An Unusual Case of Coccidioidomycosis

MIRIAM A. SMITH,1* ANN E. ANDERSON,2 AND KAREN KOSTROFF3

Department of Medicine and Infectious Diseases Division,1 Department of Pathology,2 and Department of Surgery,3 Long Island Jewish Medical Center, the Long Island Campus for the Albert Einstein College of Medicine, New Hyde Park, New York 11042

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Dissemination of coccidioidomycosis is rare. The skin, musculoskeletal system, and central nervous system have been described as the most common sites of extrapulmonary disease. We present a case of an asymptomatic patient in whom the diagnosis of coccidioidomycosis was made on a lymph node biopsy. The biopsy was performed because of an abnormal mammogram and physical findings suggestive of malignancy.

Primary infection with coccidioidomycosis usually involves the lungs. Dissemination occurs in fewer than 1% of cases, with the skin, musculoskeletal system, and central nervous system described as the most common sites of extrapulmonary disease (1, 5). We present a case of coccidioidomycosis diagnosed by axillary node biopsy which was performed because of an abnormal mammogram and physical findings suggestive of malignancy.

Case report. The patient, a 76-year-old white female in excellent health, was born in Pennsylvania but spent most of her adult life in New York City. The patient underwent screening mammography in October 1992 which revealed two adjacent, well-circumscribed, benign-appearing nodular densities approximately 4 and 3 mm in diameter in the lower outer quadrant of the right breast, as well as nodular densities in the axillary regions bilaterally consistent with small lymph nodes. Comparison with a previous mammogram performed in July 1990 revealed that the right breast and right axillary nodular densities were stable. However, comparison of the left axillary lymph nodes could not be made, because this deep axillary region had not been imaged in July 1990. The patient underwent a complete physical examination which was remarkable only for two, 2-by-1.5-cm-diameter firm nodules in the left axilla. Chest X-ray, complete blood count, and SMA-18 were normal. The patient underwent excisional biopsy of the left axillary nodules. The pathology report revealed thick-walled, periodic acid-Schiff-positive spherules containing multiple endospores (Fig. 1). The spherule was measured at 30 to 50 μm in diameter. Gomori-methenamine silver stain stained the cell wall of the developing endospore (not shown). The features were consistent with coccidioidomycosis. The pathology specimen was sent to John Bennett at the National Institutes for Health, who confirmed the diagnosis (1a). The node was never sent for culture because of the surgeon's strong clinical impression of malignancy.

A further history was obtained from the patient following the biopsy result. In 1982, the patient traveled to California and Arizona for 2 weeks. Approximately 3 weeks after her return to New York, she developed a self-limited, flu-like illness characterized by fatigue and fever. The patient denies any other travel since then.

Discussion. Coccidioidomycosis is endemic in areas of North, Central, and South America. In the United States, acquisition of infection is generally confined to the arid sections of the Southwest. Cases identified outside these areas are becoming increasingly more common because of exposure of travelers who have visited these zones in which the disease is endemic, reactivation of latent disease, and fomite transmission (1, 2).

In addition to the skin, musculoskeletal system, and meninges, disseminated infection with Coccidioides immitis in immunocompetent hosts in the genitourinary tract, the abdomen, the larynx, and the eyes has been described (1–3). In a large retrospective review of disseminated coccidioidomycosis in children, Kafka and Catanzaro described one patient with bilateral cervical and axillary swelling and drainage and pleural thickening on chest radiograph. On the basis of their 14 cases

* Corresponding author. Mailing address: Infectious Diseases Division, Long Island Jewish Medical Center, Lakeville Road, Rm. FP 333, New Hyde Park, NY 11042. Phone: (718) 470-7290. Fax: (718) 470-9859.

FIG. 1. Spherule of C. immitis seen within multinucleated giant cell. The spherule has a thick periodic acid-Schiff-positive wall containing multiple endospores and measures 30 to 50 μm in diameter. Magnification, (×500).
and a literature review, they concluded that dissemination occurred either simultaneously or within 6 months of primary pulmonary infection (3).

Roberts and Linsey undertook a study of 163 lymph node biopsies to evaluate the usefulness of microbial cultures (4). The study revealed the presence of C. immitis in two biopsies. However, there was no accompanying patient information to determine when dissemination may have occurred (5).

Our patient probably experienced primary coccidioidomycosis 10 years ago during a trip to the southwestern United States. The patient likely developed disseminated disease which remained quiescent and undiagnosed until she underwent a lymph node biopsy. To our knowledge, this is the first case of coccidioidomycosis diagnosed by lymph node biopsy in a healthy patient with no additional evidence of dissemination.

REFERENCES