



**YUAI  
EMERGENCY  
MEDICINE**

# I'm fishing. Don't get on my nerves!

Haruka Ono, MD\*<sup>1</sup>, Yuriko Morisako, MD\*<sup>2</sup>, Sunao Yamauchi, MD, FACEP\*<sup>1</sup>

Department of Emergency Medicine, Yuuai Medical Center, Okinawa, JAPAN\*<sup>1</sup>.

Department of Pediatrics, Nanbu Medical Center & Children's Medical Center, Okinawa, JAPAN\*<sup>2</sup>.



## 【CC】 Puncture wound to the upper arm

### 【HPI】

The patient is a previously healthy 29-year-old fisherman, who was medevaced from a tuna fishing boat after sustaining puncture wound to his right upper arm. The patient was on board a commercial tuna fishing vessel on the ocean and accidentally struck by a giant tuna fishhook, which came from another fishing vessel sailing nearby. The fishhook is approximately 8 cm (3.14 inch) in length and has a barb. The fishhook got stuck in the patient's right upper arm and the patient got hung in midair for a short period of time.

### 【PE】

**Vital signs:** Alert and oriented. Temp 38.3°C (100.94°F), HR 79bpm, BP 154/91mmHg, RR 20/min, SpO2 97%.

**General appearance:** Not in acute distress.

**Lungs:** CTAB

**Heart:** Normal S1, S2. No murmurs, gallops, rubs.

**Extremities:**

All fingers are warm to touch. CRT < 2secs. Right radial and ulnar pulses are intact.

**There is a large tuna fishhook sticking out of the right upper arm.**

The entry wound appears to be approximately 1.5cm in width. No active hemorrhage, erythema, warmth or swelling noted around the puncture site.

The patient reports **total loss of sensation in the entire right fifth finger. Decreased sensation in ulnar aspect of the right fourth finger also noted.**

**Able to fully grip in right hand but weaker strength compared to the left hand.**

### Questions:

1. What are the important physical examinations to perform in this patient?
2. Based upon the injury site and symptoms, what structure do you think is injured?



### Answers:

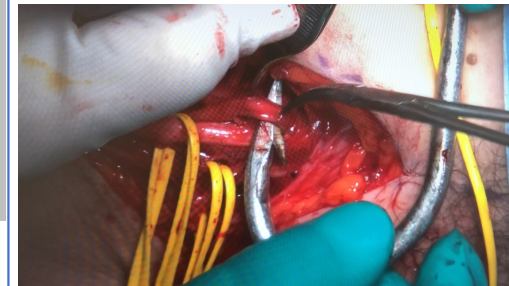
1. In addition to usual trauma evaluation, perform thorough vascular and neurological evaluation of right upper extremity.
2. Ulnar nerve.

### 【Case Discussion】

The careful neurological evaluation of right upper extremity showed **complete loss of sensation in the right fifth finger and decreased sensation in ulnar aspect of the right fourth finger.** Although **right hand grip was somehow weaker compared to the left,** motor function was almost intact and peripheral circulation was also intact. Given these findings, ulnar nerve injury was suspected. **CT scan with contrast of the injured arm showed a tip of the fishhook located adjacent to brachial artery.** No obvious hematoma or extravasation of the contrast was confirmed.

In ED, the patient was given analgesics, IM tetanus shot and IV antibiotics. Consultation was made to orthopedic surgery team and the patient was taken to OR for wound irrigation and fishhook removal. Intraoperatively, it was confirmed that **the fishhook penetrated the ulnar nerve and caused longitudinal dissection of the nerve.** Fortunately, brachial artery and median nerve were intact. The fishhook was removed manually with extreme caution and the perineurium was repaired.

Occupational therapy was initiated soon after admission. Although he had some residual numbness in affected fingers, he did well otherwise and discharged to home on POD 7 with outpatient rehabilitation appointment.



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### Clinical Pearls & Take Home Messages:

1. Even though the entry wound appears small or subtle, penetrating or puncture wound can cause significant damage to underlying internal structures. It is extremely important to perform thorough neurovascular examination when evaluating penetrating or puncture wounds.
2. Do not attempt to blindly remove a fishhook (especially the one with a barb) that goes deep under the soft tissue, as it can cause unexpected damage to underlying vasculature or nerves. When in doubt, obtain imaging study such as CT scan with contrast to avoid neurovascular complications.

**Together, Do Better, To Higher.**