CASE OF THE MONTH

Diagnosis: Orf

The patient worked in an office but lived 20 miles from a major city and denied any contact with the sheep, goats, or cattle that are present in her farming community.

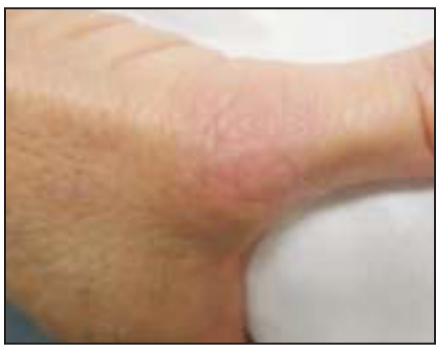
She originally sought care from her primary care physician, who treated her with azithromycin and trimethoprim-sulfamethoxazole, but the lesion worsened, Dr. Jason Hadley said in a poster presentation at the annual meeting of the American Society of Dermatopathology.

A skin swab grew only normal skin flora. Bartonella serologies were negative.

She was referred to Dr. Hadley and his associates in the dermatology department at the University of Utah, Salt Lake City. "When you have an enlarging, red, edematous plaque on the hand, you need to think of infectious causes," he said.

The clinical differential diagnoses included cutaneous anthrax, cat scratch disease, tularemia, orf, and milker's nodule.

The feral kitten scratch became a painful blister that eventually ulcerated



The patient had complete healing after treatment with imiquimod 5% cream.

because of infection. The histopathology of orf and milker's nodule are nearly identical, but orf is more likely to ulcerate or necrose, he said.

A skin biopsy showed features of orf: prominent spongiotic subcorneal vesiculation and a mixed inflammatory response of lymphocytes, histiocyte-like cells, and neutrophils. There was overlying parakeratosis with serum. Seen on higher power, epidermal cells were enlarged and had a prominent glassy appearance with apoptotic keratinocytes and enlarged nuclei with occasional mitotic figures. Numerous cytoplasmic inclusions characteristic of orf were seen in keratinocytes.

Dr. Hadley and his associates assumed the patient had orf infection because of the nature of the ulcerated lesion and the pathology findings, though the specific viral type could not be identified. Only a polymerase chain reaction test of fresh vesicle fluid or debris could have distinguished orf from milker's nodule.

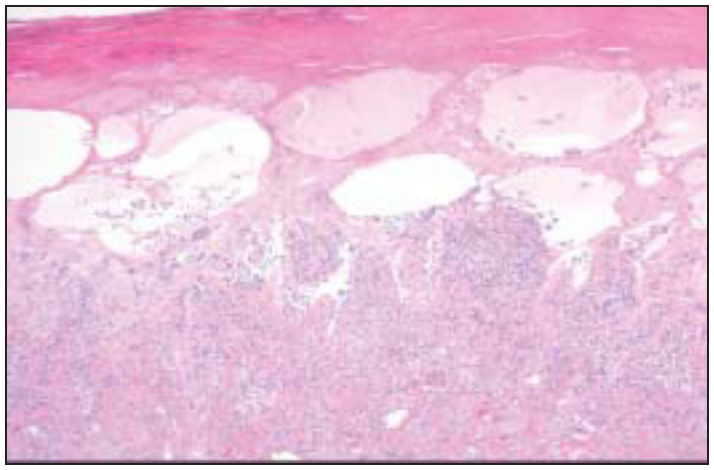
Orf virus is a *Parapoxvirus* that typically infects sheep and goats and has been known to be transmitted to humans through bites from those animals or skin contact with fomites in fence posts.

"To our knowledge, this is the first time that there is a well-documented case of it being transmitted by a cat scratch," she said.

Orf lesions heal spontaneously in immunocompetent people but can get large and fail to heal in immunocompromised people. Because this patient's methotrexate therapy caused immunosuppression, her psoriasis medication was stopped and she was treated with imiquimod 5% cream applied daily to the lesion. After 10 weeks of treatment, the lesion healed completely with no scar, and her psoriasis medication was restarted. She has not had a recurrence of the orf lesion.

Orf is uncommon in the United States but more frequent elsewhere.

—Sherry Boschert



PHOTOS COURTESY DR. JASON HADLEY

A histologic image shows prominent spongiotic epidermis with subcorneal vesiculation and a mixed inflammatory response of lymphocytes, histiocyte-like cells, and neutrophils.