

## Diabetic Mastopathy – A Case Report

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### **Abstract:**

*Introduction: Diabetic mastopathy is a rare benign condition that can occur in patients with long standing Type I or II diabetes mellitus male or female of any age. Diabetic mastopathy is a fibroinflammatory condition that resembles carcinoma of breast. Here, we report a case of Type II Diabetic female patient with suspicious breast lump in right breast*

*Case presentation: A 62 year old female presented with complaints of lump in right breast for 10 days. Clinically, hard lump of size 8x6 cm was palpable in upper outer quadrant. Trucut biopsy showed features of Diabetic mastopathy. Patient undergone wide local excision and biopsy confirmed the diagnosis. Post operative period was uneventful.*

*Discussion: Diabetic mastopathy is an uncommon tumor-like proliferation of fibrous tissue of the breast, clinically and radiologically mimicking breast cancer. Histopathologically, it involves periductal, perilobular and perivascular lymphocytic infiltration. Primary excision with adequate normal tissue margins is the treatment of choice*

*Conclusion: Diabetic mastopathy is a rare clinical entity, however due to increase in prevalence of Diabetes, diagnosis of Diabetic mastopathy should be considered in patients with breast lumps*

**Keywords:** Diabetic mastopathy, Type II Diabetes mellitus

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### **I. Background:**

Diabetic mastopathy, also known as Sclerosing Lymphocytic mastopathy, fibrous mastopathy or lymphocytic lobulitis of breast, is a rare clinical entity consisting of 1% of benign breast lesions. Though a benign lesion, the main differential diagnosis for this condition is breast carcinoma, as it mimics breast carcinoma, affecting both young and elderly females<sup>(1)</sup>. Affecting both Type I and Type II diabetes patients, Diabetic mastopathy includes lymphocytic ductitis and lobulitis with varying degrees of keloidal fibrosis, vasculitis, epithelioid fibroblasts, and lymphoid nodule formation<sup>(2)</sup>. Previously, linked with Type I diabetes mellitus, hypothesis indicate it has autoimmune pathogenesis<sup>(3)</sup>, which was supported by distinctive histopathological findings. Here we present a case of a menopausal women who presented with hardened right breast lump, which clinically and radiologically suggested breast carcinoma, however biopsy revealed diabetic mastopathy

### **II. Case Report**

A 62 year old female presented to General Surgery OPD with complaints of lump in right breast for 10 days. She noticed the swelling for 10 days while bathing, non progressive in nature, not associated with pain, fever. There is no history of trauma, similar swelling in the other breast and axilla. No history of nipple discharge. No history of weight loss, loss of appetite, chest pain, jaundice. She is a known case of Type II Diabetes mellitus, on Insulin and Oral Hypoglycemic agents. She attained Menarche at 12 years of age and has 2 children, and breastfed both children and she attained menopause at 44 years of age. No maternal history of malignancy in first and second generation family. On examination, she is anemic. Vitals were stable and systemic examination was unremarkable.

#### **Local examination:**

On examination, her left breast did not present any abnormality. On palpation, her right breast revealed a non tender lump of size 8x6 cm extending from upper outer quadrant to central zone. It is hard in consistency and has ill defined margins. Lump is mobile. There is no axillary lymphadenopathy.

