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Diabetic Lymphocytic Mastopathy: A Case Report

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Abstract **Case Report**

Diabetic mastopathy (DM) is a recently described pathological entity, rare and benign; occurring in young patients with type I diabetes, or autoimmune disease. Clinically, it mimics breast cancer. Iconographic examinations provide little information. The diagnosis of certainty is histological. We present a case of diabetic mastopathy in a diabetic patient who had been on insulin for 16 years and had multiple degenerative complications. We review the clinical, radiological and evolutionary aspects of this condition.

Keywords: mastopathy, type 1 diabetes, breast imaging; benign lesions; micro biopsy.

INTRODUCTION

Diabetic mastopathy, or lymphocytic mastitis, is a benign pathology that is generally overlooked by practitioners because of its rarity. As a result, it constitutes a diagnostic trap, since it clinically simulates a malignant mammary tumor. It is mainly described in type 1 diabetic women at the stage of degenerative complications secondary to other autoimmune pathologies. The pathophysiology is poorly understood and is thought to be multifactorial. Through an observation of diabetic lymphocytic mastitis, we recall the clinical, radiological and anatomopathological aspects of this pathology.

CASE REPORT

Mrs S.M, aged 40, with 18 years of type 1 diabetes and associated celiac disease. Her diabetes is poorly controlled, with HbA1c at 12%. The patient presents with chronic mastodynia and progressive breast enlargement. Clinical examination revealed bilateral breast nodules and masses that had been progressively enlarging for five months. There was no nipple discharge, and lymph node examination revealed bilateral axillary lymph nodes. No family history of cancer was found.

Mammography (Figure 1: A, B, C) showed bilateral patchy opacities with masked contours, visible in the upper-outer quadrants, with no thickening or skin retraction opposite. On ultrasound (Figure 1: D), the opacities described above corresponded to multiple bilateral hypoechoic lesion patches, with irregular contours, classified ACR4 on both right and left, accompanied by a posterior shadow cone. Mammary microbiopsy revealed dense fibrosis accompanied by a minimal peri-ductal lymphocytic infiltrate, with no atypical cells.

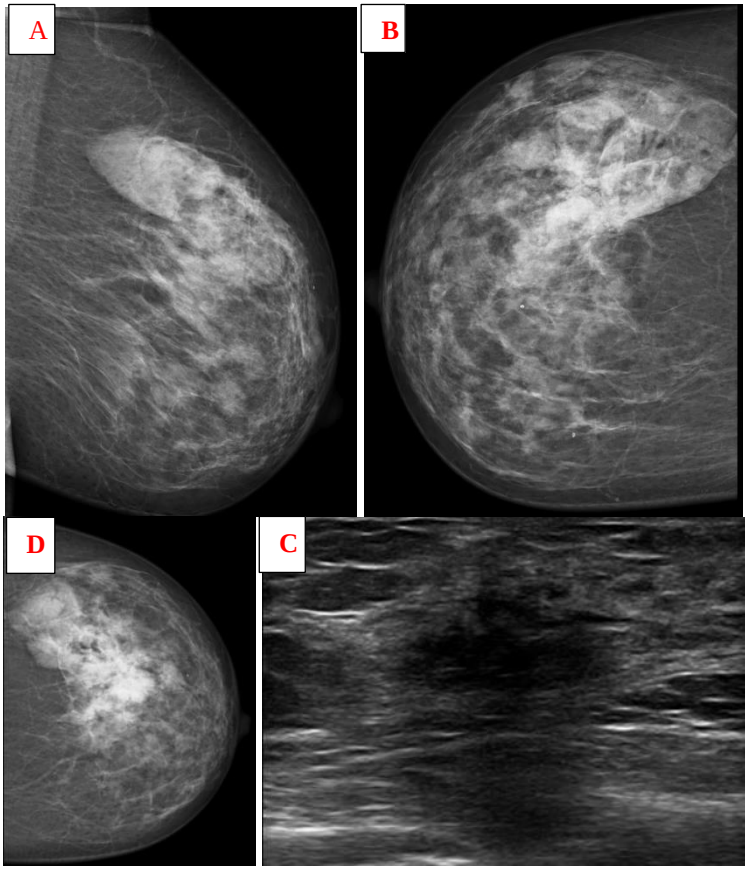

Figure 1: Mammography of the right and left breasts: "A, B, C": bilateral patchy opacities with masked contours, visible in the superolateral quadrants with axillary extension nodes. "D": hypoechoic patch in the right superolateral quadrant, poorly limited, with posterior attenuation of echoes, ACR Birads 4.

DISCUSSION

Lymphocytic mastopathy is a rare and benign pathology (less than 1% of all benign lesions of the breast) which essentially poses a problem of differential diagnosis with breast cancer. It mainly affects young women with type 1 diabetes, frequently at the stage of degenerative complications: hence the name diabetic mastopathy. It may occur more rarely in other autoimmune diseases (dysthyroidism, lupus, myasthenia, sclerosing cholangitis) or in insulin-dependent type 2 diabetes.

The pathophysiology is multifactorial, involving an autoimmune mechanism (excess glycosylation in the extracellular matrix, forming neoantigens) and lymphocytic infiltration, predominantly by B cells and macrophages. The radiological appearance is not very specific; Mammography may show an excess of density, or a sparse opacity with no architectural disorganization or microcalcifications. Mammography is often difficult to interpret, given the young age and consequent density of the breast tissue. Ultrasound is more misleading, showing hypoechoic lesions with irregular contours, strongly attenuating US, often suggestive of a cancerous origin.

MRI can be useful in differentiating diabetic mastopathy from malignant lesions strongly suggested by breast ultrasound. Enhancement in the early phase is of low intensity, increasing progressively during dynamic injection of Gadolinium, with homogenization in the late phase: the enhancement kinetics of a benign lesion. Diagnosis is made histologically by fine-needle biopsy or surgery. In the literature, image-guided microbiopsies are reported to have sensitivities of 92-98% and specificities of up to 100%.

Anatomopathological studies reveal lesions that are not pathognomonic, but which represent essential diagnostic elements. Microscopically, a collagenous stroma surrounds atrophic ducts and lobules, with prominent lymphocytic infiltration surrounding ducts and vessels. Three elementary lesions are described: peri-lobular, peri-ductal and peri-vascular lymphocytic infiltration, keloid fibrosis and dystrophic fibroblasts with an epitheloid appearance. The pathologist must be aware of this condition, and in its presence, may suggest an immunological exploration of patients.

CONCLUSION

Diabetic mastopathy is a benign pseudotumoral condition that clinicians, radiologists and pathologists should be aware of. The pathophysiology is not clearly

established, but the role of chronic hyperglycemia is likely. Lymphocytic infiltration suggests a role for autoimmunity. Knowledge of this benign condition would help reassure patients and avoid unnecessary surgery.

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