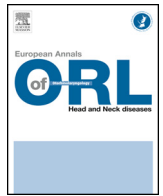




Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en



COVID-19: Preliminary recommendations from the SFORL

Guidelines of clinical practice for the management of swallowing disorders and recent dysphonia in the context of the COVID-19 pandemic

A. Mattei^{a,b,*}, B. Amy de la Bretèque^{b,c}, S. Crestani^d, L. Crevier-Buchman^e, C. Galant^{a,b}, S. Hans^e, A. Julien-Laferrrière^e, A. Lagier^f, C. Lobryeau^g, F. Marmouset^h, D. Robert^{a,b}, V. Woisard^d, A. Giovanni^{a,b}, French Society of Otorhinolaryngology, Head, Neck Surgery (SFORL) French Society of Phoniatics, Laryngology (SFPL),

^a Service d'ORL et chirurgie cervico-faciale, CHU La Conception, Assistance publique-Hôpitaux de Marseille, Marseille, France

^b Aix Marseille University, CNRS, LPL, Aix-en-Provence, France

^c Service d'ORL et chirurgie cervico-faciale, CHU Gui-de-Chauliac, Montpellier, France

^d Unité voix et déglutition, service d'ORL et chirurgie cervico-faciale, CHU de Toulouse, hôpital Larrey, TSA 30030, 31059 Toulouse cedex 09, France

^e Service d'ORL et chirurgie cervico-faciale, Assistance publique-Hôpitaux de Paris, Hôpital Foch, UFR Simone-Veil, Université Versailles Saint-Quentin-en-Yvelines (Paris Saclay University), Paris, France

^f Service d'ORL et chirurgie cervico-faciale, CHU de Liège, Liège, Belgium

^g 14, rue Lejemptel, 94300 Vincennes, France

^h Service d'ORL et chirurgie cervico-faciale, hôpital Clocheville, CHRU de Tours, Tours, France

ARTICLE INFO

Keywords:

Laryngology
Phoniatics
Coronavirus
SARS-CoV-2
COVID-19
COVID
Swallowing
Rehabilitation

ABSTRACT

Procedures putting healthcare workers in close contact with the airway are particularly at risk of contamination by the SARS-Cov-2 virus, especially when exposed to sputum, coughing, or a tracheostomy. In the current pandemic phase, all patients should be considered as potentially infected. Thus, the level of precaution recommended for the caregivers depends more on the type of procedure than on the patient's proved or suspected COVID-19 status. Procedures that are particularly at high risk of contamination are clinical and flexible endoscopic pharyngo-laryngological evaluation, and probably also video fluoroscopic swallowing exams. Voice rehabilitation should not be considered urgent at this time. Therefore, recommendations presented here mainly concern the management of swallowing disorders, which can sometimes be dangerous for the patient, and recent dysphonia. In cases where they are considered possible and useful, teleconsultations should be preferred to face-to-face assessments or rehabilitation sessions. The latter must be maintained only in few selected situations, after team discussions or in accordance with the guidelines provided by health authorities.

© 2020 Elsevier Masson SAS. All rights reserved.

1. Introduction

As for any caregiver, it is the duty of ENTs specialised in laryngology or phoniatics and of speech therapists to provide the best care possible to the general population, while at the same time respecting the obligation to prevent as much as possible the spread of COVID-19. In every situation, it is therefore a matter of weighing up the risks for the patient and the health professional against the expected benefits.

For ENT and general laryngological practice, we refer to the recommendations published by the French Society of Otorhinolaryngology, Head and Neck Surgery (SFORL) on its website, especially concerning the proper technique and precautions for flexible naso-endoscopy and laryngoscopy: <https://www.sforl.org/actualites-covid-19/>. We also recommend reading the documents provided online by the French government (<https://solidarites-sante.gouv.fr/soins-et-maladies/maladies/maladies-infectieuses/coronavirus/>), by the French High Council for Public Health (HCSP) (<https://www.hcsp.fr>) and by the French Society of Hospital Hygiene (SF2H) (www.sf2h.net).

In the present document, the board members of the French Society of Phoniatics and Laryngology provide some elements to help decision-making. These recommendations are likely to change over

* Corresponding author at: Service d'ORL et chirurgie cervico-faciale, hôpital de La Conception, 147, boulevard Baille, 13005 Marseille, France.
E-mail address: alexia.mattei@ap-hm.fr (A. Mattei).

the next weeks or months depending on the evolution of the epidemic and the progress of related research.

2. General information

Procedures where the health professional comes into close contact with the airway are particularly likely to cause contamination by the SARS-Cov-2 virus. Moreover, the risk of transmitting the virus is high, due to spitting or coughing, or during a tracheostomy (situations highly likely to spread contagion due to the projections of droplets).

Speech therapy should be deemed non-urgent in this context. Therefore, the present recommendations mainly focus on the management of swallowing problems, which can sometimes be dangerous for patients, and on cases of recent dysphonia.

If the patient has already been receiving speech therapy, this can be continued remotely during the lockdown, which was imposed in France nationwide on March 25, 2020, including private practice.

The indications and precautions relating to video fluoroscopic swallowing exams are currently being assessed.

3. COVID status of patients

In the current pandemic context, patients are theoretically all considered as Covid positive.

