



Not All Granulomas Come from Fish Tanks: A Chronic Non-Healing Hand Wound After Swimming

Namisha Thapa¹, DO; Luke Strnad^{2,3}, MD

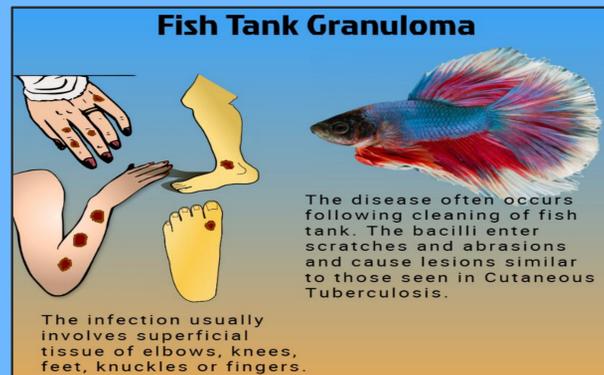
1 Department of Medicine, 2 Division of Infectious Disease, Oregon Health & Science University,
3 Epidemiology Programs, OHSU-Portland State University School of Public Health

Learning Objective

Understand the complexity of diagnosis and treatment of *Mycobacterium marinum* infection

Introduction

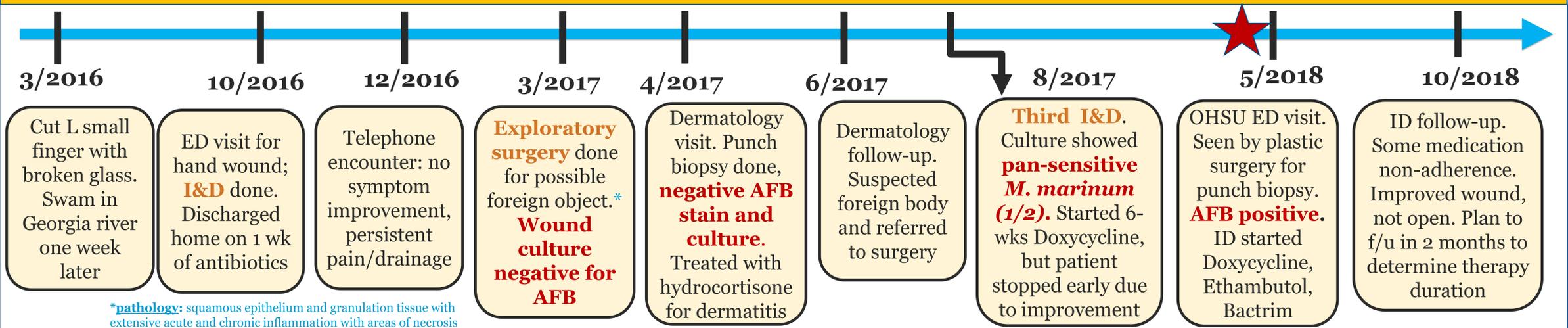
“Aquarium granuloma”, “swimming pool granuloma”, or “fish-tank granuloma” is caused by the non-tuberculous mycobacterium (NTM), *M. marinum*. Usually chronic, indolent, non-healing wound, it requires meticulous history gathering, high clinical suspicion, and often skin biopsy to make the diagnosis.



Case Presentation

A 27-year-old man presented with 2-year history of non-healing left fifth digit hand wound. It initially started as erythema with fluctuance that began after a cut from broken glass and subsequently worsened after swimming in a river.

Clinical Timeline



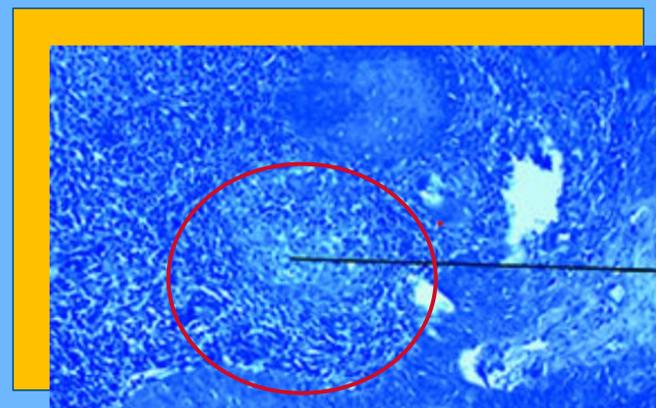
May 2018 Physical Exam



Erythematous, tender lesion on L hand from mid to distal fifth digit with **overlying necrotic scab** and minimal serous drainage

May 2018 Labs & Imaging

- ❖ Normal CBC, CMP, and CRP
- ❖ Wound culture: **+ *M. marinum***
- ❖ Hand MRI: soft tissue wound with underlying cellulitis without evidence of abscess, osteomyelitis or septic arthritis



Caseating granuloma on pathology

Discussion: *M. marinum*

- ❖ Prefers cooler temperature both in vivo and vitro, thus prefers extremities. It is **difficult to culture** depending on lab's incubation temperature.
- ❖ Diagnosis sometimes made with granulomas on path
- ❖ Though NTM (non-tuberculous mycobacterium), can have **false positive QuantiFERON**
- ❖ Good cure rate with appropriate therapy (6 weeks to 12 months) - no controlled trials
- ❖ Superficial skin infections sometimes treated with monotherapy but generally combination therapy with 2 or more of the following antibiotics indicated: macrolides, tetracyclines, sulfonamides, ethambutol

Take Home Points

- ❖ *M. marinum* often goes undiagnosed for many years
- ❖ Negative AFB culture cannot be used to rule it out
- ❖ Early diagnosis and treatment is crucial, as it can cause severe deeper infections in rare cases

References

1. Sette CS, Wachholz PA, Masuda PY, da Costa Figueira RBF, de Oliveira Mattar FR, Ura DG. Mycobacterium marinum infection: a case report. The Journal of Venomous Animals and Toxins Including Tropical Diseases. 2015;21:7. doi:10.1186/s40409-015-0008-9.
2. Aubry A, Chosidow O, Cammes E, Robert J, Cambau E. Sixty-three Cases of Mycobacterium marinum Infection: Clinical Features, Treatment, and Antibiotic Susceptibility of Causative Isolates. Arch Intern Med. 2002;162(13):1746-1752. doi:10.1001/archinte.162.15.1746.