



Editorial

Contribution of the *International Archives of Otorhinolaryngology* to COVID-19 Publications: A Bibliometric Analysis

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Int Arch Otorhinolaryngol 2021;25(3):e329–e333.

COVID-19 is an emerging, rapidly evolving situation, and scientists all around the world are focused on finding and developing treatments for this infection. Their efforts have led to a number of scientific publications since the start of the coronavirus outbreak, which was declared as a pandemic by the World Health Organization; 147,535 scientific articles have been published (as indexed in PubMed on June 22, 2020). This was considered by Science as “one of the greatest explosions of scientific literature of all time.”¹ In part, this event reflects editors’ efforts to reduce the peer review time and increase the speed of publications, without affecting the quality of research.^{1,2}

This article aims to analyze and map the articles regarding COVID-19 published in the journal *International Archives of Otorhinolaryngology* (IAO) from a bibliometric perspective.

Methods

Initially, we included 24 COVID-19 documents published in the journal IAO. For this purpose, we used the search terms “COVID” OR “Coronavirus” OR “SARS-CoV-2” OR “2019-nCoV” in the Scopus database and exported the data in CSV format: citation information, bibliographic information, and abstract & keywords. Subsequently, we included four more documents manually, which were still in the publication phase, totaling 28 documents. All data were retrieved on June 22, 2020.

We used the VosViewer software (version 1.6.16) to analyze country collaboration and the co-occurrence of keywords. We used Google Drive Word Cloud to check the most frequent words in the full text of the manuscripts.^{3,4}

The Contribution of IAO to Publications on COVID-19

In early 2020, the editor-in-chief of the IAO journal and the team pledged to rapidly follow the submissions of COVID-19 articles and publish them online shortly after acceptance and editorial production.

On April 13, 2020, the IAO published its first articles on COVID-19; a total of 28 documents were published including nine (32.14%) original research articles, seven (25%) editorials, four (14.29%) systematic reviews (including meta-analysis), four (14.29%) letters to the editor, two (7.14%) opinion articles, and two (7.14%) update articles. The average period between submission and acceptance was 46 days and that between acceptance and online publication was 83 days (►Table 1).

Of the 28 published articles, Brazil had the highest number of publications with six (45.71%) documents followed by the United States with four (11.43%) and India with three (8.57%; ►Fig. 1). To analyze international cooperation in terms of COVID-19 articles, i.e., when two or more countries participated in the same study, we built a collaboration network using the VosViewer software. Our dataset involved six countries; different colors indicate different groups, size of the circle represents the number of publications, and thickness of the line represents the strength of collaborations between the countries that it connects (►Fig. 2). ►Figure 3 shows the 15 affiliations/institutions that had the highest participation in these studies.

To analyze the co-occurrence of keywords, we used VosViewer to view the most commonly used terms. All keywords (author + index keywords) that occurred more than twice were entered in the final analysis. The most frequent keywords were

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DOI <https://doi.org/10.1055/s-0041-1733778>.
ISSN 1809-9777.

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Table 1 List of articles published in the IAO on COVID-19

