

**PLASMA CELL MASTITIS ASSOCIATED WITH
MICROCALCIFICATION.
A CASE REPORT.**

By

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ABSTRACT

SUMMARY

A 72-year old multiparous woman came for medical check. The mammography done on both breasts showed multiple macrocalcifications of different shapes and they were orientated along the lactiferous ducts. Thread or lacelike microcalcifications were also seen in the retro-areolar regions of both breasts.

Histopathology of the breast specimen disclosed plasma cell mastitis with no evidence of malignancy. Plasma cell mastitis is common in elderly women. The primary cause could be related to ducts that have lost their normal integrity. This is in keeping with aging and ultimately resulting in ductal retention, duct dilatation, and intraductal debris. These ducts may rupture with consequent extravasation of the intraductal secretions into the periductal connective tissue. Fat necrosis which develops within plasma cell mastitis may appear as microcalcification and may simulate carcinoma. This report is to create the awareness that fat necrosis which develops within plasma cell mastitis may appear as malignant microcalcification and that biopsy at the area of microcalcification is necessary to differentiate it from malignant lesion.

INTRODUCTION

Plasma cell mastitis is a benign inflammatory condition that most commonly affects the main lactiferous duct¹. Retained secretions and intraductal debris causes dilatation of the ducts². These ducts may rupture with consequent extravasation of the intraductal secretions into the periductal connective tissue thereby resulting in periductal chemical mastitis^{2,3,4}. This is an aseptic inflammatory reaction and is characterized by dilated ducts surrounded by numerous

eosinophilic and plasma cell infiltration^{2,3,4}. The final results are periductal fibrosis, and intraductal and / or periductal calcification⁴.

The thickening of the skin with nipple retraction seen in plasma cell mastitis^{1,2} may be as a result of periductal fibrosis. Periductal fibrosis, duct dilatation and stasis of the duct secretions usually result in periductal inflammation¹.

A granulomatous response with numerous macrophages and giant cells may be seen in more florid cases⁵. This can be distinguished from other granulomatous diseases in the breast because it is adjacent to the large dilated ducts⁵. Plasma cell mastitis may present clinically as nipple discharge of different appearances which could be blood stained, serous, or milky and there is common associated painful lump¹. Plasma cell mastitis is common in elderly women^{3,6}. Fat necrosis may develop in plasma cell mastitis after biopsy^{1,6}. Surgical biopsy or other breast surgery, reduction mammoplasties or trauma can cause fat necrosis^{7,8,9}.

The radiographic appearance of focal fat necrosis ranges from discrete fatty lobule or "lipid cyst" to an ill defined irregular mass that simulates carcinoma^{7,8,9}.

CASE REPORT

B.A., a 72-year old multiparous woman was brought by her son for routine medical check-up. Mammography of both breasts was done. The nipples, skin, and subcutaneous tissue layers of both breasts appeared normal. Both breasts showed multiple macro-calcifications of various shapes: tubular, ovoid, beaded, and elongated. They had linear orientation along the lactiferous duct. Most of these had central lucencies. In addition, thread- or lace-like microcalcifications were seen in the retro-

areolar regions of both breasts (Fig. 1). No intramammary mass lesion or parenchymal architectural distortion was seen in either breast.

Histopathology of the biopsied specimen disclosed plasma cell mastitis. No evidence of malignant cell infiltration was seen.

Plasma cell mastitis is common in the elderly⁶. The primary cause could be related to ducts that have lost their normal integrity⁶ thereby resulting in retained ductal secretion

Fig. 1

Mammography of the breast showing multiple macro-calcifications of varying shapes- some of them have central lucencies (blue arrow). There are lace-like micro-calcifications in the retroareolar region (red arrow)



DISCUSSION

Plasma cell mastitis is the commonest cause of benign macro-calcifications¹. About 75-80% of biopsied clusters of calcifications are usually benign¹⁰. The calcifications are ring-shaped, tubular, elongated and directed towards the nipple^{1,6,10}. They are most often bilateral and symmetrical⁵. Translucent centres may be found within some of the calcifications^{1,10}. The distribution of the calcification varies and can range from involving one ductal system to the other⁶.

and intraductal debris.

Micro-calcification of about 0.1-0.8mm found in the breast are usually malignant¹. They may be irregular, granular, linear, curvilinear or branched; some can be thread- or lace-like¹. Fat necrosis that develop within plasma cell mastitis, may simulate carcinoma when they present as a localized poorly margined or stellate mass². Occasionally, these localized masses may have bizarre micro-calcifications and in this condition biopsy of the mass is very important⁶.

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