



Comment and Controversy
Edited by Stephen P. Stone, MD

Plethora of COVID-19 Contributions in Dermatology Literature but Majority Lack Strong Evidence

Muhammad Osto, BS^a, Mehdi Farshchian, MD, PhD^{b,*}, Jane M. Grant-Kels, MD^{c,d}, Steven Daveluy, MD^b

^a Wayne State University School of Medicine, Detroit, MI, United States

^b Department of Dermatology, Wayne State university School of Medicine, Detroit, MI, United States

^c Department of Dermatology, University of Connecticut Health Center, Farmington, CT, United States

^d Department of Dermatology University of Florida College of Medicine, Gainesville, FL, United States



To the Editor

The recent COVID-19 pandemic created enormous uncertainty in the field of medicine, including dermatology. Lack of knowledge about this new virus caused dermatology journals to fast track the review process and dedicate space in their publications to COVID-19 manuscripts.¹ The dramatic increase in the number of publications involving observations, cases reports, and studies on COVID-19 created a challenge for health care professionals to find a reliable source of information with a strong level of evidence.²

Method

Method To address this issue, we conducted a comprehensive literature search utilizing PubMed/MEDLINE, Embase, Cochrane Central, and Google Scholar on COVID-19-related articles published in dermatology journals from January 1, 2020 through May 31, 2021. Non-peer-reviewed and non-English contributions were excluded. Two independent reviewers categorized papers published in dermatology journals listed in SCImago Journal Rank by their type. Level of evidence of the published papers were then analyzed us-

ing modified Oxford Center for Evidence-Based Medicine (OCEBM).³

Of the 1,928 published presentations on COVID-19 in dermatology journals, letters to the editor was the most common type followed by original papers/research letters, and editorial/commentary. Of all the dermatology journals, *Dermatologic Therapy* (18.8%) and *Journal of the American Academy of Dermatology* (13.8%) published the highest number of contributions on COVID-19 (Figure 1). Categorization of the papers based on the level of evidence revealed that a majority had a weak level of evidence (level 5) on the OCEBM scale (Table 1). The strongest level of evidence (level 1a-2b) was identified in only 2.8% of the COVID-19 related contributions in dermatology journals; furthermore, 69% of the papers with level of evidence 1a-2b were published in 2021 compared to 31% in 2020.

The lack of strong evidence for the majority of publications in dermatology journals on COVID-19 may be explained by suspension of clinical trials, efforts to focus on pandemic-related research, and lack of adequate time to design and conduct original research on a new topic such as COVID-19.⁴ Despite having weak levels of evidence, publications such as case reports/case series or letters to the editor helped familiarize dermatologists with cutaneous manifestations of this novel virus and provided practical guidelines on treatment of dermatological diseases during a pandemic. As more time has elapsed since the emergence of COVID-19, we

* Corresponding author.

E-mail address: mfarshch@med.wayne.edu (M. Farshchian). Editor: Stephen P. Stone

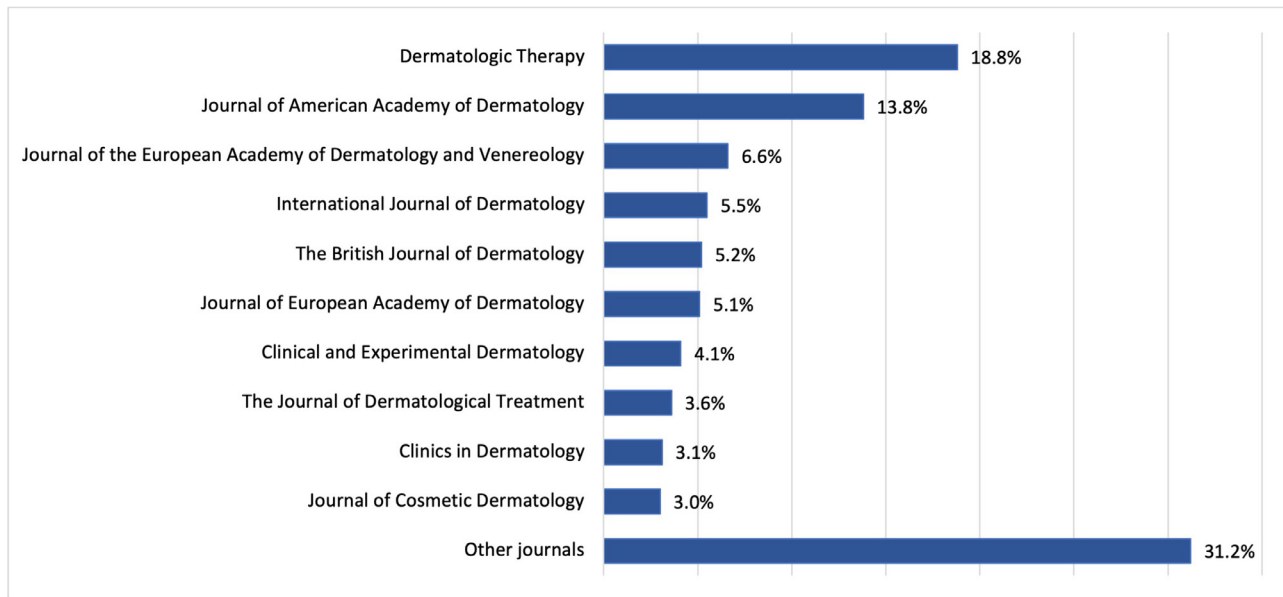


Fig. 1 Top 10 dermatology journals with most COVID-19 publications.

Table 1 Level of evidence for COVID-19 articles published in dermatology journals

Level of evidence (OCEBM)	Study type	Total number of COVID-19 publications by level of evidence (%) (Total 1,928)
1a	Systematic review of RCTs	0 (0)
1b	Individual RCT	2 (0.10)
2a	Systematic review of cohort studies	4 (0.21)
2b	Individual cohort study (including low-quality RCT)	54 (2.8)
3a	Systematic review of case-control studies	21 (1.1)
3b	Individual case-control study, cross-sectional studies, and surveys	276 (14.3)
4	Case series	87 (4.5)
5	Case reports, expert opinion, and bench research	1484 (77.0)

OCEBM, Oxford Center for Evidence-based Medicine; RCT, randomized controlled trial.

expect to see publications with stronger evidence published in the near future. Our analysis did in fact reflect an increase in publication of studies with the strongest level of evidence in 2021 compared to 2020.

Conclusions

Our analysis may be limited, as only SCImago-indexed dermatology journals were included in this study. Our study highlights the paucity of publications with strong evidence following the appearance of a novel virus, as well as the progression to stronger evidence publications as researchers gained additional time and experience.

References

- Bauchner H, Fontanarosa PB, Golub RM. Editorial evaluation and peer review during a pandemic: how journals maintain standards. *JAMA*. 2020;324:453–454.
- Farshchian M, Potts G, Kimyai-Asadi A, Mehregan D, Daveluy S. Outpatient teledermatology implementation during the COVID-19 pandemic: challenges and lessons learned. *J Drugs Dermatol*. 2020;19:683.
- Toussi A, Barton VR, Le ST, Agbai ON, Kiuru M. Psychosocial and psychiatric comorbidities and health-related quality of life in alopecia areata: a systematic review. *J Am Acad Dermatol*. 2021;85:162–175.
- Nickles MA, Zhao J, Patel MM, et al. Publication rate of clinical trials in dermatology before and during COVID-19. *Int J Dermatol*. 2021;60:250–252.