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## Perspectives

## Literature in the time of COVID-19: The “phase two”

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## ABSTRACT

The sudden onset of the COVID-19 pandemic has put a strain on the whole scientific world.

We assisted to a tremendous effort by researchers with the final goal of achieving a better management of COVID-19 patients. The world of otorhinolaryngology, likewise, has not been exempt from this commitment to research.

In this commentary we perform a bibliometric review of the available academic literature about COVID-19 in the top 20-ranked ENT journal, with the goal of providing an overview of what has been published to date and encouraging a shift towards quantitative research.

## Text

The sudden onset of the COVID-19 pandemic has put a strain on the whole scientific world. The presence of a new pathological entity, the extraordinary virulence and the lack of experience and data, forced all the scientific community to battle against time to produce evidence that supported delicate clinical decisions.

In a short time, a tremendous amount of data and experience was shared worldwide, with the final goal of achieving a better management of COVID-19 patients. Likewise, pre-COVID literature and authoritative expert opinions supplied the ground for the drafting of recommendations and even guidelines. These have been directed not only to the treatment of patients but also, for instance, to the protection of all health professionals, to the organization of hospital spaces or to the care of patients with chronic or oncological diseases.

This effort has led to the sharing of countless experiences in a very limited space of time.

A quick search of the main scientific databases (PubMed and Embase) with consistent queries in the title (“covid-19 or covid or coronavirus or SARS-Cov-2”) yielded respectively 9.714 and 5.669 contributions from January 2020 to April 2020. In particular, exploring LitCovid [1], another literary hub about the 2019 novel Coronavirus, 7085 papers have filled in the reservoir of scientific literature in the few

weeks between March 30 and May 3.

The world of otorhinolaryngology, likewise, has not been exempt from this commitment to research. Since the very beginning of this crisis, it has been evident that ENTs are one of the most exposed health care figures: this concern is derived from the acknowledged coronavirus diffusion by droplet transmission, especially the aerosolization during hospital procedures like intubation or bronchoscopy (Aerosol-Generating Procedures, AGP). Among other things, this brought the necessity of developing a series of interventions aimed at the protection of both patients and doctors, on one hand, and of reorganizing outpatient clinic and surgical theater activity, on the other hand. The unexpected pandemic wave has been particularly challenging for all healthcare professionals dealing with head and neck cancer, who had to face the dilemma of “providing much needed cancer care while preparing and providing care for the community as they face the wrath of this pandemic coming their way” [2], something we never trained for and for which guidelines are not available.

In a short time, the main head and neck journals gave space to numerous articles and contributions, that guided clinicians in the management of COVID-19 patients: from tracheotomy to endoscopy, from surveillance of oncologic patients to management of operating rooms, from questionnaires to objectify anosmia to telemedicine, the researchers tried to provide early answers to the most compelling

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**Table 1**  
Top 20-ranked ENT journal, number and type of publication about COVID-19 from January 2020 to date.

Journal	h-5 index	Type_of_publication							Total
		Research	Case series	Comment	Case report	Editorial	Letter	Systematic review	
Laryngoscope	55	1	0	2	1	0	0	2	6
Oral Oncology	52	0	0	1	0	3	15	2	21
Head & Neck	50	6	5	38	4	0	0	6	59
Otolaryngol Head Neck Surg	44	1	0	29	0	0	2	1	33
Hearing Researc	42	0	0	0	0	0	0	0	0
JAMA -OTO	41	0	1	3	2	1	0	0	7
Otology & Neurotology	40	0	0	0	0	0	0	0	0
Ear and Hearing	39	0	0	0	0	0	0	0	0
Eur Arch otorhinolaryngol	39	2	0	1	0	0	3	2	8
Int J Pediatr Otorhinolaryngol	35	0	0	2	0	0	0	0	2
Int Forum Alergy Rhinol	34	3	0	4	0	1	6	0	14
Am J Rhinol Allergy	27	0	0	1	0	0	0	0	2
J Association Res Otolaryngol.	26	0	0	0	0	0	0	0	0
Clin Otolaryngol	24	0	0	1	0	0	0	0	0
Ann Otol Rhinol Laryngol.	24	0	0	0	0	0	0	0	0
Auris Nasus Larynx	24	0	0	0	1	0	1	0	2
Audiol Neurootol.	24	0	0	0	0	0	0	0	0
Acta Otorhinolaryngol, Ital	24	0	0	0	0	1	1	0	2
Am J Otolaryng	23	1	0	4	1	0	4	0	10
Total		14	6	86	9	6	32	13	166

questions.

