

Impact of the COVID-19 pandemic on ophthalmic emergency services in a tertiary hospital in Spain

María García Lorente¹ , Francisco Zamorano Martín¹ ,
Marina Rodríguez Calvo de Mora¹ ,
and Carlos Rocha-de-Lossada² 

European Journal of Ophthalmology
1–3

© The Author(s) 2020

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/1120672120958324

journals.sagepub.com/home/ejo



Dear Editor,

We read with interest the article “Ophthalmology and SARS-CoV-2: Blind toward Those Who Fight Blindness?” by Alessandro Arrigo et al.¹ based on the importance of the safety of the clinical environment in Ophthalmology Departments in the fight against the spread of SARS-CoV-2. In our medical specialty, these protocols are of great importance since it is known that ophthalmologists are at high risk of infection given the close proximity between eye doctors and patients during examination and that virus content may be present in ocular discharge and tears.²

During the SARS-CoV-2 outbreak, ocular pathologies have been stratified and prioritized and the volume of healthcare activity and surgical procedures have been reduced. In turn, telemedicine has been a novel alternative to face-to-face consultations. Meanwhile, the ophthalmological emergency services have been available 24/7. With the aim of investigating whether rational use has been made of the ophthalmological emergency departments, we have analyzed all ophthalmological emergencies attended in our center during the lockdown declared in Spain from March to June 2020 and compared them with the ophthalmological emergencies attended in the same period during 2017. The study of the ophthalmological emergencies attended in our center during 2017 has been previously published.³

First, there have been a 65% decrease in the number of emergencies attending our department compared to 2017.³ While 4890 patients were seen during that period in 2017, only 1751 patients were attended during the lockdown. During the first phase of the shutdown (from 15 March 2020 to 3 May 2020), when isolation measures were more strict, a total of 474 patients have been treated with an average of nine patients per day. In the second phase of the shutdown (from 4 May 2020 to 21 June 2020), the number of emergencies attended was tripled, with an average of 26 patients per day (Figure 1).

Regarding the diagnosis, we have observed important differences between both periods of the lockdown

(Figure 2). In the first period, there have been an evident decrease in diagnoses that are not considered urgent, nor severe, such as conjunctivitis, stye, hyposphagma or blepharitis. Instead, the number of patients attending for pathologies both urgent and/or severe as acute glaucoma, globe rupture, retinal tear, chemical burns, and acute diplopia, was maintained. At the same time, there was a reduction in the number of patients consulting for pathologies which can also be considered of a certain urgency such as uveitis, retinal detachments, and macular pathology (exudative macular degeneration and choroidal neovascular membranes). On the other hand, in

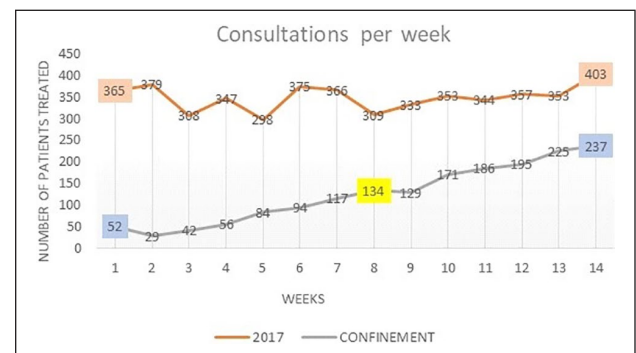


Figure 1. This graph shows the comparison between number of patients treated per week during confinement (lockdown) and during the same period in 2017. The 8 week (highlighted in yellow) marks the beginning of de-escalation (relaxation of strict lockdown measures), note the upward trend in the number of consultations.

¹Regional University Hospital of Malaga, Malaga, Andalucia, Spain

²Clinic Barcelona Hospital Clinic Institute of Ophthalmology, Barcelona, Spain

Corresponding author:

María García Lorente, Regional University Hospital of Malaga, Avenida Carlos Haya, Malaga, Andalucia 29010, Spain.

