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Original Research Paper

Pathology

GRANULOMATOUS MASTITIS DUE TO TUBERCULOSIS INFECTION: A CASE REPORT

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ABSTRACT Granulomatous mastitis is a rare benign inflammatory breast condition that often mimics carcinoma clinically and radiologically, leading to diagnostic difficulty. It may present as a localized lesion or as part of a systemic granulomatous disease. We report a case of a 32-year-old female with a left breast lump of two months' duration. Histopathological examination revealed granulomatous inflammation consistent with granulomatous mastitis. As this condition commonly affects women of reproductive age and closely resembles malignant breast lesions, histopathological confirmation is essential to ensure accurate diagnosis and appropriate management, thereby avoiding unnecessary aggressive treatment.

KEYWORDS : Granulomatous Mastitis, Tuberculosis, Langhans Type Multinucleated Giant Cell.

INTRODUCTION

Granulomatous mastitis encompasses a heterogeneous group of inflammatory breast lesions, among which tuberculous mastitis is a rare entity. Tuberculous mastitis is primarily a disease of premenopausal women and shows a predilection for the lactating breast, although it may occur at any age.[1] In younger women, the disease commonly presents with abscess formation, whereas in older patients it may present as a firm mass simulating carcinoma.[1,2] The condition is usually unilateral and often occurs without evidence of pulmonary tuberculosis.[1]

Case Report

History: A 32-year-old female presented with unilateral left breast lump since one month. She is G1P1L1.

USG Findings : An ill-defined hypoechoic lesion noted at 9'o clock position of left breast with no intralesional vascularity. Prominent retroareolar ducts seen in bilateral breasts. An anechoic cystic lesion noted at 2-3 o'clock position in left breast. No significant bilateral lymphadenopathy.

Methodology: After proper fixation and standard tissue processing, H&E stain was done.

Gross Findings : Total measuring (5.5 x 4.3 x 3.2) cm sized creamish, firm single tissue received. The outer surface is irregular and creamish in colour.

Cut surface shows fibrofatty normal breast tissue with white homogenous areas.

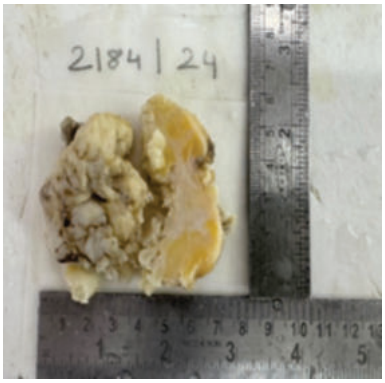

Figure 1: Gross Image of Breast Showing White Homogenous Area

Microscopic Findings

Sections show breast tissue with normal terminal duct lobular unit surrounded by dense chronic inflammatory infiltrate of lymphohistiocytes, multinucleated Langhans's type of giant cells, well to ill formed epithelioid cell granuloma and areas of caseous necrosis.

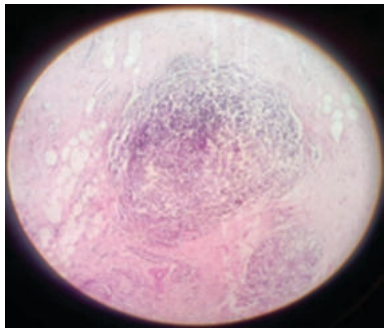

Figure 2: H & E (Low Power View) Show Foci of Granuloma in Breast Tissue.

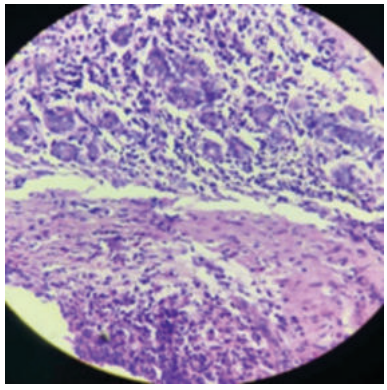

Figure 3: H & E (High Power View) Show Langhans Type Multinucleated Giant Cell, Lymphohistiocytic Inflammatory Infiltrate

DISCUSSION

Tuberculous mastitis is an uncommon form of extrapulmonary tuberculosis and is frequently misdiagnosed clinically as carcinoma or idiopathic granulomatous mastitis.[1,2] It may present either as part of systemic tuberculosis or as an isolated breast lesion. The disease most commonly affects young women, often within five years following childbirth, particularly during or after lactation.[1]

The proposed mechanisms of infection include direct inoculation through the nipple and lactiferous ducts, lymphatic spread, or hematogenous dissemination.[1,3] Clinically, tuberculous mastitis is classified into nodular, diffuse, and sclerosing forms, with the nodular type being the most common.[1] The presence of multiple lesions and associated lymphadenopathy may closely mimic multifocal breast carcinoma.[2] In some cases, acid-fast bacilli may not be demonstrable, and diagnosis relies on characteristic histopathological features.[1] The recommended management includes limited surgical intervention combined with antitubercular therapy, which yields excellent outcomes.[1,3]

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