Mycobacterium interjectum Infection in an Immunocompetent Host Following Contact With Aquarium Fish

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PRACTICE **POINTS**

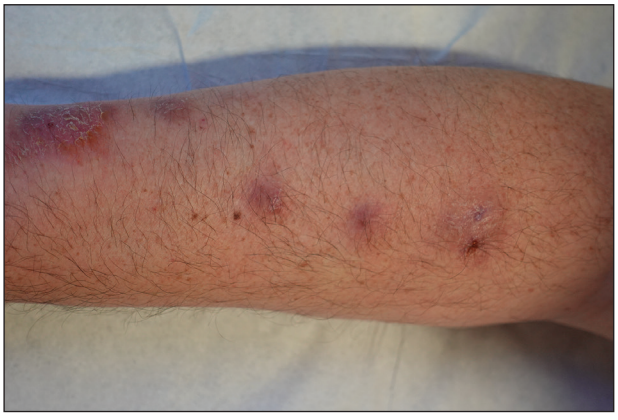
- *Mycobacterium interjectum* can cause cutaneous nodules in a sporotrichoid or lymphocutaneous pattern and may affect immunocompromised and immunocompetent patients.
- This mycobacteria has been detected in water, soil, and aquarium fish. The latter could be a source of infection and should be taken into account in the anamnesis.
- There is no established therapeutic regimen for *M interjectum* infection. Combination therapy with rifampicin, clarithromycin, and co-trimoxazole could be an option, though it must always be adapted to an antibiogram if results are available.

To the Editor:

A 48-year-old man presented with nodular lesions in a sporotrichoid pattern on the right hand and forearm of 3 months' duration (Figure). There were no lymphadenopathies, and he had no notable medical history. He denied fever and other systemic symptoms. The patient recently had manipulated a warm water fish aquarium. Although he did not recall a clear injury, inadvertent mild trauma was a possibility. He denied other contact or trauma in relation to animals or vegetables.

Histopathology from a punch biopsy of the forearm revealed a granulomatous infiltrate with necrosis at the deep dermis level at the interface with the subcutaneous cellular tissue that was composed of mainly epithelioid cells with a few multinucleated giant cells. No acid-fast bacilli or fungi were observed with special stains.

A polymerase chain reaction assay for atypical mycobacteria was positive for *Mycobacterium interjectum.* The culture of the skin biopsy was negative for fungi and mycobacteria after long incubation (6 weeks) on 2 occasions, and an antibiogram was not available. Complementary tests including hemogram, HIV serology,



Nodular lesions on the right hand and forearm in a sporotrichoid pattern with no lymphadenopathies due to *Mycobacterium interjectum* infection.

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and chest and upper extremity radiographs did not reveal any abnormalities.

The patient was treated with rifampicin 600 mg/d, clarithromycin 500 mg every 12 hours, and co-trimoxazole 160/800 mg every 12 hours for 9 months with some resolution but persistence of some residual scarring lesions. There was no recurrence at 6-month follow-up.

Mycobacterium interjectum is a rare, slow-growing, scotochromogenic mycobacteria. Case reports usually refer to lymphadenitis in healthy children and pulmonary infections in immunocompromised or immunocompetent adults.[1,2] A case of *M interjectum* with cutaneous involvement was reported by Fukuoka et al,[3] with ulcerated nodules and abscesses on the leg identified in an immunocompromised patient. Our patient did not present with any cause of immunosuppression or clear injury predisposing him to infection. This microorganism has been detected in water, soil,[3] and aquarium fish,[4] the latter being the most likely source of infection in our patient. Given its slow growth rate and the need for a specific polymerase chain reaction assay, which is not widely available, *M interjectum* infection may be underdiagnosed.

No standard antibiotic regimen has been established, but *M interjectum* has proven to be a multidrug-resistant bacterium with frequent therapy failures. Treatment options have ranged from standard tuberculostatic therapy to combination therapy with medications such as amikacin, levofloxacin, rifampicin, and co-trimoxazole.[1] Because an antibiogram was not available for our patient, empiric treatment with rifampicin, clarithromycin, and co-trimoxazole was prescribed for 9 months, with satisfactory response and tolerance. These drugs were selected because of their susceptibility profile in the literature.[1,5]

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