By repeating the same search (“covid-19 or covid or coronavirus or SARS-Cov-2”) for each of the 20 most valuable otolaryngology journals, ordered by their five-year h-index (google scholar source), 166 contributions were retrieved from January 2020 to date (10th of may 2020) (Table 1). In particular, articles concerning organizational aspect in the COVID era were the most represented (66/166): the majority of these contributions proposed interventions directed at minimizing the impact of pandemics on the clinical activity of ENT departments. 30 articles dealt with diagnostic and surgical procedures, mostly giving recommendations to decrease transmission of the virus and to protect clinicians involved in such activities. Furthermore, 24 articles covered tracheotomy technique and indications, 19 anosmia and hyposmia, 4 oropharyngeal and nasopharyngeal swabs. Finally, the remaining 22 papers commented on several aspects related to the pandemic and on the possible consequences of the infection upon ENT patients (Fig. 1).

Undoubtedly, this generous contribution from the scientific and editorial world meant access to a large amount of material from authoritative sources for all of us engaged in this emergency. Of note, access was granted for free by the majority of online journals.

Our research was extended further and we found out that: 124 articles (75%) were in the form of editorials, letters or commentaries; 13 were in the form of review or overview, and 6 of these dealt with pre-Covid literature; 29 consisted of case series, case reports or descriptive or quantitative researches (Fig. 1). What is striking is that only 29 out of the 166 contributions (17%) reported data, albeit in a preclinical form or often using unvalidated methods.

In such a phase of urgency, this is amply justified by the eagerness of quick answers. Nonetheless, with the pandemic far from being over, topics related to the effects of the disease on the ENT practice have been exhausted and therefore research has now to evolve from qualitative to quantitative analysis (Fig. 2).

A collective, perhaps unprecedented effort has quenched the thirst of the initially disoriented clinicians, but it is now necessary to give foundation to all the recommendations provided, through the production and publication of rigorous data analysis, possibly avoiding the redundancy of comments and suggestions. In this sense, emblematic is the presence of similar considerations, signed by the same authors, on different journals.

We have already learnt that this crisis will have undeniable consequences on our routine activity but several questions still need evidence to justify a change of the known paradigms: method for triaging

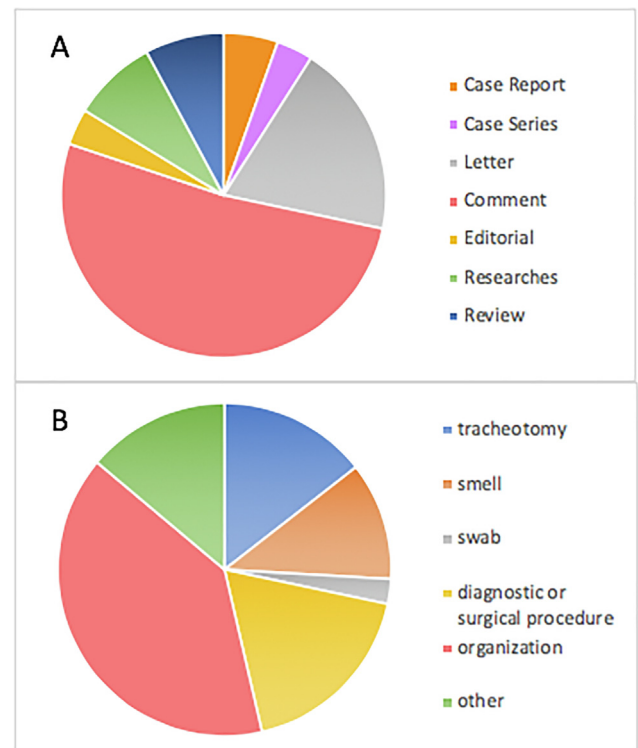


Fig. 1. Pie chart: type of publication (A) and topic (B) distribution of COVID-19 literature in the top 20-ranked ENT journal.

patients, protection of professionals, management of oncologic patients, real feasibility of new technologies such as telemedicine, outcomes of patients who experience anosmia during COVID-19 infection, academic activities, are just few of the still open debates [3].

“Ferrum cudendum est, dum candet in igne” (Iron needs beating while it's glowing in the fire) says an ancient and pragmatic Latin saying. Although this applies to many situations in everybody’s life, it is maybe time for us researchers to cool it down and mold it differently.



Fig. 2. An illustrative vignette of literature at the time of COVID-19.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

#### References

- [1] Chen Q, Allot A, Lu Z. Keep up with the latest coronavirus research. *Nature* 2020;579(7798):193.
- [2] Hanna Ehab Y. How fragile we are. *Authorea* 2020. April 09.
- [3] Vukkadala N, Qian ZJ, Holsinger FC, Patel ZM, Rosenthal E. COVID-19 and the otolaryngologist: preliminary evidence-based review. *Laryngoscope* 2020. Mar 26.