for utilization in the safe discharge of patients from the ED (1). It is therefore unlikely that qSOFA would be more suitable in this regard, though further research is required.

Finally, it is important to mention that all of the studies cited by Úbeda-Iglesias et al. utilized mortality as a primary outcome. While mortality is certainly an important and patient-centered outcome, the job of the emergency physician is more focused upon identifying the risk of future deterioration, of which mortality is only a single component. For example, an emergency physician who discharges a patient home with pneumonia and oral antibiotics, only to find that the patient returned 24 h later and was intubated, suffered a long course of critical care, and was ultimately discharged with severe disability, would not find much solace in the fact that the patient did not die. This again reinforces the difficult nature of disposition in the ED. Patients who deteriorate after ward transfer (and requiring intensive care unit admission in a delayed fashion) suffer longer hospital stays and greater costs of care, beyond the issue of mortality itself (9). Thus, we believe emergency physicians should therefore focus discharge decision making on the risk of short-term deterioration, and not simply mortality. Utilizing ED lactate for safe discharge of patients with infection is not supported by our study or others, and may result in adverse outcomes in this population.

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☐ STINGRAY ENVENOMATION REQUIRES IMAGING

☐ To the Editor:

We read with interest the prospective study of stingray envenomation by Myatt et al. (1). We took particular note of the absence of any radiologic imaging among their cohort, despite the presence of persistent symptoms 3 days post-injury and development of infection in at least 1 subject at 6 days post-enrollment. Animal parts such as fangs, claws, and cartilaginous skeletal remnants, like stingray barbs, are radiopaque and retention of said animal parts can result in very serious, long-term wound complications, not the least of which is infection.

The only reason to utilize a test—any test—is if the results of the test might change your planned management. Because animal body parts are radiopaque and their presence would surely require removal or additional management strategies, we strongly recommend that all of these (stingray) injuries undergo evaluation with an x-ray study, specifically to evaluate for the presence of retained foreign bodies. In addition, the stingray barb is encased in a radiolucent integumentary sheath impregnated with the venom, therefore, it is our practice to perform limited local exploration and extensively irrigate these wounds with hot water.

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☐ STINGRAY ENVENOMATION

☐ To the Editor:

We appreciate Dr. O'Malley's and Dr. Mark's comments on our prospective case series of stingray injuries and envenomations (1). As stated in the methods, this was an on-site observational study at a local Southern California beach. Our study group was not involved in the direct management of the study enrollees. Lifeguards have been managing stingray injuries for decades in this manner on the beaches of San Diego. It was the intent of this study to characterize these injuries and determine the natural course and outcomes of these sting injuries.

Foreign-body retention with stingray injury is a real risk and can have serious infectious consequences. We agree that injuries with retained spines or foreign bodies need to be identified. Local wound exploration is certainly a reasonable approach in the acute care medical professional setting, but is beyond the scope of practice of local lifeguards. However, we do not necessarily agree with the recommendation that all injuries warrant x-ray evaluation. There does not seem to be sufficient literature to support this practice. Clark et al. have published the largest retrospective series on record and found x-ray studies to have very limited utility and diagnostic yield (1,2). There are certainly case reports, such as O'Malley et al., that have shown identification of a barb after stingray injury with use of radiographs (3). When positive, these images are helpful, but we do not believe radiography has the sensitivity to be an effective routine screen.

The acute health care setting likely sees a biased sample, with more severe stingray injuries in individuals seeking pain control and wound evaluation. It can be presumed that more-severe injuries will likely have a higher incidence of retained stingray barbs or infectious complication. Our population was composed of all beachgoers who sought on-site lifeguard assistance immediately after their injury and were treated with hot water submersion. Albeit a small sample size, all 22 of these on-site stings were managed without serious, long-term wound complication without the use of radiographic imaging. Only 1 patient sought professional medical care after developing subsequent soft-tissue infection. It was managed successfully without imaging, but it would certainly be reasonable to obtain imaging in that scenario.

We believe in a thoughtful case-based approach and taking into account the appearance, size, severity, and location of the wound, foreign-body sensation, and comorbidities. Minor superficial injuries likely need basic wound care, and more severe, deeper penetrating injuries warrant further investigation to rule out retained spine. There is growing support for the use of ultrasound and magnetic resonance imaging to identify small foreign bodies in the soft tissue, and we advocate for these modalities, perhaps with the addition of x-ray studies if there is reasonable concern to diagnostically evaluate for the presence of retained stingray spine.

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