

'Fish Tank Granuloma' Can Mimic Staph Infection

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — A water-borne mycobacterium that infects humans through breaks in the skin causes lesions that easily are mistaken for staphylococcal infection, Dr. Peggy Weintrub said at the annual meeting of the American Academy of Pediatrics.

Mycobacterium marinum infection causes what's commonly known as "fish tank granuloma," said Dr. Weintrub, chief of pediatric infectious diseases at the University of California, San Francisco. Lesions typically appear 1-4 weeks after exposure and start out as little papules and nodules that can be misdiagnosed as a staph infection. Later, however, they become verrucous, plaquelike lesions that start spreading up the skin along lymphatic tracts.

She described a case in a 3-year-old boy who presented with mild eczema and some other long-standing, crusting lesions on his hand and arm that were spreading up the arm lymphocutaneously. The lesions had not responded to previous treatment with cephalexin. A previous culture from the lesions did grow some staphylococcal organisms, but two additional courses of antibiotics did not affect the lesions.

The boy was afebrile and systemically well, and had an infant sibling at home with no lesions.

The patient's history helped point toward *M. marinum*. The boy liked to be helpful, assisting his mother with the baby and helping his father with anything and everything, including gardening and cleaning the family's fish tank.

"Apparently, this was his favorite job, so he had done it multiple times in the weeks before he broke out in these lesions," giving *M. marinum* an inoculation pathway through the boy's eczematous lesions.

M. marinum infects fish and amphibians. "You also can get this infection from swimming in pools and in natural bodies of water," she said.

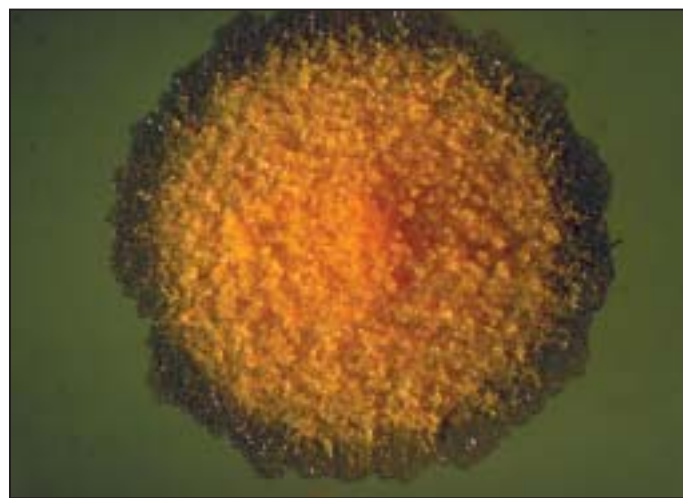
If a lesion is oozing, the secretions can be cultured for *M. marinum*. A skin biopsy from the boy grew the organism. Histopathology will show granulomas. Patients with the infection often are purified protein derivative (PPD) positive.

Patient history also can help sort through the differential diagnoses. A history of gardening raises the possibility of *Sporothrix schenckii* infection, which produces lesions that look very similar to *M. marinum* lesions, with a lymphocutaneous spread. It is more a disease of adults (typically farmers and gardeners) than of children, with a history of skin trauma in 10%-60% of cases. A history of travel may suggest *Leishmania*, a parasite.

Providers also should consider *Staphylococcus aureus* infection, which most commonly causes pustular, draining lesions but rarely can cause granulomatous disease that looks like *M. marinum*.

Usually two or three drugs are used to treat *M. marinum* infection, although no

controlled studies back these strategies. "There aren't really good guidelines" on which drugs to use or for how long, she said. Regimens may include clarithromycin or azithromycin, ethambutol, rifampin, and/or minocycline or doxycycline (for older patients). One to two months of treatment may suffice. In rare cases, surgery may be needed to remove infected tissue. ■



This plate culture of *Mycobacterium marinum* shows a rough colony of granular growth containing fine red pigment deposits. The culture growth occurs over 7-14 days, and is optimal at 32°C.

CDC/DR. CHARLES C. SHEPARD



TOPAMAX Tablets and TOPAMAX Sprinkle Capsules are indicated for adults for the prophylaxis of migraine headache. The usefulness of TOPAMAX in the acute treatment of migraine headache has not been studied.

TOPAMAX is contraindicated in patients with a history of hypersensitivity to any component of this product.

IMPORTANT SAFETY INFORMATION

TOPAMAX has been associated with serious adverse events, including:

- Hyperchloremic, non-anion gap metabolic acidosis—lowering of bicarbonate levels in the blood. Measurement of baseline and periodic serum bicarbonate is recommended.
- Acute myopia and secondary angle-closure glaucoma—patients should be cautioned to seek medical attention if they experience blurred vision or ocular pain.

- Oligohidrosis and hyperthermia—decreased sweating and increased body temperature, especially in hot weather. The majority of reports have been in children.

- Cognitive/psychiatric side effects including cognitive dysfunction, psychiatric/behavioral disturbances including suicidal thoughts or behavior, and somnolence and fatigue.

Most common adverse events associated with TOPAMAX 100 mg vs placebo were: paresthesia, 51% vs 6%; anorexia, * 15% vs 6%; fatigue, 15% vs 11%; nausea, 13% vs 8%; diarrhea, 11% vs 4%; weight decrease, 9% vs 1%; taste alteration, 8% vs 1%.

The possibility of decreased contraceptive efficacy and increased breakthrough bleeding should be considered in patients taking combination oral contraceptive products with TOPAMAX.

Patients should be instructed to maintain an adequate fluid intake in order to minimize the risk of renal stone formation.

*Anorexia is defined as loss of appetite.