

## 2019-nCoV transmission through the ocular surface must not be ignored

Chaolin Huang and colleagues<sup>1</sup> reported the epidemiology, symptoms, and treatment of patients infected by the 2019 novel coronavirus (2019-nCoV) in Wuhan, China. As ophthalmologists, we believe that transmission of 2019-nCoV through the eyes was ignored.

On Jan 22, Guangfa Wang, a member of the national expert panel on pneumonia, reported that he was infected by 2019-nCoV during the inspection in Wuhan.<sup>2</sup> He wore an N95 mask but did not wear anything to protect his eyes. Several days before the onset of pneumonia, Wang complained of redness of the eyes. Unprotected exposure of the eyes to 2019-nCoV in the Wuhan Fever Clinic might have allowed the virus to infect the body.<sup>2</sup>

Infectious droplets and body fluids can easily contaminate the human conjunctival epithelium.<sup>3</sup> Respiratory viruses are capable of inducing ocular complications in infected patients, which then leads to respiratory infection.<sup>4</sup> Severe acute respiratory syndrome coronavirus (SARS-CoV) is predominantly transmitted through direct or indirect contact with mucous membranes in the eyes, mouth, or nose.<sup>5</sup> The fact that exposed mucous membranes and unprotected eyes increased the risk of SARS-CoV transmission<sup>4</sup> suggests that exposure of unprotected eyes to 2019-nCoV could cause acute respiratory infection.

Thus, Huang and colleagues<sup>1</sup> should have analysed conjunctival scrapings from both confirmed and suspected 2019-nCoV cases during the onset of symptoms. The respiratory tract is probably not the only transmission route for 2019-nCoV, and all ophthalmologists examining suspected cases should wear protective eyewear.

We declare no competing interests.

\*Cheng-wei Lu, Xiu-fen Liu,  
Zhi-fang Jia  
lcwchina800@sina.com

Department of Ophthalmology (C-WL, X-FL) and  
Division of Clinical Research (Z-FJ), First Hospital of  
Jilin University, Changchun 130021, China

- 1 Huang C, Wang YM, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020; published online Jan 24. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5).
- 2 Dai X. Peking University Hospital Wang Guangfa disclosed treatment status on Weibo and suspected infection without wearing goggles. Jan 22, 2020. <http://www.bjnews.com.cn/news/2020/01/23/678189.html> (accessed Jan 24, 2020).
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