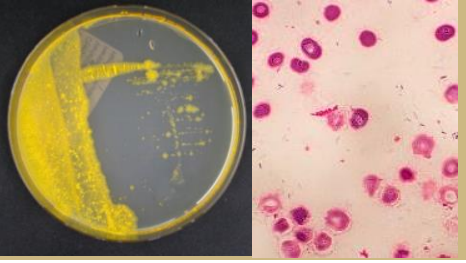

Mycobacterium Marine Infections: Shark Bite

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INTRODUCTION

- Shark bite wounds pose a high risk for infection due to exposure to marine environments, which often harbor unusual pathogens.
- Repeat procedures and wound wash-outs can make it difficult to distinguish osteomyelitis from post-operative inflammation.
- Marine pathogens such as mycobacterium can be difficult to culture and may take 2-6 weeks, PCR should be considered.

CASE DESCRIPTION

- 16 y.o. female was scuba diving in the Carribean, where she was bit by a shark, sustaining injuries to her left arm and right leg
- She underwent a left BKA in Belize and was discharged on prophylactic antibiotics
- Transferred to Miami hospital where she underwent an amputation formalization, wound washout and wound cultures were obtained
- Returned to her home in Colorado. Two weeks later she presented to the ED with fever and drainage from infection site.
- Despite treatment with Zoysn, the patient's fever continued. She was transferred to Children's Hospital Aurora.
- Patient was afebrile on admission, with an erythematous and swollen right BKA, purulent fluid was draining from the site. Surrounding tissue warm to touch.

WORKUP

Figure 1. Right lower limb amputation site and left upper extremity wounds in Children's Hosptial of Colorado ED.

Culture	Result
Mycobacterium marinum	positive
Mycobacterium abscessus	positive
Fungal Cultures	negative
Anaerobic Cultures	negative
MSSA	positive
Enterococcus faecali	positive

Table 1. Final culture results for patient across various hospitalizations.

Figure 2. MRI of RLE amputation site, denoting area of concern for infection

Concerns for osteomyelitis

- Medullary hypointensity on MRI near the distal diaphysis
- Surrounding soft tissue edema
- No cystic pockets for less invasive sampling for culture
- Infectious disease and orthopedics debated the necessity of another wash-out. Treatment team elected to move forward with repeat incision and drainage with wound cultures.

DISCUSSION

- Polymicrobial infections with rare environmental pathogens following post-traumatic amputations require a multidisciplinary approach.
- Early detection and continued surveillance of wound cultures is integral to optimal treatment and outcomes.
- It is important to continually monitor for polymicrobial infections in post-amputation patients.
- Follow-up on labs when patients are transferred between institutions is vital to ensure proper treatment of infections.

CONCLUSION

- Since the bite, the patient's wound has grown *E. faecalis*, *MSSA*, *M. marinum*, and *M. abcessus*. Overall, she was treated with 13 different antibiotics over the course of 9 weeks across 4 hospitals. She discharged with long-term antibiotics Including Amikacin, Imipenem, Tigecycline, and Linezolid, currently undergoing rehab. for her R BKA and L wrist/hand.

DISCLOSURES

- We have no conflicts to disclose.

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