Clinical Ophthalmology

Dovepress
Taylor & Francis Group

Open Access Full Text Article

LETTER

A Note on Literature Review Related to "Oral Azithromycin Versus Oral Doxycycline in the Treatment of Meibomian Gland Dysfunction: A Systematic Review and Meta-Analysis" [Letter]

Margarita Safir[1,2], Michael Mimouni[3,4], Dror Ben Ephraim Noyman[3,4]

[1]Ophthalmology Department, Rabin Medical Center, Petah Tikva, Israel; [2]Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel; [3]Ophthalmology Department, Rambam Health Care Campus, Haifa, Israel; [4]Ruth and Bruce Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel

Correspondence: Dror Ben Ephraim Noyman, Email dror.ben.ephraim@gmail.com

Dear editor

We are writing in reference to the article titled "Oral Azithromycin versus Oral Doxycycline in the Treatment of Meibomian Gland Dysfunction: A Systematic Review and Meta-Analysis" recently published in Clinical Ophthalmology.[1] While the article makes an important contribution to the literature, we wanted to humbly bring to your attention another relevant study that could have complemented the discussion and findings presented by the authors.

Our meta-analysis, recently published in Acta Ophthalmologica,[2] systematically reviewed and analyzed 54 eligible studies, ultimately including six randomized controlled studies involving 563 cases across three countries assessing the safety and efficacy of macrolides (ie, Azithromycin) versus tetracyclines (ie, Doxycycline) for Meibomian Gland Dysfunction (MGD).

Our findings align with and expand upon those reported in the Clinical Ophthalmology article. Specifically, we found that overall, both treatment methods induced improvement in MGD signs and symptoms. However, macrolides were significantly superior in the total signs score (pooled standardized mean difference (SMD) −0.51, 95% confidence interval (CI): −0.99 to −0.03), meibomian gland secretion score (pooled SMD −0.25, 95% CI: [−0.48, −0.03]), tear break-up Time (TBUT; SMD −0.31, 95% CI: [−0.50, −0.13]) and fluorescein staining score (SMD −1.01, 95% CI: [−1.72, −0.29]). Moreover, while no severe complications were reported for both treatments, the macrolide group exhibited significantly less adverse events (pooled odds ratio 0.24 with a 95% CI of 0.16 to 0.34).

While the authors have conducted a valuable meta-analysis, and have reached parallel conclusions regarding the efficacy and safety of macrolides, it is worth noting that this is not the first systematic review and meta-analysis addressing the efficacy and safety of oral antibiotics for the treatment of MGD. Including our findings, based solely on RCTs according to the Cochrane Society's guidelines, could have further enriched the article's discussion, particularly in areas that were not extensively addressed, such as individual sign scores (eg, fluorescein staining and TBUT).

We understand that no study can cover all relevant literature, and we appreciate the thorough work of the authors. Nevertheless, we believe that referencing our findings might provide readers with a more comprehensive view of this topic and contribute to advancing research in the field of MGD.

Disclosure

The authors report no conflicts of interest in this communication.

Received: 22 December 2024
Accepted: 29 January 2025
Published: 4 February 2025

© 2025 Safir et al. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at https://www.dovepress.com/terms.php and incorporate the Creative Commons Attribution – Non Commercial (unported, v3.0) License (http://creativecommons.org/licenses/by-nc/3.0/). By accessing the work you hereby accept the Terms. Non-commercial uses of the work are permitted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission for commercial use of this work, please see paragraphs 4.2 and 5 of our Terms (https://www.dovepress.com/terms.php).

References

1. Bukhari ZM, Alsudais AS, Bshnaq AG, et al. Oral azithromycin versus oral doxycycline in the treatment of meibomian gland dysfunction: a systematic review and meta-analysis. *Clin Ophthalmol*. 2024;18:3353–3363. PMID: 39600615; PMCID: PMC11588669. doi:10.2147/OPTH.S480719.
2. Ben Ephraim Noyman D, Chan CC, Mimouni M, Safir M. Systemic antibiotic treatment for meibomian gland dysfunction-A systematic review and meta-analysis. *Acta Ophthalmol*. 2024;102(1):e1–e10. Epub 2023 May 4. PMID: 37139848. doi:10.1111/aos.15681.

Dove Medical Press encourages responsible, free and frank academic debate. The contentTxt of the Clinical Ophthalmology 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the Clinical Ophthalmology editors. While all reasonable steps have been taken to confirm the contentTxt of each letter, Dove Medical Press accepts no liability in respect of the contentTxt of any letter, nor is it responsible for the contentTxt and accuracy of any letter to the editor.

Clinical Ophthalmology

Dovepress
Taylor & Francis Group

Publish your work in this journal

Clinical Ophthalmology is an international, peer-reviewed journal covering all subspecialties within ophthalmology. Key topics include: Optometry; Visual science; Pharmacology and drug therapy in eye diseases; Basic Sciences; Primary and Secondary eye care; Patient Safety and Quality of Care Improvements. This journal is indexed on PubMed Central and CAS, and is the official journal of The Society of Clinical Ophthalmology (SCO). The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit http://www.dovepress.com/testimonials.php to read real quotes from published authors.

Submit your manuscript here: https://www.dovepress.com/clinical-ophthalmology-journal

https://doi.org/10.2147/OPTH.S513728