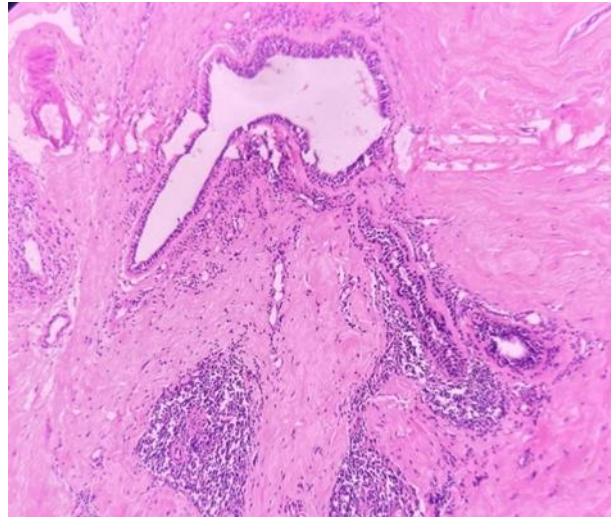
#### **Workup:**

Patient was proceeded with Laboratory investigations, which showed anaemia and deranged glycated haemoglobin(HbA1c- 8.1%), while rest of the laboratory values were within normal range

Mammogram and Ultrasound both breast showed focal asymmetry in right upper outer quadrant in mammogram and USG breast showed irregular ill- defined area of ~2.7x2.1 cm with few microcalcification and posterior acoustic shadowing in right upper quadrant, while the rest of breast parenchyma showed no echo configuration and no evidence of axillary lymphadenopathy- Suggestive of **BIRADS IVa**

FNAC of Right breast lesion was taken, which revealed highly cellular smears composed of numerous papillary clusters and sheets of ductal epithelial cells. Few cells clusters have enlarged nucleus with mild nuclear atypia, features suggestive of papillary lesions of breast.

Trucut biopsy of the lesion, which showed dense periductal, periductal and focal perivascular lymphocytic infiltration with no evidence of atypia, showing features of Lymphocytic mastopathy(Diabetic mastitis)



**Fig 1.1** Biopsy showing Periductal and perilobular infiltrate with dense fibrosis in surrounding stroma

**Intraoperative findings:**

Patient was taken up for Wide local excision. Intraoperatively, a 6x4 cm hard lesion is found on the upper outer quadrant of right breast, which was sent for biopsy. Primary closure was done.



**Fig 1.2a.** Showing Hard mass

**1.2b-** Excised lesion

### **III. Discussion**

Diabetic mastopathy is an uncommon tumor-like proliferation of fibrous tissue of the breast, clinically and radiologically mimicking breast cancer. In 1984, Soler and Khardori first reported fibrous breast masses with lymphocytic inflammation were first reported in association with patients with long standing type I diabetes mellitus and unusually this condition is seen in patients with type II diabetes mellitus. Clinically, this lesion may appear as a single or multiple, unilateral or bilateral, synchronous or asynchronous ill-defined, hardened mass. Hypothesis for formation of diabetic mastopathy is sequence of events including primary matrix expansion secondary to prolonged hyperglycemia, formation of advanced glycosated end products with neoantigen formation, autoimmune response directed against neoantigen and cytokine release secondary to autoimmune process<sup>(4)</sup>. The US findings varied from case to case, but the most typical US findings observed for DMP were an irregularly shaped, heterogeneous echogenic mass with posterior shadowing which corresponds to BIRADS IV, hence biopsy is needed to differentiate from malignancy<sup>(5)</sup>. Specific histopathologic characteristics of diabetic mastopathy include keloidal fibrosis, epithelioid fibroblasts, widespread perivascular/lobular lymphocytic infiltration, and widespread perivascular lymphocytic infiltration. There is association with long term type I diabetes mellitus, with poor management and multiple complications suggesting that chronic hyperglycemia is involved in the development of the condition<sup>(6)</sup>. Surgical excision with an adequate normal breast tissue margin remains the primary treatment option as wider tissue margins reduces recurrence rates<sup>(1)</sup>. Recurrence rate is about 30% and reexcision is avoided in these patients.

### **IV. Conclusion**

Diabetic mastopathy is a rare benign condition seen in patients with both Type I and II diabetes mellitus. Core needle biopsy is used for diagnosis and primary treatment includes excision of tumor with adequate primary skin margins. In conclusion, we should be aware of diabetic mastopathy as a differential diagnosis when we encounter breast mass in patients with both type 1 and type 2 diabetes mellitus.

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