To date, however, in the majority of teams, the following categorisation is applied:

- patients are considered to be Covid positive in the event of:
 - a positive PCR test,
 - and/or a chest CT-scan suggestive of SARS-Cov-2-induced pulmonary lesions.
- patients are suspected to be infected with Covid in the following cases:
 - presence of suggestive clinical signs: flu-like symptoms, myalgia, asthenia, fever, cough, chest pain, headache, anosmia or ageusia (loss of taste or smell), digestive symptoms (especially diarrhoea), delirium,
 - contact with a Covid positive person.

Patients who do not meet these criteria should nonetheless be treated with caution because many patients are asymptomatic and, moreover, the diagnostic tests are not completely reliable. Indeed, there are about 30% of false negative results with the RT-PCR detection of SARS-Cov-2 from nasopharyngeal swabs [1,2].

In effect, the attitude of health professionals should depend on the procedure to be carried out. For an invasive procedure such as flexible endoscopy or the insertion of a nasogastric tube, the same precautions should be taken for all patients whatever their Covid status. For the time being, treating patients with swallowing disorders is considered to be a high risk of COVID-19 contamination for caregivers. The situation is likely to change in the very near future with the help of infectious diseases specialists.

4. Recommendations regarding the assessment of patients suffering from swallowing disorders

We recommend assessing these patients only in cases of emergencies that cannot be postponed and only in a hospital environment. The decision to maintain face-to-face evaluation should be taken after team discussion or on the basis of official recommendations issued by the health authorities. Such situations are rare, and the majority of investigations may be postponed to a time when the patient is not suspected of contagiousness anymore. A

teleconsultation might be planned if it is likely to be useful and if the patient's condition allows it.

Clinical and flexible endoscopic assessments of swallowing are not routinely recommended due to the impossibility of maintaining the adequate level of precautions (patient not wearing a mask for tests involving food, distance of less than one metre between the caregiver and the patient's face) and to particularly high risks of projections of virus-laden droplets (coughs, sneezes, spitting, etc.).

Video fluoroscopic swallowing exams require the same PPE for all participants as during other procedures involving the airway. In cases of food aspirations, especially for liquids, any procedure should be postponed to a period when the patient is no longer contagious. If oral feeding is impossible, an alternative method of nutrition should be put in place after discussion with colleagues.

The nasogastric tube must be inserted and removed using the same protection as for other procedures involving the airway, with a minimum number of participants.

In situations where urgent management of swallowing disorders is compulsory, as in some postoperative cases or in some patients with neurodegenerative diseases, tele-rehabilitation is preferable whenever it is technically possible and allowed by the current regulations. When face-to-face consultation is necessary, caregivers must be aware of the high risk of contamination from droplets emitted by the patient and they therefore should wear the same type of PPE as that recommended for any airway procedure such as flexible endoscopy or nasogastric tube insertion, consisting of head cap, FFP2 mask, protective glasses and possibly a full face protection with visor, gloves and a gown (see the current protocol in the establishment where the procedure is carried out). Caregivers should learn how to properly put on and remove their clothing.

5. Recommendations regarding the assessment of patients suffering from recent dysphonia

Laryngologists and speech pathologists may need to perform flexible naso-endoscopies and laryngoscopies to explore recent dysphonia. The reader may be referred to the website of the French Society of Otorhinolaryngological Society (<https://www.sforl.org/>), where recommendations on this subject are regularly updated. For these patients, a teleconsultation should preferably be suggested if feasible. Face-to-face consultations should be decided after team discussion. In those selected cases, even if flexible endoscopy is not required and if the patient is relatively unlikely to have COVID-19, the examination must be performed carefully and both the patient and the caregiver must wear a surgical mask. When a flexible endoscopy is performed, the usual PPE used in any airway procedure is required: head cap, FFP2 mask, protective glasses and possibly a full-face protection with protective visor, gloves and a gown.

Key points

- Vocal rehabilitation should not be considered urgent in the current epidemic context. If the patient has already been taken care of for such a rehabilitation, this can be continued by tele-rehabilitation.
- The current recommendations therefore mainly concern the management of swallowing disorders and the assessment of acute dysphonia.
- Since we are currently in the COVID-19 pandemic phase, even asymptomatic patients can be infected and contagious, and as false negatives from coronavirus diagnostic tests are frequent, the same precautions should apply to all patients.

- Only swallowing disorders management or exploration of recent dysphonia that are regarded as impossible to postpone should be maintained. The decision to maintain these urgent indications must be validated by team discussions or should rely on official recommendations from health authorities.
- Several procedures are to be considered as at very high risk of caregiver contamination: clinical and flexible endoscopic swallowing assessments (especially since food tests require that the patient not wear a mask), flexible endoscopies, insertions of nasogastric tubes and video fluoroscopic swallowing exams, although the risk level of the latter remains under discussion.
- When these risky procedures cannot be postponed, the following personal protective equipment (PPE) is recommended for caregivers: protective glasses, FFP2 (N95) mask, cap, gloves and gown. Caregivers must learn the appropriate dressing and undressing technique.

Disclosure of interest

The authors declare that they have no competing interest.

References

- [1] Wang W, Xu Y, Gao R, et al. SARS-CoV-2 in different types of clinical specimens. *JAMA* 2020, <http://dx.doi.org/10.1001/jama.2020.3786>.
- [2] Ai T, Yang Z, Hou H, et al. Correlation of Chest CT and RT-PCR testing in Coronavirus Disease 2019 (COVID-19) in China: a report of 1014 cases. *Radiology* 2020;26:200642, <http://dx.doi.org/10.1148/radiol.2020200642>.