Coronavirus Disease 2019 (COVID-19) Pandemic and Lacrimal Practice: Diagnostic and Therapeutic Nasal Endoscopy and Dacryoendoscopy

To the Editor:

Nasal endoscopy is quite a routine pre- and postoperative procedure in well-established lacrimal practices, while dacryoendoscopy has specific indications.¹ The unprecedented crisis of coronavirus disease 2019 (COVID-19) pandemic has forced cancellation of elective endoscopy procedures across the specialties, and lacrimal practice is no exception.² While this is important and is currently practiced, prolong deferral can be detrimental with respect to patient morbidity, healthcare, and economic loss. Hence, there is a need for better evidence-based understanding on the safety and optimal utilization of endoscopy for patient care during COVID-19 pandemic.

The nasal tissues have demonstrated shedding of SARS-CoV-2 virus, and nasal interventions are potential aerosol generators.³,⁴ Hence, lacrimal surgeons who perform endoscopy and their staff are at a high risk of virus transmission. This risk can be compounded by the face-to-face position with the patients during examination and the possible sneezing and coughing that can be induced by the procedure. The risk of nasal endoscopy and dacryoendoscopy may be different because the duration of the procedure and its nature (diagnostic or therapeutic) can significantly alter the transmission risk.³ Dacryoendoscopy usually takes a longer time and therapeutic procedures using it can notably enhance the risks.

The triage of indications for nasal or dacryoendoscopy as emergency, urgency (can be deferred for up to 3–4 weeks with or without conservative management), and elective, even though arbitrary, can be helpful for surgeons to take decisions on operating during this pandemic. Table 1 summarizes these indications, which are by no means an exhaustive list and can itself be a subject of debate. Therefore, individual and institutional discretion based on local government guidelines is advised. Patients who are designated as urgent or elective and their endoscopy examination is deferred should be clearly communicated with and also receive such decisions in writing to avoid medicolegal issues or lawsuits.

Table 2 summarizes the precautions to be taken while performing a nasal and a dacryoendoscopy. There are no evidence-based guidelines as to which among the flexible or rigid endoscopy is preferable during COVID-19.⁴ The use of topical decongestants and local anesthetics is controversial. If used, the surgeon should preferably avoid spray and instead use soaked pledgets. Care should be taken during this step to avoid reflex sneezing or coughing. It is also important to remember that the virus remains viable on multiple surfaces for hours,⁵,⁶ and the same can be true of endoscopes. Hence, systematic cleaning of all surfaces after endoscopy is crucial for disinfection. There are no special guidelines for sterilization and standard sterilization procedures for endoscopes and instruments are recommended. While performing dacryoendoscopy, it is natural to come in close proximity to the patients while passing the scope through the punctum and canaliculus. Hence, it is advisable to either use an operating microscope or magnifiers or loupes to avoid close contact with the patient’s face.

The major question that remains is dealing with emergencies and urgent procedures in suspected COVID-19 patients. All such cases should undergo laboratory testing in the form of polymerase chain reaction test using a nasopharyngeal swab combined with an antibody testing (IgM and IgG). While emergency endoscopy may not be able to wait for the results, the procedure can be performed with full personal protective equipment. The urgent cases can wait for the laboratory results before the procedure. Hence, screening of the patients for COVID-19 symptoms, laboratory tests where needed, adherence to specific operating room guidelines, and personal protective equipment should facilitate performance of nasal endoscopy and dacryoendoscopy during the COVID-19 pandemic.

While the medical communities would continue to experience numerous changes to their endoscopy practice, it would also be an opportunity to consider certain evolving concepts such as the use of imaging in lieu of endoscopy and the utility of disposable endoscopes.

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**TABLE 1.** Categorization of nasal endoscopy and dacryoendoscopy indications

<table>
<thead>
<tr>
<th>Emergency</th>
<th>Urgency</th>
<th>Elective</th>
</tr>
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<tbody>
<tr>
<td>1. Congenital dacryocystocele (with airway compromise)</td>
<td>2. Postoperative epistaxis</td>
<td>3. Pediatric acute dacryocystitis</td>
</tr>
<tr>
<td>4. Acute NLD trauma</td>
<td>5. Suspected recurrence of previous lacrimal drainage malignancy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency</th>
<th>Urgency</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recurrent</td>
<td>2. Inflammatory SALDO (eg, exacerbation in WG)</td>
<td>3. Suspected lacrimal drainage mass</td>
</tr>
<tr>
<td>4. in presence of complications</td>
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WG, Wegener’s granulomatosis.

**TABLE 2.** Precautions during nasal endoscopy and dacryoendoscopy in lacrimal practice

1. Systematic cleaning of all surfaces in the endoscopy procedure room
2. Use of recommended COVID-19 personal protective equipment
3. COVID-19 clinical screening of all patients and laboratory tests in suspected patients
4. Minimize the number of staff to what is essential
5. Maintain social distance between staff and the patient
6. Be careful with reflex sneezing, if one is using topical decongestant/local anesthetic
7. Perform endoscopy using a monitor and avoid direct viewing through eyepiece
8. Use magnifiers or loupes while performing dacryoendoscopy to prevent close proximity with the patient
9. Ensure a quick yet controlled procedure
10. Clear communication with endoscopy team and daily team huddle
11. Careful disposal of contaminated disposables
12. Postexamination sterilization of endoscopes and instruments using standard procedures

COVID-19, coronavirus disease 2019
REFERENCES