

July 20, 2015

Attention: Physicians, Nurse Practitioners, Walk-in Clinics, Hospitals – Emergency,
Dermatologists

RE: CLUSTER OF SUSPECT MYCOBACTERIUM INFECTIONS

The Haliburton, Kawartha, Pine Ridge District Health Unit has been notified of a cluster of individuals in the Campbellford area experiencing a skin and soft tissue infection of the hands and arms possibly related to the handling/cleaning of raw shrimp. Based on clinical presentation and exposure history, these infections are suspected to be due to *Mycobacterium marinum*.

Mycobacterium marinum (*M. marinum*) is a slow growing atypical mycobacterium that is found in salt water and fresh water. *M. marinum* infections, commonly known as fish tank granuloma, produce nodular or ulcerating skin lesions on the extremities. *M. marinum* is most commonly found among aquarium cleaners, fisherman and seafood handlers but has also been found to be associated with handling of raw fish/seafood during food preparation. The infection cannot be acquired by ingesting fish or seafood that carries *M. marinum* nor can it be transmitted person to person (i.e., is not contagious). (An image of skin lesions caused by *M. marinum* can be viewed at <http://www.nejm.org/doi/full/10.1056/ENEJMicm000083>).

What providers should do?

- Suspect and arrange biopsy and treatment of *M. marinum* infection in patients with erythematous, tender subcutaneous nodules of skin or soft tissue infections who report having handled raw fish or seafood.
- **Report all suspect or confirmed cases to the local Health Unit.**
- **Refer suspect patients to a Dermatologist or other appropriate specialist physician for skin biopsy of the lesion(s) for laboratory confirmation.**
- **Consult with an Infectious Disease specialist before commencing treatment and commence treatment after the lesions have been biopsied.**

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Laboratory testing

- Submit biopsy specimens through the nearest Public Health Ontario Laboratory (PHOL) for processing and testing at the PHOL-Toronto. Indicate “Mycobacterial culture” and for diagnostic information please also indicate “Query Mycobacterium marinum”.
- Collect a minimum 4 mm punch biopsy of a representative skin lesion (at least 2 -3 biopsies if possible).
- Collect aseptically, do not wrap in gauze, select caseous portion if available and do not freeze; if delay in transportation is anticipated, store at 2 – 8°C but transportation to the laboratory should be done as soon as possible.
- Place in a sterile container, and a small amount of sterile saline may be added.
- Specimens should also be submitted for histopathology through your local laboratory provider (this service is not performed by the Public Health Ontario Laboratories).
- Specimens should also be submitted for bacterial culture and susceptibilities through your local laboratory provider (this service is not performed by the Public Health Ontario Laboratories).

Note: Please do not submit swabs of purulent material for mycobacterial cultures. Swabs are not recommended for mycobacterial culture.

Treatment

In patients with clinically compatible illnesses, providers should treat empirically for *M. marinum* and not wait for laboratory confirmation. **Consult with an Infectious Disease specialist before commencing treatment and commence treatment after the lesions have been biopsied**

A standard treatment of choice has not been recognized for *M. marinum* skin and soft tissue infections. However, antimicrobial therapy is the mainstay of treatment. The duration of therapy is not well defined, but treatment of skin and soft tissue infections should be continued for 1-2 months after resolution of symptoms and lesions. Therefore, the treatment duration is typically 3-4 months, longer if deeper structures are involved.

If you have questions and/or are reporting suspect or confirmed cases, please call the Health Unit and ask to speak with a nurse in the Communicable Disease Control Department.

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