



# Endoscopic nasopharyngoscopy and ENT specialist safety in the COVID 19 era: the back endoscopy approach to the patient

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## Abstract

**Purpose** To propose a way to safely perform endoscopic nasopharyngoscopy in ENT outpatient clinic during the COVID-19 pandemic.

**Methods** This manuscript highlights the importance of endoscopy in daily ENT clinical practice, which is a pivotal procedure in the diagnosis of many head and neck pathologies. However, since the beginning of the COVID-19 outbreak, the authors have witnessed a drastic reduction (91%) in the use of endoscopic nasopharyngoscopy at their institutions. In fact, it is considered at risk of contamination for healthcare professionals, as any upper airway manipulation procedure.

**Results** In the “Back approach to the patient” for endoscopic nasopharyngoscopy, the operator positions himself behind the patient and faces the monitor. The endoscopist, not being positioned in front of the patient, should, therefore, be less exposed to airborne transmission of SARS-CoV-2 virus.

**Conclusion** This simple variation of the physician’s position during endoscopic nasopharyngoscopy could potentially reduce the risk of contagion since the operator is not in the trajectory of droplets and/or aerosols.

**Keywords** COVID-19 · ENT endoscopy · Endoscopic nasopharyngoscopy · Risk of contamination · SARS-CoV-2

Nasal endoscopy is one of the most often performed ENT procedures in outpatient clinic, just thinking that an American insurance company reimbursed \$86.3 million for 559 547 nasal endoscopies in 2016 [1]. This diagnostic modality plays a fundamental role in the daily clinical practice of the otolaryngologist. Indeed, especially if associated with new technologies such as narrow band imaging, it represents a pivotal tool in the early diagnosis of neoplasms of the nasopharyngolaryngeal district and for the follow-up of patients who have already undergone treatments for head and neck cancer [2].

However, endoscopic nasopharyngoscopy is considered a procedure at risk for 2019-novel coronavirus (SARS-CoV-2) contamination for the ENT specialists, as all procedures that have the potential to aerosolize aerodigestive secretions [3]. In fact, it seems that the virus spreads primarily through droplets and/or aerosols, which are inevitably created during every upper airway manipulation procedure [3, 4]. This has led to a drastic reduction in the use of endoscopy over the last few months; and the activity data of the Otolaryngology Department of the Civil Hospital of Sanremo confirm this trend. Between March and April 2019, 416 endoscopic nasopharyngoscopy were performed, compared to the mere 38 procedures performed in the same time span in 2020. There was, therefore, a 91% reduction in performing this procedure.

In this scenario, the authors would like to recommend the use of the *Back approach to the patient* to carry out endoscopic nasopharyngoscopy. This method of performing endoscopy, used often by some consultants at our institutions, seems to be a simple and useful technique to minimize the risk of contagion by the health worker during the coronavirus disease 2019 (COVID-19) pandemic.

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**Fig. 1** The back endoscopy approach to the patient in the ENT outpatient clinic. Photo source: Department of Otolaryngology-Head and Neck Surgery, Giovanni Borea Civil Hospital, Sanremo, Italy



The patient is admitted to the outpatient clinic only after having carefully washed the hands, wearing gloves and surgical mask. After sitting, the patient is asked to lower the mask and uncover the nose only. Nasal anesthesia is then performed with spray or with cottonoids soaked in anesthetic (e.g., Lidocaine 2%). In addition to reducing the discomfort of the nasal passage of the endoscope, the anesthetic, reaching the pharynx, also inhibits pharyngeal reflexes and, therefore, the risk of spreading droplets.

The operator, after wearing the enhanced personal protective equipment [5], positions himself behind the patient and faces the monitor (Fig. 1). This simple variation of the position of the physician during the execution of the endoscopy, which is traditionally carried out with the patient in front and the monitor behind or to the side of it, would in our opinion reduce the risk of contamination. In fact, in this way, the operator is not in the trajectory of droplets and/or aerosolization.

Finally, we recommend avoiding and postponing all endoscopic procedures through the oral cavity, such as stroboscopy, considering the safest nasal route for the endoscopic evaluation of ENT patients in the COVID 19 era.

## Compliance with ethical standards

**Conflict of interest** The authors have no conflict of interest to disclose.

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