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☐ IN RESPONSE TO: "A PROSPECTIVE STUDY OF STINGRAY INJURY AND ENVENOMATION OUTCOMES"

☐ To the Editor:

We read with interest the recent paper by Myatt et al. (1). We commend the authors for their work on the underreported topic of the management of stingray envenomation. We would like to point out some limitations of the paper that challenge the author's assessment.

The study design and data collection could have been either more rigorous or more rigorously reported. While it is true that all victims were immersed in hot water, there was no mention of the technique of heating or confirmation of the water temperature achieved, and neither rationale nor control for the large variation in immersion time. The authors failed to entertain the possibility that ongoing symptoms or development of a complication may be associated with shorter submersion duration or failure to maintain an adequate water temperature. It would be valuable to know whether there was any difference in submersion time or temperature between the group that had a complication or had ongoing symptoms compared to the group that did not.

In addition, the observational case series is not designed to detect any significant difference between the groups, as demonstrated by a lack of clear statement of hypothesis or sample size calculation. Subjects could have been easily randomized to 2 groups (such as use of povidone wipes or not) and the samples powered to detect a significant difference.

In conclusion, the authors suggest that on-site management of stingray envenomation is safe and has a low rate of complications. However, it is challenging to draw any conclusions from the paper as the analysis suffers from limitations in methodology, data collection, and the small sample size. A more rigorous prospective study with a larger sample size is needed for readers to benefit from the author's geographically unique exposure.

Elie Harmouche, MD
New York University
School of Medicine
New York, New York

Megan Ann V. Mendoza, MD
Nicole Kiyohara, MD
Department of Psychiatry
New York University School of Medicine
New York, New York

Robert S. Hoffman, MD
Division of Medical Toxicology
Ronald O. Perelman Department of Emergency Medicine
New York University School of Medicine
New York, New York

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☐ REPLY

☐ To the Editor:

We thank Harmouche et al. for their review of our article. We are glad a common problem on the West Coast is generating attention nationally, especially this underreported problem. Prospective studies on stingray stings are uncommon for several reasons. First, other than in the southern part of the West Coast and perhaps the Gulf of Mexico, stings only occur in a short season, and only when stingrays are common near popular beaches. Second, many of these injuries do not rise to the level of requiring attention in a health care facility—we specifically located our study at the shore because the vast majority of people with stingray stings are treated at the beach by lifeguards, who know from interacting with local health care providers that hot water immersion is most often effective for treatment (1). Health care facilities typically see these patients only when a retained foreign body is suspected, there is ongoing bleeding, a gaping wound occurs, or an infection ensues. Interestingly, only a few studies have tried to validate this "well-known" hot water immersion treatment, and most have been retrospective (2,3).

Our intent was to go to the beach to begin to validate what is already considered the standard of care among our lifeguards. We hoped to enroll multiple subjects each day based on communications with lifeguards. The number of stingray injuries can range from 0 to over 30 on any given day at our chosen study location. We were surprised by our limited number of enrollments, but unfortunately our convenience sampling occurred on days that were inconveniently low for stingray injuries