We report a case of an unusual and unsuspected chronic infection creating a soft-tissue mass in the foot of a 35-year-old woman. The causative agent, *Mycobacterium gordonae*, is usually encountered as a laboratory contaminant. Only rarely does it manifest as a clinical infection. The patient’s presumed predisposing risk factor was a history of barefoot gardening. An iatrogenic source, corticosteroid injections, was also considered. (J Am Podiatr Med Assoc 98(4): 311-313, 2008)
again, to obtain tissue for microbiological cultures. At that time, a routine chest radiograph and tuberculin skin test were performed, with normal and nonreactive results, respectively. Her postoperative course was unremarkable. An infectious disease consultation was obtained, but treatment with antibiotics was not initiated.

Pathologic Findings

The specimen was received in formalin and consisted of a 1.5-cm fragment of firm, tan-gray tissue, grossly inconsistent with a typical lipoma. Histologic examination revealed a chronic lymphocytic-histiocytic inflammatory process with subtle granulomatous features (Fig. 1). Caseous necrosis was not present. Acid-fast stain revealed numerous acid-fast bacilli in the lesion, morphologically consistent with non-tuberculous mycobacteria (Fig. 2). Special stains for fungal elements and routine bacteria were negative. Microbiological cultures from the second excision and debridement of the lesion were positive for *M. gordonae*.

Discussion

*Mycobacterium gordonae* is a ubiquitous environmental organism, existing predominantly in soil and groundwater. As such, it is identified in the laboratory most frequently as a nosocomial water contaminant,16-18 which must be distinguished from other, more typical, pathogenic mycobacteria. Documented infections have been reported only sporadically.8, 12, 13 In the majority of these reported cases, a confirmed or presumptive exposure to environmental soil or water was present. At least one article alluded to a probable gardening-related acquisition of the infection.13

Histologic features suggesting the granulomatous nature of these lesions (eg, multinucleated giant cells, palisading histiocytes, or focal necrosis) may be extremely subtle and easily overlooked. Of four pathologists who independently reviewed the histologic slides in this case, only one suspected an infectious etiology; the other three favored a benign fibrohistiocytic lesion or a pseudopyogenic granuloma. Therefore, these lesions are almost certainly under-recognized pathologically as well as clinically.

Differential diagnostic considerations include other chronic cutaneous and soft-tissue infections, benign tumor and tumor-like conditions (eg, tenosynovitis, traumatic neuroma, lipoma, and giant cell tumor of the tendon sheath), and, rarely, malignant tumors that may mimic granulomatous processes (eg, epithelioid sarcoma and necrotizing metastases). Directed microbiological cultures in conjunction with the histologic findings will permit the correct diagnosis in most instances. However, routine aerobic/anaerobic cultures are generally insufficient for the detection of these “atypical” mycobacteria. A high index of clinical suspicion is necessary to prompt the appropriate microbiological evaluation. In cases with atypical clinical presentations, a small representative portion of the specimen can be submitted to the laboratory in a sterile container for retention until the correct microbiological appraisal is determined by the histologic examination.
The possibility that the etiology of the patient’s infection was iatrogenic, secondary to the corticosteroid injections, cannot be entirely excluded. The vial and syringe used for the injections were not available for microbiological cultures. However, the appearance of the lesion during the patient’s gardening season and the lack of clinical change following the injections favors an environmental acquisition of the infection. Since the presentation of the initial lesion, she has developed a similar, smaller lesion in the right foot, which is currently being followed clinically. If this lesion persists, excision with culture could provide additional support for this supposition.

**Conclusion**

*Mycobacterium gordonae* is an uncommon cause of a painful foot mass. In this case, exposure to groundwater while gardening barefoot was the presumptive etiology of the soft-tissue infection. Conservative surgical excision is generally curative, except in individuals with severely compromised immune systems, for whom aggressive systemic antibiotic therapy is indicated.

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**References**