

Hong Kong study links dry eye disease with COVID-19

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Post-COVID-19 patients have a greater risk of dry-eye-related ocular surface manifestations



Some COVID-19 patients develop various and persistent symptoms weeks and months after completely recovering from the infection. Investigators from the Department of Ophthalmology and Visual Sciences of The Chinese University of Hong Kong's (CUHK) Faculty of Medicine (CU Medicine) have found that one in five post-COVID-19 patients have at least one recent-onset symptom related to dry eye disease (DED) such as blurred vision, itching, pain, or burning.

In addition, the study showed that the risk of DED is linked to the severity of COVID-19 infection.

During the study, all participants underwent comprehensive eye examinations including evaluation for meibomian gland dysfunction, the most common cause of DED, and corneal fluorescein staining, an indicator of DED severity. It was found that post-COVID-19 patients had a higher prevalence of dry-eye-related ocular surface manifestation than healthy individuals.

With post-COVID-19 patients who received any form of supplementary oxygen during hospitalisation, the tear break-up time (an indicator of tear evaporation, the average break-up time of a health person is usually over 10 seconds) was 1.6 seconds shorter, implying a higher likelihood of DED when compared to those not requiring oxygen during hospitalisation. One of the reasons for this is that the gas flow from oxygen delivery may increase the evaporation of the tear film.

Image caption- (From left) Dr. Kelvin KL CHONG, principal investigator of the study and Associate Professor; Professor Calvin CP PANG, S.H. Ho Research Professor of Visual Sciences; Professor Clement CY THAM, Department Chairman and S.H. Ho Professor of Ophthalmology and Visual Sciences; and Dr. Kelvin HN WAN, the lead author of the study and Assistant Professor from the Department of Ophthalmology and Visual Sciences, CU Medicine.