

## IMAGES IN CLINICAL MEDICINE

# PINK EYE – A SYMPTOM OF COVID-19

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A 30-year-old male presented to the Emergency Department for a 3 day history of photophobia, redness and watery discharge from both of his eyes. The patient had no symptoms of fever, cough or dyspnea. His medical history was unremarkable and physical examination was normal. The patient mentioned that he is a dentist and that he wore personal protective equipment when having close contact with patients suffering from stomatological diseases, but on some particular events, he had to take off his protective eye-wear during certain interventions. In this instance, he can't deny a possible contact with an asymptomatic case of COVID-19. The ophthalmology exam (Figure 1) with slit lamp examination described bilateral moderate conjunctival injection, inferior palpebral conjunctival follicles and bilateral watery discharge. Fundus examination disclosed unremarkable results. No subconjunctival haemorrhage or pseudomembranes. Macular ultrastructure or thickness assessed on optical coherence tomography were normal. No lesions on the corneal or anterior chamber. Routine fungal and bacterial cultures were also carried out and provided negative results. Oral and nasopharyngeal swab tests for SARS-CoV-2 were recommended, and came back negative. Nasal swab for influenza was also negative. Considering acute conjunctivitis, it was recommended to him to frequently clean the eyes by washing them with normal saline, to use cold compressions, topical anti-histaminics and frequent application of

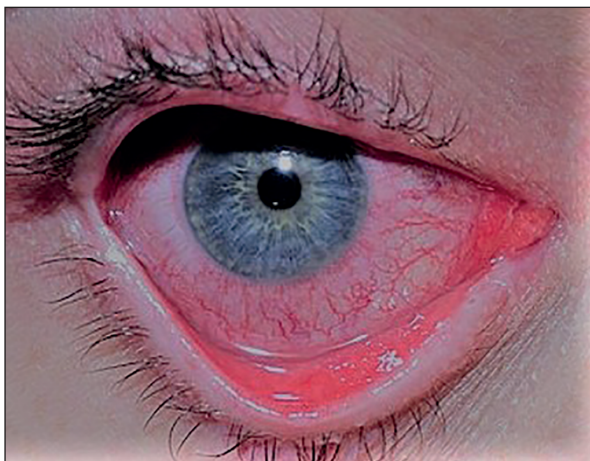
preservative free artificial tears. Also, a topical antibiotic was prescribed for 8 days. The patient was then discharged and recommended home isolation. After 36 hours, he was admitted to the hospital because of added complaints of cough and fever. Routine blood examination: glucose 113 mg/dL, C-reactive protein 13 mg/L, AST 43 U/L, ALT 73 U/L, LDH 313 U/L, monocytes% 14.3%, total cholesterol 223 mg/dL, triglycerides 234 mg/dL, a white blood cell count of  $8.11 \cdot 10^9$ / Liter, neutrophils  $5.76 \cdot 10^9$ / Liter, lymphocytes 42.29%, D-dimers 487 ng/mL, creatine kinase-MB 17 U/L, fibrinogen 443 mg/dL, troponin T 7.11 ng/L, ferritin 179 ng/mL, erythrocyte sedimentation rate of 73 mm/hr, normal thrombin clotting time, creatinine clearance rate normal. Normal electrocardiogram. The computed tomography of the chest showed no signs of viral pneumonia (Figure 2). Samples for testing for SARS-CoV-2 were collected by conjunctival swab technique. The patient had positive RT-PCR results for both eye samples. Routine adenovirus tests returned negative results. To stop the evolution of COVID-19 infection, based on national protocol, the patient received the combination of lopinavir/ ritonavir (7 days), Heparin Sodium 5000 IU injection daily (7 days), cough syrup, hepatoprotectors, antacids, dexamethasone 20 mg tab daily (7 days), Azithromycin 500 mg tab daily (7 days). Other treatment was largely supportive. On day 8 of hospitalisation (day 12 of illness), the patient stated that all ocular symptoms had resolved. After

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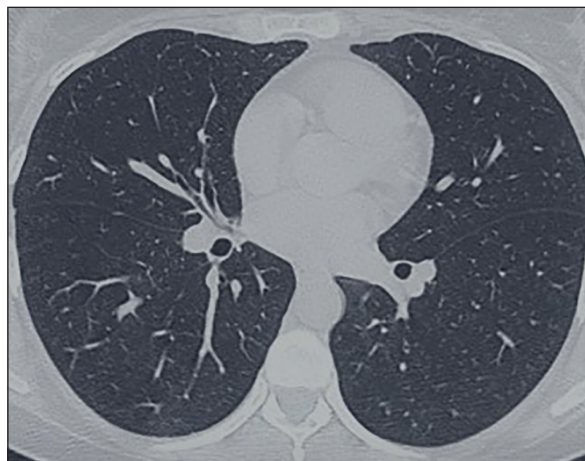
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**Figure 1.** Ophthalmology exam by slit lamp examination – moderate conjunctival injection, inferior palpebral conjunctival follicles and watery discharge.



**Figure 2.** Chest computed tomography (CT) scan – few cylindrical bronchiectases and no signs of viral pneumonia.

hospital discharge, constant negative oropharyngeal swab tests for SARS-CoV-2 but serial conjunctival swab testing have shown that SARS-CoV-2 RNA may persist for up to 16 days, indicating a persistent replication of the 2019-nCoV.

#### Take home messages:

- Hand-eye/ hand-mouth contact may intensify the risk of contracting the virus from the hand<sup>1</sup>.
- In endemic areas, the risk of SARS-CoV-2 transmission during dental procedures is high<sup>2</sup>.
- Ocular symptoms may emerge prior to the onset of respiratory symptoms<sup>3</sup>.
- Whether patients with viral conjunctivitis exist with the virus in their conjunctival sac and whether the virus causes conjunctivitis is yet unknown<sup>4</sup>.

#### Author contributions:

*P.E.M. is responsible for the diagnostic procedures, clinical diagnosis, treatment decisions and also wrote the manuscript. The author has read and agreed to the published version of the manuscript.*

#### Compliance with Ethics Requirements:

*„The author declares no conflict of interest regarding this article. The author declares that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law. Informed consent was obtained from the patient included in the study“.*

#### Acknowledgments:

*None*

#### REFERENCES

1. Muntean PE, Neculcea GC, Pascu I. Case reports on COVID-19 infection. STEF Publishing House, 2020. ISBN 978-606-028-400-0.
2. <https://www.who.int/publications/i/item/who-2019-nCoV-oral-health-2020.1>(accessed on 20 Aug 2020)
3. Hong N, Yu W, Xia J, Shen Y, Yap M, Han W. Evaluation of ocular symptoms and tropism of SARS-CoV-2 in patients confirmed with COVID-19. *Acta Ophthalmol.* 2020; 98: e649-e655.
4. Xia, J, Tong, J, Liu, M, Shen, Y, Guo, D. Evaluation of coronavirus in tears and conjunctival secretions of patients with SARS-CoV-2 infection. *J Med Virol.* 2020; 92: 589- 594.