

Reply: Letter to the Editor: A Comprehensive Review of Medicinal Leeches in Plastic and Reconstructive Surgery

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Sir,

We would like to thank the authors for their response and comments regarding our article entitled “A Comprehensive Review of Medicinal Leeches in Plastic and Reconstructive Surgery.” Their letter certainly reiterates and highlights some important points we sought to convey in our original article. Although at the time of our writing, we were unaware of their institution-specific data points, we feel our comprehensive literature search supports many of the themes they have raised.

With regard to the use of leeches in the case of digital replantation, we would like to clarify that our choice of word order was not meant to imply a decreasing success rate for each indication listed, such as an ingredients list on food products, but rather as a comprehensive restatement of indications for hirudotherapy as found in our literature review. With respect to the use of medicinal leeches in fingertip replantation, both Hattori et al¹ and Buntic and Brooks² list hirudotherapy as a useful salvage option in scenarios where the replanted tissue shows evidence of venous congestion. Choice of digital replantation methodology, such as arterial and/or venous anastomoses or composite grafting, always requires patient-specific considerations such as zone of injury, mechanism of injury, and surgeon expertise.

In addition, we certainly agree that leeches have never been a frontline therapy for relief of flap congestion and, as we stated, are accompanied by an evolving risk profile. We agree that they should be considered only after a return to the operating room and after a thorough anastomosis exploration has been conducted. For clarification, our article suggests that leeches can be used as a salvage option to bridge viable tissue during

the time required for neovascularization. The authors’ case of aggravated flap ischemia after implementation of hirudotherapy certainly highlights the alteration to flap rheology following the application of medical leeches. Our article discusses standard hemoglobin monitoring intervals, maintenance of up-to-date type and screening, and thresholds for patient blood transfusion to combat the risk of significant blood loss.

Once again, we would like to thank the authors for reading and thoughtfully evaluating our article. Our article seeks to provide surgeons at all levels of training and expertise with a unified and current resource as they implement medical leech therapy in patient care. As this age-old, yet still modern, salvage therapy remains a tool for plastic and reconstructive surgeons, the authors’ additional data and those of others will continue to shape the landscape regarding best practices for hirudotherapy in the future.

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DISCLOSURE

Dr. Janis receives royalties from Thieme and Springer Publishing. Dr. Hackenberger reports no conflicts.

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1. Hattori Y, Doi K, Ikeda K, et al. Significance of venous anastomosis in fingertip replantation. *Plast Reconstr Surg*. 2003;111:1151–1158.
2. Buntic RF, Brooks D. Standardized protocol for artery-only fingertip replantation. *J Hand Surg Am*. 2010;35:1491–1496.

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