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Severe Acute Respiratory Syndrome (SARS) is a newly recognized but highly contagious disease entity that has recently been reported in Asia, North America, and Europe. Within a short period of time, the outbreak afflicted more than 30 countries and became a global health threat. The infectious agent of this "modern plague" was suspected to be caused by a novel coronavirus strain (SARS-CoV), and coronavirus has been previously reported to be associated with retinitis and a breakdown of the blood–retinal barrier in animal studies. The ocular involvements of this novel coronavirus strain, SARS-CoV, and its disease, SARS, in humans were not known.

Methylprednisolone pulse therapy and high-dose oral prednisolone constituted the major part of the treatment regimen for SARS. Prolonged use of a corticosteroid drug is associated with glaucoma, cataract, central serous chorioretinopathy, and papilloedema. There is little information in the literature on the significance of routine ocular monitoring during the acute phase in prescribing pulse or high-dose corticosteroid therapy.

In March 2003, Hong Kong was seriously affected by a massive outbreak of SARS, and we took that opportunity to conduct a prospective observational study to investigate the probable ocular manifestations arising from SARS and the possible short-term complications resulting from the pulse or high-dose corticosteroid therapy. The results are important to physicians and ophthalmologists in determining whether a routine ocular examination should be arranged in suspected cases for diagnosis and in probable or confirmed cases for monitoring of complications.

Patients with the diagnosis of SARS who had been managed in the Prince of Wales Hospital, Hong Kong, were recruited. We only included cases that were probable and therefore fit the case definition issued by the World Health Organization. Cases were excluded if an alternative diagnosis could fully explain their illness. Patients physically unfit for ophthalmic examinations or those who failed to give informed consent were also excluded. The study was approved by the Ethics Committee of the Chinese University of Hong Kong. Relevant medical and ocular histories, including diabetes mellitus, hypertension, glaucoma, high myopia, previous ocular disease, and surgery, were recorded. Patients were assessed with a comprehensive ocular examination including best-corrected visual acuity, intraocular pressure (IOP) by noncontact tonometer (I.N.C.T.) Xpert Noncontact Tonometer Plus; Reichert Ophthalmic Instruments, New York, New York, USA), slit-lamp, and binocular indirect ophthalmoscopy at baseline and at 2 months and 3 months. Use of personal protective equipment recommended by the Infectious Control Unit of the hospital was strictly maintained throughout the examination.

A total of 45 patients (90 eyes) were recruited; 28 (62.2%) were female and 17 were male. Their age ranged from 22 to 74 years (mean, 39 years). Most patients were recruited during the first week (n = 17, 37.8%) or second
The mean ± standard deviation of the IOP at baseline was 14.2 ± 3.6 mm Hg. Two patients had IOP higher than 21.0 mm Hg. One was 21.7 mm Hg, and the other was 23.7 mm Hg. Both had a normal visual field with Humphrey central 24-2 threshold test and had no other glaucomatous features.

Twenty-seven patients (60%) completed the second-month follow-up and 15 patients (33%) completed the third-month follow-up. Only 15 patients (55%) were still on prednisolone by the second month (dosage ranged from 5 to 15 mg), and none required any by the third month. No visual acuity loss, cataract progression, or anterior uveitis was observed. Fundus examinations were unremarkable in all patients, with particular emphasis on any vitritis, retinitis, vaculitis, central serous chorioretinopathy, and changes at the optic disks. For the 2 patients with mildly elevated IOP in both eyes, the IOP was persistent elevated at the same level 2 months after corticosteroid cessation. There was no statistically significant difference between IOP at baseline and month 2 (t test, P = .904; SPSS 10.0 for Windows). At month 3, when no patient was on corticosteroid, the mean IOP was 13.8 ± 2.9 mm Hg. There was only one case with IOP greater than 21.0 mm Hg. This patient had an IOP of 22.0 mm Hg at month 3 and IOP of 21.3 mm Hg at baseline. None of the cases had an IOP rise of at least 2.0 mm Hg compared with the baseline IOP.

Our study did not demonstrate any ocular manifestations resulting from SARS or the novel coronavirus. No significant elevation in IOP or other corticosteroid-related ocular complications was observed in the short-term follow-up. Coronavirus-associated atypical pneumonia is extremely infectious, and the transmission appears to be through direct contact or contact with respiratory droplets in close vicinity to an infected person. Health care workers are particularly at risk for infection, as reflected by the numbers of those involved. Among the total number of 8,422 cases worldwide, 1,725 (20%) were health care workers.2 With the unremarkable ophthalmologic findings of this study, routine ocular screening in patients with SARS for diagnosis or for complications may not be worthwhile.

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Red Contact Lenses for Alleviation of Photophobia in Patients With Cone Disorders

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PURPOSE: To describe the use of red contact lenses to alleviate photophobia in patients with cone disorders.

DESIGN: Retrospective interventional case series.

METHODS: Twenty-three patients with achromatopsia or an acquired cone disorder with complaints of severe photophobia were fit with absorptive red soft contact lenses to alleviate photophobia and improve their ability to use their remaining vision more effectively.

RESULTS: The contact lenses immediately resolved the aversion to light, with dramatic improvement in visual function in all patients (determined by observation of the patient and by patient report). It allowed eight patients to become eligible to drive.

CONCLUSIONS: Red contact lenses successfully alleviate photophobia in patients with cone disorders. (Am J Ophthal 2004;137:774–775. © 2004 by Elsevier Inc. All rights reserved.)

Patients with disorders of the cone photoreceptors often have debilitating photophobia, over and above their decreased visual acuity. This prevents them from optimal visual functioning in the daytime and even in ordinary indoor illumination. Patients often need to wear a baseball cap or visor in addition to light-absorbing glasses and still find it difficult to function. Several investigators have reported improvement in effective vision in cone disorders by using red or grade 3 gray-tinted contact lenses, but these reports have generally been of only one or two