An uncommon case of diabetic mastopathy

Abstract

Introduction: Diabetic mastopathy (DMP) is an uncommon fibrous disease of the breast, most commonly found in premenopausal women with type 1 diabetes exposed to long-standing insulin therapy. Often mimicking breast cancer clinically and on imaging, this condition poses a diagnostic challenge requiring pathological confirmation.

Clinical case: A 68-year-old woman with type 1 DM and a family history of breast cancer in paternal aunt had an abnormal screening mammogram showing a lobular nodular density in the subareolar region deep to the nipple measuring at least 2.5cm in the left breast. S Ultra Sound (US) showed a hypoechoic, heterogeneous mass 2cm from the nipple, measuring 41x13x46mm with relatively circumscribed margins, demonstrating some internal blood flow on Doppler. Lymph nodes were normal. Patient underwent US-guided biopsy. Pathology showed hyalinized stromal fibrosis and chronic mastitis. Within a short period of time, patient presented with a painless palpable area is the right breast. Mammography and US of right breast showed a very dense tissue in the palpable area of concern, corresponding to heterogeneous, slightly hypoechoic mass with relatively circumscribed margins measuring 38x18x65mm with internal vascularity. It had a very similar appearance to the area that was biopsied on the left breast. Given the bilaterality and history of diabetes, a preliminary diagnosis of bilateral DMP was made. A decision was made to follow up annually with regular mammography. Later, patient developed retraction in the skin and nipple areolar complex in both breasts. Mammogram and US of both breasts revealed large densities that were relatively stable, however the skin changes prompted repeat biopsies. Thickened tissue on both breasts was excised and sent for pathology revealing features consistent with DMP.

Discussion: Patients with DMP clinically present with painless, irregular hard unilateral or bilateral breast masses. It is rare as it represents 0.6% to 13% of benign lesions observed in woman with type 1 diabetes. The pathogenesis is not fully understood but many theories involving the effects of sustained hyperglycemia and glycosylated end products on the connective tissues of the breast have been proposed. Malignant transformation has not been described.

Conclusion: This case underlines the importance of considering diabetic mastopathy in the differential diagnoses when evaluating breast lesions in women with diabetes. Recognizing the presentation of this rare condition can help avoiding unnecessary surgical intervention.

Keywords: diabetes, mastopathy, breast cancer
Discussion

Diabetic mastopathy, also known as lymphocytic mastitis or lymphocytic mastopathy is seen occasionally in premenopausal women who have longstanding type 1 diabetes mellitus. This case underlines the importance of considering diabetic mastopathy on the list of differential diagnoses when evaluating breast lesions in a diabetic woman. Patients with DMP clinically present with painless, irregular hard unilateral or bilateral breast masses. It is rare as it represents represent 0.6% to 13% of benign lesions observed in woman with type 1 diabetes. Core biopsy is recommended for diagnostic confirmation. Pathology shows dense keloid-like fibrosis and periductal, lobular, or perivascular lymphocytic infiltration. The pathogenesis is not fully understood but many theories involving the effects of sustained hyperglycemia and glycosylated end products on the connective tissues of the breast have been proposed. Also it may represent an autoimmune reaction as the histologic features are similar to those seen in other autoimmune diseases. There are no large series with long-term follow up, but most reports recommend annual clinical and radiological monitoring and, in case of a new lesion, an additional biopsy must be considered. Once the diagnosis is established, excision is not necessary and malignant transformation has not been described. Conservative management is adequate for the majority of patients. Lesions have a tendency to recur after resection. Recognizing the presentation of this rare condition can help avoiding unnecessary surgical intervention (Figures 1 & 2).

Figure 1 Ultrasound of the breast showing Mastopathy changes, 311x222mm (72x72 DPI).

Figure 2 Ultrasound of the breast showing mastopathy changes, 321x218mm (72x72 DPI).

Acknowledgments

None.

Conflicts of interests

Authors declare that there is no conflict of interest.

References


Funding details

N/A.


Discussion

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