
Head and neck surgery is a high-risk procedure for COVID-19 transmission, and there is a need for a preventive strategy to protect professionals



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A major objective during the COVID-19 epidemic is protecting health professionals and systems to avoid collapse. COVID-19 is primarily spread by respiratory droplets. High-risk procedures are those that lead to a long exposure to patient aerosols. Until now, critical care has been considered the main risk source in hospitals.

However, head and neck surgery of infected patients is probably another high-risk procedure. While intubation takes 2 or 3 minutes, head and neck surgery means prolonged periods of close contact with patients and is very common. When community extension is taking place, as in most parts of the world, ophthalmologic, otorhinolaryngologic, dermatologic, and plastic surgery might lead to an important number of infections in medical personnel. It is also important to notice that higher inoculum is related to the severity of influenza,¹ and this might also be the case for COVID-19.

An ophthalmologist described this disease in Wuhan, China, and the first doctors in Italy and Spain with the disease, in our limited experience, were ophthalmologists, dermatologists, and plastic surgeons. Only 2 of the 23 physicians who died in China were assigned to treat patients with COVID-19, compared with 8 surgeons and 13 other physicians, probably as a result of inadequate precautions.²

I suggest that there is a need to protect head and neck surgeons (ophthalmologists, otorhinolaryngologists, dermatologists, and plastic surgeons) from COVID-19 infection.

Abbreviations used:

PPE: personal protective equipment
SARS-CoV-2: severe acute respiratory syndrome coronavirus 2

Choosing the best strategy depends on factors that are changing fast or are unknown: scarcity of personal protective equipment (PPE) and diagnostic tests, the prevalence of COVID-19 in the population and the usefulness of tests to predict infection.

One strategy could be to always use PPE, as we do for blood-borne infections, and follow existing guidelines for high-risk procedures (airborne precautions by using N95 or higher respirators, contact precautions, and droplet precautions, including eye protection).³ This is the only possible strategy in urgent cases and has the advantage of protecting patients. The feasibility of this strategy depends on the availability of PPE.

If PPE is scarce, an alternative strategy could be to detect patients infected with COVID-19 and postpone their therapy or provide alternatives. This could be done by screening for clinical features and testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). However, important information is missing to support this method. We do not know the prevalence of infectious patients in the population. The best current data indicates that 50% of patients who

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are positive for COVID-19 are asymptomatic,⁴ and mathematical modeling has suggested that for each COVID-19 fatality, there may be thousands of cases in the population,⁵ suggesting the need to be cautious.

The negative predictive value of current COVID-19 tests could be another limitation, because it is not well known⁶ but is likely to improve. It is also possible that a negative test is not a good predictor of low infectiousness, thus not avoiding the need for PPE. Testing professionals to protect patients should also be done. The appropriate strategy might change as population immunity varies over time.

While we get better information, I suggest that head and neck surgery should be considered a high-risk procedure and that either PPE always be used or clinical screening plus SARS-CoV-2 testing be done before elective surgery in areas of high COVID-19 incidence to avoid high-risk exposure of scarce professionals. Doing nothing is not the right answer.

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