

UCLA

Proceedings of UCLA Health

Title

Diabetic Mastopathy: A Benign Breast Condition in Diabetic Patients

Permalink

<https://escholarship.org/uc/item/9zt71834>

Journal

Proceedings of UCLA Health, 28(1)

Authors

Nguyen, Cindy

Wang, Annie

Publication Date

2024-12-30

CLINICAL VIGNETTE

Diabetic Mastopathy: A Benign Breast Condition in Diabetic Patients

Cindy Nguyen, MD and Annie Wang, MD

Case

A 32-year-old female with type 1 diabetes presents to clinic for a right breast mass that has been present for several weeks. The mass is not painful and has not changed since first noticed. She has no history of breast masses. Her menstrual periods are regular, occurring every 28 days, with her last period 11 days prior to presentation. She denies cyclical breast symptoms with menses. She is not on hormonal birth control and denies any personal or family history of breast cancer. One year prior to presentation, she had COVID-19 infection with associated right breast pain. Right breast ultrasound at that time showed reactive axillary adenopathy and no other significant findings. She denies any nipple discharge or breast skin changes and has no systemic symptoms.

She was diagnosed with type 1 diabetes at age 12 and has no known microscopic complications such as retinopathy or nephropathy. She reports occasional numbness of the fingers and toes. She has no macrovascular complications such as coronary artery disease, cerebral vascular disease and peripheral artery disease. She is on an insulin pump with most recent hemoglobin A1C of 8.0%.

Breast exam revealed a non-tender, firm, mobile, well-circumscribed, 2x2 cm right breast mass. There were no overlying skin changes, nipple retractions or nipple discharge. There was no palpable cervical, supraclavicular or axillary lymphadenopathy.

Diagnostic mammogram found extremely dense breast tissue with no obvious mammographic abnormality corresponding to the palpable area of concern. Diagnostic ultrasound noted an indistinct area of dense acoustic shadowing measuring approximately 2.8 x 2.0 x 2.3 cm with heterogenous stiffness. An ultrasound-guided core biopsy was performed. Pathology reported perivascular and perilobular inflammation and dense fibrotic stroma with prominent myofibroblasts, compatible with diabetic mastopathy.

Discussion

Diabetic mastopathy is a rare, benign breast condition that may occur in diabetic patients. The incidence ranges from 0.6% to 13% in women with type 1 diabetes, though it can also less commonly occur in men.¹ Patients generally have longstanding type 1 diabetes (usually 20 years), often treated with exogenous insulin, with associated microvascular complications (neuro-

pathy, retinopathy and nephropathy).² Diabetic mastopathy often presents as a hard, palpable, nontender and mobile breast mass.¹ It may be solitary, multiple, unilateral or bilateral.¹ Mammogram often reveals increased density or heterogenous parenchymal pattern.³ Ultrasound often reveals an ill-defined hypoechoic mass with posterior acoustic shadowing without visible vascularity.³ To diagnose diabetic mastopathy, a core-needle or excisional biopsy is recommended for pathologic analysis.³ Pathology shows dense, keloid-like fibrosis and periductal, lobular and perivascular lymphocytic infiltration.⁴ In patients without the diagnosis of diabetes, this breast condition is known as lymphocytic mastitis or lymphocytic mastopathy.¹ Once this diagnosis is established, further treatment is not necessary for asymptomatic patients because diabetic mastopathy is not associated with malignancy.⁵ Patients with pain or other symptoms may be treated with surgical excision. Surgical management may also be indicated if biopsy pathology is not definitive of the diagnosis. Lesions may recur after excision.¹

It is important for providers to consider diabetic mastopathy in patients with longstanding type 1 diabetes presenting with a breast mass. Although a biopsy is recommended for evaluation, once the diagnosis of diabetic mastopathy is established, the patient can be spared further invasive treatment. Asymptomatic patients do not need lumpectomy or mastectomy. Surveillance imaging may be recommended to ensure stability. Spontaneous regression of diabetic mastopathy has been reported.

Our young, premenopausal, patient has had type 1 diabetes on insulin for 20 years, with possible neuropathy. Her clinical presentation and radiographic findings are consistent with classic diabetic mastopathy. A core biopsy is still recommended to rule out malignancy and confirm the diagnosis of diabetic mastopathy. No further treatment is indicated as our patient is asymptomatic. She had a follow up ultrasound 6 months after diagnosis which showed stable and benign findings.

REFERENCES

1. **Agochukwu NB, Wong L.** Diabetic Mastopathy: A Systematic Review of Surgical Management of a Rare Breast Disease. *Ann Plast Surg.* 2017 Apr;78(4):471-475. doi: 10.1097/SAP.0000000000000879. PMID: 28272124.
2. **Thorncroft K, Forsyth L, Desmond S, Audisio RA.** The diagnosis and management of diabetic mastopathy. *Breast*

J. 2007 Nov-Dec;13(6):607-13. doi: 10.1111/j.1524-4741.2007.00489.x. PMID: 17983405.

3. **Andrews-Tang D, Diamond AB, Rogers L, Butler D.** Diabetic Mastopathy: Adjunctive Use of Ultrasound and Utility of Core Biopsy in Diagnosis. *Breast J.* 2000 May;6(3):183-188. doi: 10.1046/j.1524-4741.2000.99073.x. PMID: 11348362.
4. **Kudva YC, Reynolds C, O'Brien T, Powell C, Oberg AL, Crotty TB.** "Diabetic mastopathy," or sclerosing lymphocytic lobulitis, is strongly associated with type 1 diabetes. *Diabetes Care.* 2002 Jan;25(1):121-6. doi: 10.2337/diacare.25.1.121. PMID: 11772912.
5. **Sankaye S, Kachewar S.** Diabetic mastopathy. *Australas Med J.* 2012;5(6):296-9. doi: 10.4066/AMJ.2012.1247. Epub 2012 Jun 30. PMID: 22848327; PMCID: PMC3395289.