

# Penetrating Injury from Horseshoe Crab Tail

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Horseshoe crabs belong to the Merostome class of arthropods.<sup>1</sup> Three genera of these animals now reside in United States Atlantic coastal waters, in the Gulf of Mexico, and in the Asian Pacific coasts ranging from Korea to the Indo-Pacific. These crabs can be up to 3 feet long from the rostrum to the tip of the telson, which is articulated to the body and has a sharp point with nu-

merous spicules on its lateral surfaces. These animals are scavengers that plow through the sand and mud at the bottom of the coastline in water up to 36 feet in depth. The Delaware Bay, which has one of the most abundant concentrations of these animals in the world, is populated with *Limulus polyphemus*.<sup>1</sup> A representative case history of injury caused by horseshoe crab follows.

A 55-year-old male experienced sudden penetrating pain in the left foot while walking on the beaches of the Southern Delaware coast. A foreign object was noted protruding from his foot and was identified by a lifeguard as

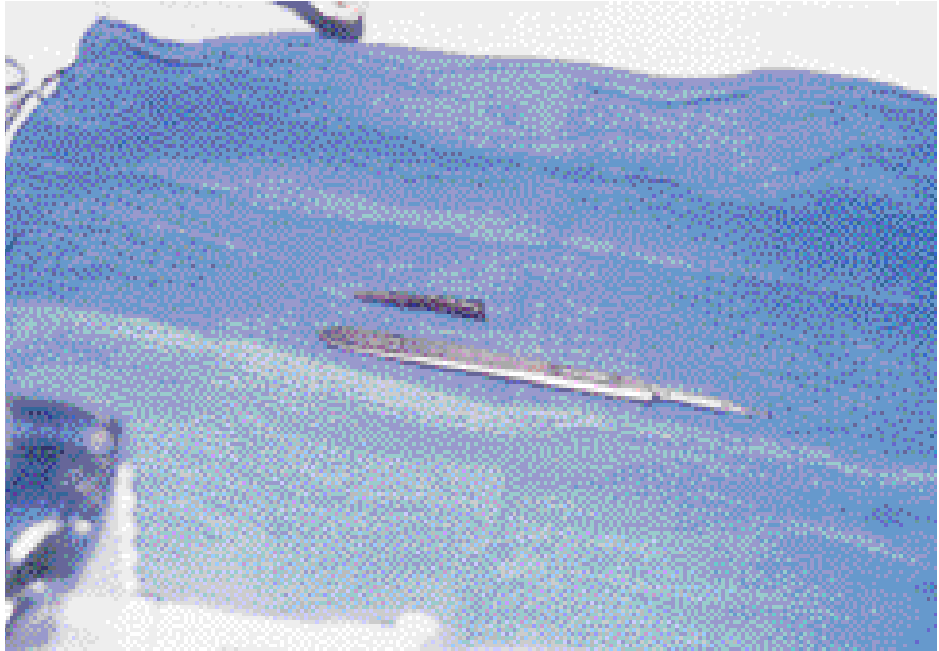
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**FIGURE 1.** Tip of horseshoe crab tail seen on radiograph between third and fourth metatarsal bones.



**FIGURE 2.** *Top*, tip of horseshoe crab tail after surgical removal. *Bottom*, bulk of tail spine. A small intermediate segment is missing.

the “spike” or tail of a horseshoe crab. The object was immediately removed on the beach, and emergency room care at that time consisted of soaks, tetanus toxoid, cefadroxil 1.5 g/day, and ciprofloxacin 1 g/day. Pain, erythema, and edema progressed over the next 24 hours with an oral temperature of 38.4°C. X-ray revealed retained foreign body fragments that were surgically removed, and the wound was packed (Figures 1 and 2). *Vibrio alginolyticus*, *Enterobacter cloacae*, and *Corynebacterium* species were isolated on culture. Intravenous ceftriaxone 100 mg every 8 hours, intravenous ceftriaxone 1 g every 12 hours, and doxycycline 100 mg every 12 hours were

started, followed then by surgical closure of the wound. The postoperative course was uneventful.

Three major points are illustrated by the case. 1) A radiologic examination of the wound is necessary to locate this spine. 2) Surgical removal will be required because of the spicules on the tail. 3) Adequate bacteriologic isolation can only be done using media isotonic with the microenvironment of the injury (3% salt).

### REFERENCE

1. Halstead BW: Poisonous and Venomous Marine Animals of the World, vol 1. Washington DC, US Government Printing Office, 1965.