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### **Freshwater Fishhook Injuries and Antibiotic Prescribing Patterns: A retrospective analysis**

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**Abstract**

○ **Background**

○ Fishing remains a popular leisure and sporting activity in the United States. One common injury while fishing is an embedded hook in the fisherman/women or a bystander. Hooks, often barbed, are designed to not easily be removed to ensure the angler completes the catch. Studies vary on indications for antibiotic use from recommending antibiotics in all fishhook injuries, to location of injury, and/or immunocompromised status of patients<sup>1,2,3,4,5</sup>.

○ **Methods**

○ This is a retrospective analysis of patient seen in the Emergency Department at Henry Ford Jackson Hospital after sustaining a fishhook injury.

○ Patient characteristics, location of embedment, antibiotic usage data was collected

○ **Results**

○ 51 patients were identified. Fishhook injuries primary occurred in the fingers.

○ Antibiotics were prescribed in 51% of patients, the class of antibiotic and course varied greatly.

○ **Conclusions**

○ Antibiotic prescribing patterns vary widely. There were no recorded complications in the patients who did or did not receive antibiotics

○ Antibiotics are likely not necessary in fishhook embedment injuries

**Objectives**

○ Fishhook injury management includes removing embedded hook, but also wound care. There appears to be no consensus recommendation as to whether antibiotic prophylaxis is needed. Previous research shows a wide practice pattern variation in antibiotic, and if they are deemed necessary, there is no guidance as to what antibiotics should be used.

**Materials & Methods**

○ This study is a retrospective analysis of patients who were seen in the ED at HFAH after sustaining a fishhook injury, primary measures include: (1) Assessing and describing patient characteristics such as age and sex; (2) characteristics of the injury such as narrative of the injury, type of injury, type of fishhook, location of injury, and associated complications; and (3) whether antibiotics were prescribed and if so what antibiotic.

○ 190 ICD-10 codes were used to screen for possible fishhook injury from 01/01/2016 through 07/01/2022

**Results**

● 51 Patients were identified with a mean age of 47.94 years. The majority of patients, 43 or the 51, were identified as males. The most common location of embedment was in fingers at 78.4%. (See table 1). Antibiotics were prescribed in 51% of patients (See table 2).

● Only 4 patients were found to have followed up within 30 days. 3 of the patients were seen for different complaints. The fourth patient was seen by PCP and had a well healing wound without signs of infection. No patients required initiation of antibiotics after being discharged without them being prescribed.

● Only 4 of the patients were classified as immunosuppressed, all of which was due to diabetes.

**Table 1**

**Body Part with Fishhook injury**

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Arm	1	2.0	2.0	2.0
2 Ear	1	2.0	2.0	3.9
3 Face	1	2.0	2.0	5.9
4 Finger	40	78.4	78.4	84.3
5 Foot	1	2.0	2.0	86.3
6 Hand	2	3.9	3.9	90.2
7 Leg	1	2.0	2.0	92.2
8 Nose	1	2.0	2.0	94.1
9 Scalp	3	5.9	5.9	100.0
Total	51	100.0	100.0	

**Table 2**

	Frequency	Percent
Amoxicillin/clavulanic acid 875mg BID for 10d	1	2.0
Amoxicillin/clavulanic acid 875mg BID for 7d	1	2.0
Cefpodoxime 200mg BID for 5d	1	2.0
Cephalexin 500mg BID for 7d	2	3.9
Cephalexin 500mg QID for 10d	1	2.0
Cephalexin 500mg QID for 5d	6	11.8
Cephalexin 500mg QID for 7d	3	5.9
Cephalexin 500mg TID for 10d	2	3.9
Cephalexin 500mg TID for 5d	2	3.9
Ciprofloxacin 500mg BID for 10d	1	2.0
Ciprofloxacin 500mg BID for 5d	1	2.0
Ciprofloxacin 500mg for BID 7d	1	2.0
Clindamycin 300mg QID for 5d	1	2.0
Levaquin 750mg for 10d and clindamycin 450mg TID for 10d	1	2.0
NA	25	49.0
Sulfamethoxazole-trimethoprim 800/160mg BID for 7d	2	3.9
Total	51	100.0

**Conclusions**

- Fingers were the most common body part of fishhook embedment.
- There is a large practice variation in prescribing prophylactic antibiotics after fishhook embedment and if they are prescribed there is disparity in class and duration. There was no 30 day follow-up visits for infection, indicating prophylactic antibiotics are likely over utilized.

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