



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

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## Learning Objective

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

## Introduction

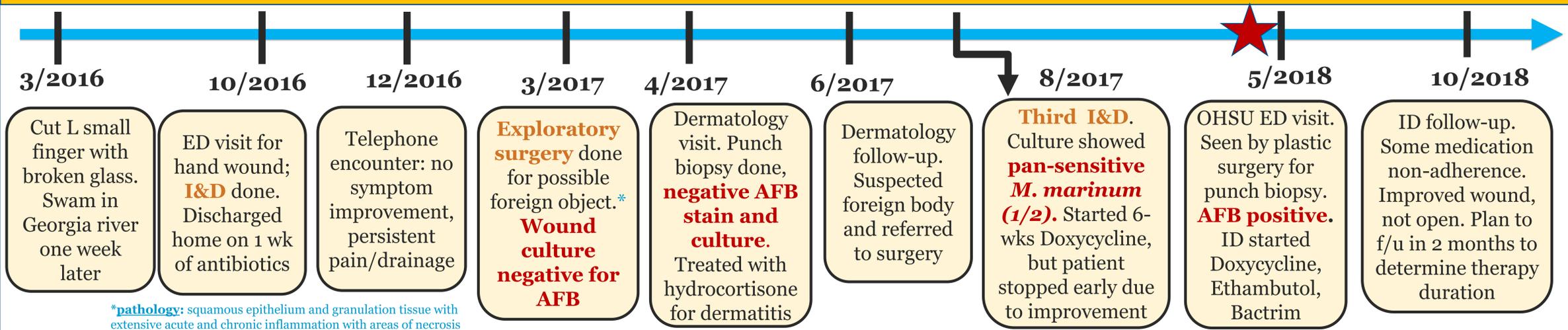
“Aquarium granuloma”, “swimming pool granuloma”, or “fish-tank granuloma” is caused by the non-tuberculous mycobacterium (NTM), *M. marinum*. Usually chronic, indolent, non-healing wound, it requires meticulous history gathering, high clinical suspicion, and often skin biopsy to make the diagnosis.



## 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



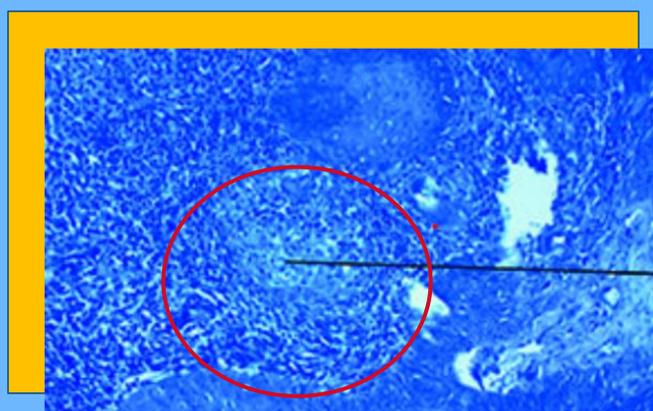
## May 2018 Physical Exam



**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

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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.