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Case illustrated

Rapidly developing and fatal *Vibrio vulnificus* wound infection

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A 59 year old male presented at a hospital in September 2013 with a painful blister and significant associated erythema on his right ankle (Fig. 1). The patient complained of an acute burning sensation emanating from his lower ankle. The patient attributed the infection to a possible insect bite, which had subsequently been exposed to seawater during a fishing excursion in the Gulf of Mexico, USA. The infection rapidly progressed (4 h and 15 min between panel A and B), with extensive swelling and erythema of the lesion evident. The patient's condition subsequently deteriorated, with a rapid and progressive spreading of fluid-filled bullae over the majority of his body surface. Despite aggressive treatment with the antibacterial agents doxycycline, ceftazimide, and clindamycin the patient succumbed to the infection approximately 28 h after admission to hospital. The Gram-negative bacterium *Vibrio vulnificus* was subsequently isolated. It should be noted that the individual did not have obvious underlying medical conditions, which make this a particularly noteworthy and unusual case.

Vibrios are amongst the fastest growing bacteria known, and the progression of *V. vulnificus* wound infections can be incredibly rapid. Indeed, in the case presented here, the individual succumbed to the infection in a little over 48 h following transmission. Furthermore, *V. vulnificus* wound infections carry a ~20% mortality rate, underlying the need to quickly and accurately identify these pathogens in clinical settings. This particular clinical picture is to our knowledge unique in that it shows a fatal *V. vulnificus* wound infection at its very earliest stages, as opposed to the more severe and extensive swelling, erythema and subsequent tissue necrosis normally documented. A recent increase in *Vibrio* wound infections, including the USA, as well as in Europe should be noted. The minute portal of entry, the rapidity of infection and clinical outcome, and the increasing geographical spread of non-cholera *Vibrio* wound infections underlie the need for clinicians to identify possible exposure to seawater. This is particularly important in patients who have a history of diabetes, immune disorders or liver dysfunction.

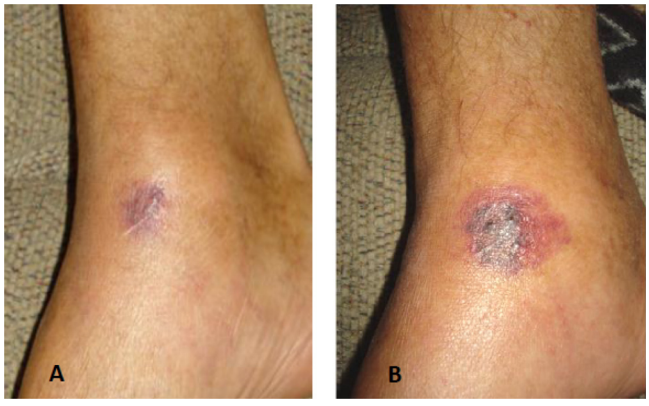

Fig. 1. Initial stages of a fatal *V. vulnificus* wound infection. The photograph (panel A) shows initial erythema associated with the early stages of infection. The progression of the infection (B) is rapid, and was taken 4 h and 15 min later, showing more extensive erythema of the lesion.

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