligne sur
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com



LETTER TO THE EDITOR

Correspondence on "Acute corneal endothelial graft rejection following COVID-19 vaccination"*

Commentaires sur l'article « Rejet aigu de la greffe endothéliale cornéenne après vaccination anti-COVID-19 »

Dear Editor, we would like to share ideas on "Acute corneal endothelial graft rejection following COVID-19 vaccination [1]." Crnej et al. concluded that SARS-CoV-2 vaccination might disrupt immune regulation enough to cause cornea transplant rejection [1]. We agree that there is an abnormal immunological process in the present. However, whether it is only a co-incidence or not requires further investigation. After a vaccination, a hyperstimulation of immune system might occur and it might result in a graft loss. The graft loss after vaccination is also reported in other vaccination such as yellow fever vaccination [2]. For COVID-19 vaccination, a response to vaccine can result in a rapid increasing of plasma viscosity [3]. Regarding this hypothesis, when COVID-19 vaccine is given, the immune response will occur and there is a rapid change of viscosity in circulation due to increased immune elements [3]. In some vaccine recipients, the hyperviscosity might occur and can lead to clinical problems [3]. Regarding graft rejection, high plasma viscosity is associated with cellular graft loss [4]. In animal transplantation model study, a high viscosity condition can block or a proper perfusion to graft area and decreased graft survival chance is a result [5].

Disclosure of interest

The authors declare that they have no competing interest.

References

- [1] Crnej A, Khoueir Z, Cherfan G, Saad A. Acute corneal endothelial graft rejection following COVID-19 vaccination. *J Fr Ophtalmol* 2021;44:e445–7.
- [2] Vignapiano R, Vicchio L, Favuzza E, Cennamo M, Menecucci R. Corneal graft rejection after yellow fever vaccine: a case report. *Ocul Immunol Inflamm* 2021;1–4, <http://dx.doi.org/10.1080/09273948.2020.1870146> [Online ahead of print].
- [3] Joob B, Wiwanitkit V. Viscosity after COVID-19 vaccination, hyperviscosity and previous COVID-19. *Clin Appl Thromb Hemost* 2021;27 [10760296211020833].
- [4] Lee SW, Jo JY, Kim WJ, Choi DK, Choi IC. Patient and haemodynamic factors affecting intraoperative graft flow during coronary artery bypass grafting: an observational pilot study. *Sci Rep* 2020;10:12968.
- [5] Tojimbara T, Wicomb WN, Garcia-Kennedy R, Burns W, Hayashi M, Collins G, et al. Liver transplantation from non-heart beating donors in rats: influence of viscosity and temperature of initial flushing solutions on graft function. *Liver Transpl Surg* 1997;3:39–45.

R. Mungmumpuntipantip^{a,*}, V. Wiwanitkit^b

^a Private Academic Consultant, Bangkok, Thailand

^b Dr DY Patil University, Pune, India

* Corresponding author.

E-mail address: [\(R. Mungmumpuntipantip\)](mailto:rujittika@gmail.com)

<https://doi.org/10.1016/j.jfo.2021.10.003>

0181-5512/© 2021 Elsevier Masson SAS. All rights reserved.

COVID-19, Coronavirus disease 2019.

* Refers to: Crnej A, Khoueir Z, Cherfan G, Saad A. Acute corneal endothelial graft rejection following COVID-19 vaccination. *J Fr Ophtalmol* 2021 Oct;44(8):e445–e447.