Year	Volume Issue	Type	Title	Country	Scopus Citation	Submission	Acceptance	Published online	Time from submission to acceptance (days)	Time from acceptance to publication (days)
2020	24(2)	Editorial	High Risk of COVID-19 Infection for Head and Neck Surgeons	Brazil	25	*	*	04/13/2020	*	*
2020	24(2)	Editorial	Otorhinolaryngologists and Coronavirus Disease 2019 (COVID-19)	Brazil	10	*	*	04/13/2020	*	*
2020	24(3)	Original Research	Effect of the COVID-19 Pandemic on the Activity of Physicians Working in the Areas of Head and Neck Surgery and Otorhinolaryngology	Brazil	5	04/23/2020	04/24/2020	05/22/2020	1	28
2020	24(3)	Editorial	Prevention of COVID-19 Infection in Neck Breathers, Including Laryngectomies	United States	1	*	*	06/12/2020	*	*
2020	24(3)	Editorial	Why We Need to Use and which Mask Types are Effective against the Novel Coronavirus (COVID-19)?	Brazil	1	*	*	06/23/2020	*	*
2020	24(3)	Original Research	Novel Changes in Resident Education during a Pandemic: Strategies and Approaches to Maximize Residency Education and Safety	United States	1	05/28/2020	06/03/2020	07/31/2020	6	58
2020	24(3)	Update Article	Chloroquine and COVID-19: Should We Care about Orototoxicity?	Brazil	1	05/24/2020	06/02/2020	07/31/2020	9	59
2020	24(3)	Opinion Article	Proposal of Research Model for the Detection of COVID-19 among Asymptomatic Carriers	Jamaica, Barbados, India	1	04/30/2020	05/03/2020	06/02/2020	3	30
2020	24(3)	Letter to the Editor	Olfactory and Taste Disorders in Patients with SARS-CoV-2 Infection	India	1	*	*	07/31/2020	*	*
2020	24(3)	Update Article	The COVID-19 Pandemic and Planetary Health. A Critical Review of Epidemiology, Prevention, Clinical Characteristics and Treatments for Oral, Head and Neck Health Professionals. Do We Have a Roadmap?	Brazil, United States, Switzerland	0	06/04/2020	06/11/2020	07/31/2020	7	50
2020	24(3)	Letter to the Editor	Olfaction and COVID: The little we know and what else we need to know	Brazil	0	*	*	06/15/2020	*	*
2020	24(3)	Letter to the Editor	The Italian Society Indication for Rhinologists during Covid-19: Italy Phase 2	Italy	0	05/07/2020	05/11/2020	06/19/2020	4	39
2020	24(4)	Systematic Review	COVID-19 Infection and Its Influence in Otorhinolaryngology-Head and Neck Surgery	Spain, Venezuela, United States	3	06/29/2020	07/05/2020	09/24/2020	6	81
2020	24(4)	Systematic Review	Head and Neck Practice in the COVID-19 Pandemics Today: A Rapid Systematic Review	Brazil	1	06/03/2020	06/25/2020	09/30/2020	22	97
2020	24(4)	Editorial		Brazil	0	*	*	20/10/2020	*	*

Table 1 (Continued)

Year	Volume Issue	Type	Title	Country	Scopus Citation	Submission	Acceptance	Published online	Time from submission to acceptance (days)	Time from acceptance to publication (days)
2021	25(1)	Systematic Review	"Green July" 2020 and Another Good Reason to Quit Smoking: Help to Stop Spreading SARS-COV-2 and Save Lives!	Indonesia	5	09/11/2020	09/24/2020	11/26/2020	13	63
2021	25(1)	Original Research	Anosmia/Hyposmia is a Good Predictor of Coronavirus Disease 2019 (COVID-19) Infection: A Meta-Analysis	Italy	2	07/18/2020	08/08/2020	02/01/2021	21	177
2021	25(1)	Original Research	Percutaneous Tracheostomy in COVID-19 Critically Ill Patients: Experience from 30 Consecutive Procedures	Brazil	2	09/18/2020	11/16/2020	02/01/2021	59	77
2021	25(1)	Original Research	Impact of the COVID-19 Pandemic on Physicians Working in the Head and Neck Field	Brazil, Argentina	1	09/16/2020	11/10/2020	02/01/2021	55	83
2021	25(1)	Editorial	Teleconsultation and Teletreatment Protocol to Diagnose and Manage Patients with Benign Paroxysmal Positional Vertigo (BPPV) during the COVID-19 Pandemic	Brazil	0	*	*	02/01/2021	*	*
2021	25(2)	Editorial	Coronavirus (COVID-19): Yesterday, Today, and Always	Brazil	0	*	*	05/04/2021	*	*
2021	25(2)	Letters to the Editor	COVID-19: Priority Use of N95 Mask or Double Mask	Iran	0	09/21/2020	12/07/2020	03/15/2021	77	98
2021	25(2)	Original Research	Is Early Traumatic Facial Nerve Surgery a Priority during the COVID-19 Pandemic?	Brazil	0	07/24/2020	08/26/2020	02/19/2021	33	177
2021	25(2)	Systematic Review	Barrier for Particle Dispersion Control During Mastoidectomy	Brazil	0	08/22/2020	11/08/2020	03/29/2021	78	141
2021	25(3)	Opinion Article	Auditive and Vestibular Changes Related to the Use of Hydroxychloroquine and Chloroquine: An Integrative Review	India	**	12/27/2020	05/28/2021	*	152	*
2021	25(3)	Original Research	Tips and Pearls for Tracheostomy during COVID-19 Pandemic	Egypt	**	15/09/2020	07/01/2021	*	114	*
2021	25(3)	Original Research	The Pattern of Anosmia in Non-hospitalized Patients in COVID-19 Pandemic: A Cross-sectional Study	Brazil	**	04/12/2020	15/02/2021	*	73	*
2021	25(3)	Original Research	The Impact of the COVID-19 Pandemic on Head and Neck Surgery Training: A Brazilian National Survey	Egypt	**	25/09/2020	14/02/2021	*	142	*
2021	25(3)	Original Research	Analysis of Ear Nose Throat Manifestations in COVID-19 Patients	Egypt	**					
MEDIAN	-	-	-	-	2.5	-	-	-	46.05	83.86

*Information not available.

