

Reply to Comments on "Treatment of Delayed-onset Inflammatory Reactions to Hyaluronic Acid Filler: An Algorithmic Approach"

David K. Funt, MD, FACS

Sir: **S** nozzi et al¹ have recently called into question the originality of an article I published in the June 2022 issue of *PRS Global Open.*² The article was written at the request of former *PRS* Editor-in-Chief Rod Rohrich, based on a presentation of the same topic made at the American Society for Aesthetic Plastic Surgery Aesthetic Meeting 2021 (Miami, May 2021). Prior to this meeting and before the publication of the 2018 Snozzi et al article with a similar title, my protocol was presented at multiple continuing medical education (CME) and non-CME events in the United States, and to key opinion leaders and medical affairs staff at Allergan, at the time when delayed-onset nodules first became clinically relevant.

The current article is true to the presentations given at these events and presents a treatment approach for delayed-onset inflammatory reactions. As clearly stated in the text, it is an update to broader guidance on dermal filler adverse events that I originally co-authored in 2013.³ If Snozzi et al came to similar conclusions in 2018,⁴ I can only assume that my initial guidance continues to be relevant.

Snozzi et al subsequently report that since the publication of their 2018 article they have changed their approach, and now recommend injection of hyaluronidase as a first-line treatment for all delayed-onset inflammatory reactions, regardless of etiology. Their inference is that my algorithm overstates the importance of antibiotics. I would like to point out that the approach in my treatment algorithm is to target treatment based on suspected etiology.² For example, if a patient presents with signs of an infective etiology, namely warmth, tenderness, erythema, induration, or edema, my recommendation for initial treatment would be broadspectrum antibiotic therapy. In contrast, if generalized edema or induration is present, my recommendation is to start the patient with oral steroids with concurrent

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Copyright © 2023 The Author. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. Plast Reconstr Surg Glob Open 2023; 11:e4661; doi: 10.1097/ GOX.000000000004661; Published online 17 February 2023. injection of hyaluronidase. I recognize that it can be difficult to distinguish between inflammatory nodules that result from infectious processes versus those that are immune-mediated. The algorithm was developed over time, based on my experience as an adverse event consultant for Allergan, Revance, Galderma, and Merz: leading pharmaceutical companies in the aesthetic field. This algorithm has been successfully employed by me in this capacity and is based on my extensive experience. My aim is always rapid resolution of the offending area with minimal trauma for the patient. The algorithm presented has allowed me to achieve this in the majority of patients I have been asked to treat.

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DISCLOSURE

The author has no financial interest to declare in relation to the content of this article.

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