Email: glorentemaria@gmail.com

| Diagnosis | Lockdown | 2017 | De-escalation | 20172 |
|---|----------|------|---------------|-------|
| Extra-ocular foreign body | 49 | 165 | 131 | 170 |
| Administrative consultation / no eye disease | 26 | 112 | 114 | 126 |
| Blepharitis | 16 | 68 | 91 | 86 |
| Posterior Vitreous Detachment | 40 | 90 | 84 | 83 |
| Superficial punctate keratitis | 7 | 84 | 84 | 22 |
| Corneal / conjunctival erosion | 22 | 86 | 60 | 184 |
| Stye | 14 | 54 | 60 | 100 |
| Inespecific conjunctivitis | 21 | 146 | 56 | 196 |
| Hyposphagma | 11 | 52 | 53 | 185 |
| Acute follicular conjunctivitis | 33 | 173 | 33 | 209 |
| Acute anterior uveitis | 21 | 51 | 31 | 32 |
| Exudative age-related macular degeneration/ choroidal neovascular membranes | 5 | 12 | 23 | 12 |
| Retinal detachment | 7 | 13 | 16 | 15 |
| Infiltrated corneal ulcer | 8 | 12 | 14 | 37 |
| Eyelid edema | 3 | 12 | 14 | 28 |
| Ocular burns | 16 | 13 | 13 | 17 |
| Migraine aura | 4 | 12 | 13 | 16 |
| Binocular diplopia | 8 | 4 | 12 | 9 |
| Trichiasis | 4 | 15 | 12 | 14 |
| Acute dacryocystitis | 7 | 10 | 11 | 14 |
| Episcleritis | 7 | 31 | 10 | 43 |
| Cataract | 2 | 22 | 10 | 20 |
| Herpetic keratitis | 6 | 14 | 8 | 19 |
| Retinal tears | 8 | 11 | 6 | 10 |
| Ophthalmic zoster | 5 | 2 | 5 | 2 |
| Retinal vein thrombosis | 2 | 3 | 5 | 6 |
| Anterior ischemic optic neuropathy | 0 | 1 | 5 | 1 |
| Hemovitreous | 9 | 11 | 4 | 7 |
| Acute glaucoma | 4 | 3 | 3 | 1 |
| Globe rupture/ocular perforation | 2 | 0 | 3 | 0 |
| Preseptal cellulitis | 4 | 4 | 2 | 3 |
| Endophthalmitis | 1 | 1 | 2 | 0 |

Figure 2. Most common diagnosis in our ophthalmology emergence service during lockdown due to SARS-CoV-2 compared to normal activity in 2017.

the second period of the shutdown, when isolation measures were progressively more relaxed, we have observed a delay in the diagnosis of pathologies that pose a great threat to vision loss, such as retinal detachment, maculopathy, venous thrombosis, ischemic optic neuropathy, and uveitis. Surprisingly enough, the most frequent diagnoses were trivial pathologies of the ocular surface, in a similar fashion to what we observed in a previous study.³

These data support the conclusion that, at the beginning of the shutdown there has been greater awareness about the utilization of the emergency services, since we have observed a reduction in the total number of consultations compared to the same period during 2017.

Moreover, the majority of cases attended were both severe and urgent pathologies. Nevertheless, in the second period of the lockdown, when the measures of isolation were less strict, we have observed a delay in the diagnosis of other pathologies that we consider equally severe and urgent, probably caused by the fear of going to a hospital during a global pandemic, but at the same time there has been a less rational use of emergency services since the number of patients has tripled, prevailing the diagnosis of pathologies considered trivial. Although we do not know the exact reason of this fact, we believe we should take advantage of this time to influence health education measures.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

María García Lorente  <https://orcid.org/0000-0003-4981-5959>

Francisco Zamorano Martín  <https://orcid.org/0000-0002-1446-1663>

Marina Rodríguez Calvo de Mora  <https://orcid.org/0000-0002-5513-8790>

Carlos Rocha-de-Lossada  <https://orcid.org/0000-0001-7464-2493>

References

1. Arrigo A, Aragona E, Parodi MB, et al. Ophthalmology and SARS-CoV-2: blind toward those who fight blindness?. *Eur J Ophthalmol*. Epub ahead of print 26 May 2020. DOI: 10.1177/1120672120929961.
2. Borrelli E, Sacconi R, Querques L, et al. Taking the right measures to control COVID-19 in ophthalmology: the experience of a tertiary eye care referral center in Italy. *Eye (Lond)* 2020; 34(7): 1175–1176.
3. García Lorente M, Rodríguez Calvo de Mora M, Zamorano Martín F, et al. Comment on: Ophthalmology emergencies. An epidemiological study: are resources being used properly?. Comentario al artículo “Oftalmología de urgencias. Un estudio epidemiológico: ¿se utilizan correctamente los recursos?”. *Arch Soc Esp Oftalmol* 2019; 94(11): 571–572.