**Insufficient time to accumulate citation.

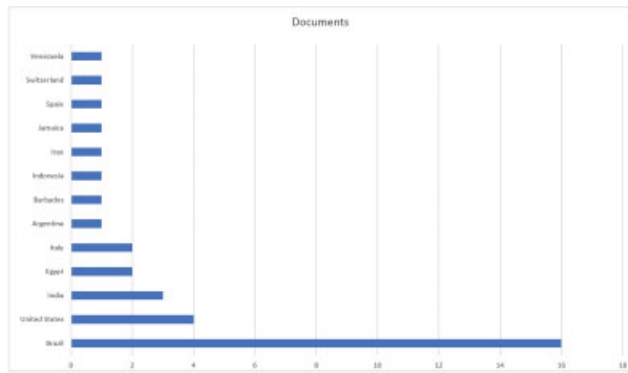


Fig. 1 Documents by country or territory



Fig. 2 Visualization of the country collaboration network

“coronavirus disease 2019” (total link strength: 313), “pandemic” (total link strength: 189), “COVID-19” (total link strength: 141), and “aerosol” (total link strength: 123) (► Fig. 4).

In addition, we created a full-text word cloud (title, abstract, keywords, and manuscript body) to show the most frequently used words in the manuscripts. The most frequent terms were “COVID” (n = 668), “patients” (n = 645), and “pandemic” (n = 204; ► Fig. 5).

For the citation metrics, we considered 24 documents (published in the editions from April 2020 to 2021) and excluded four documents published in this edition (July 2021) because they did not allow sufficient time to accumulate citations. The 24 documents, according to the Scopus database (on June 22, 2021), received a total of 60 citations (average 2.5 citations per article) (► Table 1). The average number of citations of COVID-19 articles was higher than the average number of citations received by the IAO journal in 2020, citations per document 2 years = 1.191 (according to the Scimago database).⁵ This value indicates the number of citations received by the documents of a journal divided by the total number of documents published in that journal.

Final Comments

In this study, we used descriptive bibliometric analysis to understand the profile of authors and the topics and to monitor the evolution of citations. “Hot” and urgent topics like this one usually lead to a significant increase in the number of publications and citations; therefore, these documents require monitoring, and bibliometric analysis provides a guide for the important topics and trends for future research.

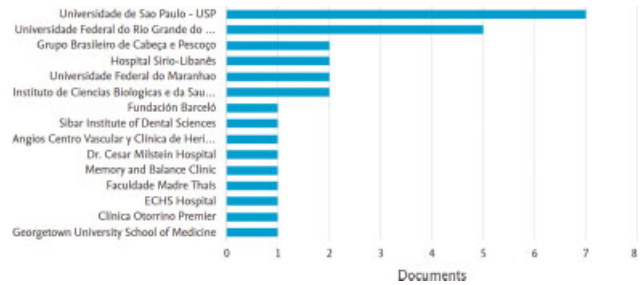


Fig. 3 Documents by affiliation; Source: Scopus

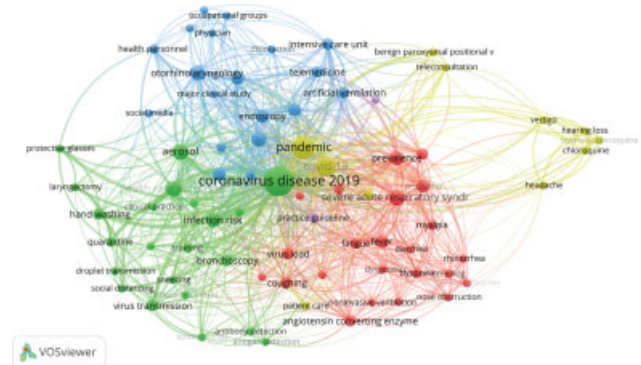


Fig. 4 Keyword co-occurrence analysis by VosViewer



Fig. 5 Word cloud created on Google Drive. The font size represents the frequency of occurrence.

Conflict of Interest

The authors have no conflict of interests to declare.

Acknowledgements

We/The authors thank Crimson Interactive Pvt. Ltd. (Ulatu) – www.ulatus.com.br for their assistance in manuscript translation and editing.

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