Compartment Syndrome and Wrist Disarticulation after a Catfish Sting

**Introduction**

Catfish can be found throughout the world in both fresh and saltwater. They can inject stings through their spines located on their dorsal and pectoral fins (known as puncture and laceration wounds). The spines of catfish contain toxins that can have rare but devastating effects on their victims.

**Case Report**

- 56-year-old R hand dominant man presented to the ED with right hand pain and swelling 24 hours after being stung by a catfish (Figure 1).
- Exam was suggestive of compartment syndrome and patient was taken to the OR for emergent fasciotomies and I&D (Figures 2-5).
- Patient developed gangrene to digits which progressed over his hospital course
  - POD 1 repeat I&D
  - POD 2 cultures grew *Vibrio damae*
  - POD 3 repeat I&D (Figure 6)
  - POD 10 digit amputation of index and long finger to PI (Figure 7)
- POD 12 wrist disarticulation

**Discussion**

- Spines on the dorsal and pectoral fins become erect when the fish is agitated.
- Glands in the skin of the catfish as well as at the base and lateral edges of the spine contain toxins.
- These toxins have dermatotoxic, edemogenic, vasoparalytic, inflammatory, and necrotic factors.
- Trauma from the sting itself introduces native aquatic bacteria into the wound.
- Treatments include hot water soaks, local or regional anesthesia, calcium channel blockers, antibiotics, I&Ds.
- No previously reported cases of compartment syndrome of the hand after a catfish sting

**Conclusion**

The combination of venom injected from the catfish sting, *Vibrio damae* infection, and late presentation led to the eventual wrist disarticulation seen in this patient. In addition, previous stings endorsed by the patient may have resulted in a significant immune response such as a hypersensitivity type reaction.

**References**