Kikuchi-Fujimoto Lymphadenitis: A case of misdiagnosed breast cancer

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Summary

Background: Kikuchi-Fujimoto Lymphadenitis, also known as histiocytic necrotizing lymphadenitis, is a benign, rare, and self-limiting disease that mainly affects young Asian women.

Case Report: We present a case of a 35-year-old Caucasian female with painful unilateral axillary lymphadenopathy. The patient was initially diagnosed with breast cancer based on her clinical presentation and initial pathology review of her lymph nodes.

Conclusions: However, after a series of imaging to exclude a primary neoplastic source and metastasis, and upon expert hematopathologic review of her lymph nodes, the patient was diagnosed with Kikuchi-Fujimoto Lymphadenitis.

key words: Kikuchi Fujimoto Lymphadenitis • necrotizing lymphadenitis • axillary adenopathy


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BACKGROUND

Kikuchi-Fujimoto Lymphadenitis is a form of necrotizing lymphadenitis that is an uncommon disease, and its etiology is unknown. Two Japanese pathologists, Kikuchi and Fujimoto, first reported the disease as a benign and self-limiting syndrome of necrotizing lymphadenitis with a characteristic histologic appearance in 1972 [1]. Since then, the incidence of the disease has been reported between 0.54–5.7% worldwide [1]. The characteristic histopathology includes necrotic foci with karyorrhexic debris and proliferation of crescentic histiocytes and plasmacytoid monocytes [1]. The disease has been reported in mainly young Asian women between the ages of 20–30, with a female: male ratio of 4:1 [2,3]. Adenopathy and fever are primary symptoms. Less common manifestations include night sweats, rashes, gastrointestinal complaints, and chills. The disease can be confused with presentation of cancer, and particularly for women, the disease presentation can be confused for breast cancer.

CASE REPORT

Our patient is a 35-year-old healthy Caucasian female who presented with a painful lump under her right arm for several months. She denied experiencing fevers, chills, night sweats, weight loss, and changes in appetite. She had no past medical history or family history of illnesses including cancer. She had no ill contacts or a history of trauma. She was first seen at an outside facility and was worked up for possible breast cancer secondary to axillary lymphadenopathy. An ultrasound from the outside facility revealed several minimally prominent lymph nodes in the right axilla, with two dominant nodes measuring 13 mm and 8 mm in diameter. Both lymph nodes demonstrated normal fatty hilum and vascularity. A diagnostic mammogram at the outside facility did not demonstrate a breast mass but did demonstrate enlarged right axillary nodes. Excisional biopsy of the nodes was performed as the patient had persistent tenderness under her right arm. Pathology at the outside facility demonstrated one node was a small reactive node and the other was 50% replaced by poorly-differentiated carcinoma. Our patient was referred to our oncology division for management of presumed node positive breast cancer.

The patient was examined in clinic. Her examination was unremarkable, including her breast exam. However, she had a palpable 10×20 mm right axillary lymph node and additional small right axillary adenopathy. A complete blood count, complete metabolic profile, and serologic tumor markers including CA-125, CEA, CA 27.29, and CA 15-3 were obtained and were normal. The only abnormality was an elevated LDH of 808 U/L (normal: 300–600 U/L). A breast MRI was ordered and demonstrated no breast masses. The breast MRI revealed right axillary adenopathy, and the largest node measured 16 mm in diameter (Figure 1). A PET CT scan was ordered to further identify a primary cancer source or regions of metastasis. However, the PET CT showed hypermetabolic nodes in the right axilla but no primary breast lesion or evidence of metastatic disease (Figure 2).

It is standard practice to have outside pathology reviewed by our institution to confirm a diagnosis of cancer. Therefore, hematopathology consultation was requested to examine the lymph node samples. The samples demonstrated proliferation of crescentic histiocytes and plasmacytoid monocytes with areas of patchy necrosis. Upon review by the expert pathology panel, this was not felt to represent malignancy but instead necrotizing lymphadenitis consistent with Kikuchi-Fujimoto Lymphadenitis.

Our patient did not undergo surgery or chemotherapy. At her one month follow-up visit, she reported persistent tenderness in her right axilla. On exam, she had persistently palpable nodes that were unchanged in size. Given her symptoms, she was treated with a short course of high dose steroids. At her two-month follow-up visit, she had no further tenderness and axillary nodes were no longer palpable on exam. She also reported that she had an intermittent red butterfly rash over her cheeks and nose for years. Given the association of Kikuchi-Fujimoto Lymphadenitis with lupus, she was referred to rheumatology, whom she has not yet visited.
Discussion

Kikuchi-Fujimoto Lymphadenitis is a subacute necrotizing lymphadenopathy of unknown etiology characterized by histiocytic proliferation and lymph node necrosis. The diagnosis is based on the characteristic histopathologic features of patchy paracortical areas of necrosis, fragmented nuclear debris, proliferation of crescentic histiocytes and plasmacytoid monocytes, and absence of neutrophils [2]. The cause of Kikuchi-Fujimoto Lymphadenitis is unclear, though some reports suggest that the disease is a result of immunologic stimulation from a variety of environmental and infectious triggers [1].

The disease affects mostly young Asian females. Cervical adenopathy and fever are principal symptoms, which differs from our patient who presented as a Caucasian female with axillary adenopathy and no fever. Cervical lymphadenopathy is reported in 70–98% of patients. Fever is a primary symptom in 50–50% of cases [1]. Less common manifestations include night sweats, rashes, weight loss, gastrointestinal complaints, and chills [1]. The disease is associated with lymphoma, lupus, arthritis, adult Still’s disease, polymyositis, uveitis, scleroderma, interstitial lung disease, thyroiditis, drug hypersensitivity, and vasculitis. [4]. The disease resolves spontaneously over several weeks to six months. Tender lymphadenopathy can be treated with nonsteroidal anti-inflammatory drugs. For severe symptoms, corticosteroids are recommended [5]. Recurrence of disease occurs in 2–3% of patients [5].

The condition is most often misinterpreted as malignant lymphoma. In a review by Dorfman and Berry of 108 lymph node biopsies, 30% of cases were at first misdiagnosed for malignant lymphoma [6]. The pathologists were unfamiliar with Kikuchi-Fujimoto Lymphadenitis and had interpreted the presence of histiocytic and immunoblastic proliferations for atypical lymphocytes of lymphoma. As a result, the patients who were misdiagnosed with lymphoma received chemotherapy. Upon review of this study, Norris et al. recommend that clinicians suggest Kikuchi-Fujimoto Lymphadenitis in the differential diagnosis in cases of lymphadenopathy if the pathologist is not a seasoned hematopathologist [1].

Conclusions

A diagnosis of cancer has serious implications for the patient and the patient’s family. This is a case in which the presentation of axillary lymphadenopathy led to the misdiagnosis of breast cancer in a patient with Kikuchi-Fujimoto Lymphadenitis. This case illustrates the importance of careful evaluation and expert pathology review of atypical cases of cancer presentation.

References: