



## COVID-19 and Ophthalmology Practice at University Hospital “Policlinico Umberto I” in Rome

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COVID-19 is a newly defined disease, affecting the respiratory system. It is caused by a novel coronavirus, called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The growing importance of the outbreak led the World Health Organization (WHO) to declare it a public health emergency of international concern on 30 January 2020 and to later officially describe it as a pandemic on 11 March 2020 [1]. Italy was the first European country to be heavily impacted by COVID-19, with the number of cases and deaths caused by the virus surging in the months of March and April 2020 [2]. Ophthalmologists represent a high-risk category for the spread of the infection, mainly because the examination demands close contact with the patient, exposing the clinician to tear, conjunctival secretions and to aerosol droplets [3].

The Policlinico Umberto I Hospital is one of the main tertiary care hospitals in Rome and the biggest in Europe by surface, accounting for more than 1200 inpatient beds. As of September 2020, it has been designated COVID Hospital 5, together with four more large hubs serving the capital city of Italy. It also includes an Ophthalmology Emergency Room, the only one in Rome, together with Ospedale Oftalmico, to offer a 24/7 care. Due to the COVID-19 outbreak, the Italian government declared a national lockdown on 11 March 2020. Consequently, our department was forced to stop every elective surgical procedure, including cataract surgery. All the non-urgent examinations were also cancelled. In response, after urgent healthcare workers and staff meetings, we immediately implemented the initial protocols to face the challenge. Online and in-person courses were organized, in order to train all personnel regarding the correct use of Personal Protective Equipment (PPE). Pre-triage questionnaires were prepared for patients. As an additional safety measure, we asked nurses to contact every patient on the phone the day before the examination and ask them about

the presence of possible COVID-19 symptoms. A temperature check was made mandatory both at the hospital entrance and before accessing our clinic. Disinfectants dispensers and protective surgical masks were available at every floor. Waiting rooms were re-organized to account for social distancing safety measures. Every slit lamp and all the instruments requiring a close contact with the patient were equipped with a breath shield [4]. Along with the aforementioned safety measures and protocols, both the medical and non-medical staff underwent periodical serological tests and oropharyngeal/nasopharyngeal swabs for the detection of COVID-19.

Here is the impact of the pandemic and the consequent lockdown on the ophthalmology practice at our department, we hereby present the numbers comparing the clinical examinations and the surgical procedures before (10<sup>th</sup> of January 2020 to 9<sup>th</sup> of March 2020) and after (10<sup>th</sup> of March 2020 to 9<sup>th</sup> of May 2020) the suspension of the non-urgent admissions to our hospital. Following the lockdown, all the non-urgent examinations were suspended. This led to a 70% decrease of the number of patients admitted weekly to our hospital. The Ophthalmology Emergency Room was closed during the first days of March 2020. Trauma surgeons and emergency ophthalmologists were on call 24/7 and an examination room in our department was set up for this purpose. Trauma surgical procedures decreased from 5 to 2 (i.e. a 60% decrease). We performed consultations for COVID-19 patients, many of which were immunocompromised. In some cases, this led to significant findings, as later reported in the Literature [5].

In this period time every elective surgical procedure was cancelled. Cataract surgery decreased from 231 surgeries to 10 (a 95,7% decrease). This involved monocular patients or patients that required an extremely urgent cataract extraction. Corneal

transplants decreased from 8 to 1 (an 87,5% decrease). During the lockdown, a thorough study of the Literature was conducted, in order to assess the risk posed to corneal transplant recipients by COVID-19-affected donors [6]. Vitreo-retinal surgery decreased from 60 procedures to 25 (a 58,3% decrease). Glaucoma surgery went from 8 procedures to 1 (an 87,5% decrease).

The COVID-19 outbreak had a massive impact on our ophthalmology practice at University Hospital "Policlinico Umberto I". Extremely swift and totally unexpected decisions were required, in order to face the unprecedented situation. The pandemic shed a light on the vulnerabilities of healthcare systems and put every healthcare worker under an enormous amount of stress. At the same time, it brought up a positive and constructive spirit of collaboration involving every member of the staff and led to innovative and meaningful ways of learning for our residents.

However, thanks to all the useful initiatives that have been put in place, none of the approximately 150 health professionals, including ophthalmologists, residents, orthoptists, nurses, administrators and others have tested positive for COVID-19. And this was a great success for us!

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