

Introduction:

A gram-negative bacterium, named *Vibrio vulnificus* can result in serious infections and is the primary cause of mortality related to shellfish in the US. Infections can manifest in a spectrum from cellulitis to necrotizing fasciitis and fulminant septicemia [1]. People with chronic liver disease and diabetes are at increased risk for complications.

Case presentation:

A 57-year-old female with history of type 2 DM presented with right-hand pain and swelling along with high-grade fever and chills. She was deboning the spine of catfish, when the bone got stuck in her right palm and on trying to pull it out, she sustained a puncture wound. Physical exam revealed puncture wound on hypothenar eminence of right hand with surrounding erythema and tenderness. She complained of pain with active and passive range of motion, without signs of neurovascular compromise. Initial laboratory data revealed WBC count of 22,000 cells/microliter, high CRP of 2.82 mg/dl, and slightly elevated lactate of 1.5 mmol/L. Right hand x-ray showed soft tissue and subcutaneous edema. Blood cultures were obtained, and empiric IV Vancomycin and Piperacillin/Tazobactam were started. After 23 hours of incubation, blood cultures became positive for gram-negative rods and infectious diseases were consulted. Piperacillin/Tazobactam was continued, and Vancomycin was replaced by Doxycycline. MRI of hand showed diffuse subcutaneous edema and flexor tenosynovitis. Plastic surgery recommended management with IV antibiotics, elevation, and betadine soaks. Later, blood cultures finalized as *V. Vulnificus*. Piperacillin/Tazobactam was transitioned to IV ceftriaxone and doxycycline. Pain and swelling decreased and on day 4, she was discharged on oral doxycycline to complete 14-days course and had complete resolution on discharge follow-up.

Discussion:

V. vulnificus infections are mainly caused by consuming contaminated seafood, especially raw oysters, or inoculation of skin while handling seafood or exposure of broken skin to seawater [2,3]. Literature review revealed only one article with two cases of Necrotizing dermatitis from *V. vulnificus* reported in France [4]. Our case is the first reported case of catfish-associated *V. vulnificus* septicemia resulting from deboning the catfish in North America. Early culture and diagnosis are crucial, as such infection can rapidly progress to septic shock and death.