

NIPPLE ADENOMA: A CASE REPORT AND LITERATURE REVIEW

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ABSTRACT

Nipple adenoma is a type of intraductal papilloma that arises within the lactiferous ducts of the nipple. We present a rare case of nipple adenoma in a perimenopausal 50 year old female patient clinically resembles pagets disease and highlight its imaging features on mammography, ultrasound and shear wave elastography. The aim to report case is considering this rare benign entity in patients presenting with nipple disorders mainly lump, nipple discharge, erythema and ulceration.

Key words: Nipple adenoma, rare benign, Pagets disease, Mammography, ultrasound, shear wave elastography,

Introduction

Nipple adenoma is a rare benign neoplasm which originates from the nipple of the breast. Jones described first time as florid papillomatosis in 1955.¹ In addition to a palpable tumor below the nipple the common clinical symptoms are nipple discharge and erosion or ulceration.² It can clinically mimic a case of mammary Paget's disease of the nipple or an even more rare case of squamous cell carcinoma of the nipple when it visibly eroded through the skin of the nipple.³ We present a rare benign disorder of nipple and its imaging features in a patient clinically mimicking pagets disease.

Case Summary

A 50 year old female patient presented to out patient department Civil hospital Karachi with complain of lump in left nipple, blood stained nipple discharge, erythema and ulceration of nipple since eight months. She was para five and has no family history of breast cancer. Her general physical examination was unremarkable. On breast examination, the left nipple was enlarged in size with skin ulceration and firm mass was palpable. (Fig.1a) There was a slight sero-

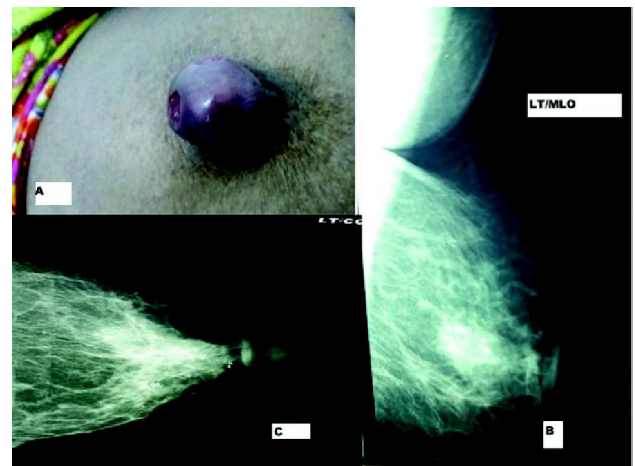


Figure 1(A). Enlarged left nipple with skin ulceration, **(B).** MLO view and **(C)** CC views of left breast shows well define soft tissue density lesion in nipple. Foci of coarse calcification seen in lower inner quadrant.

sanguinous discharge from nipple. Otherwise, both breasts and axillae were clinically normal with no palpable lymphadenopathy. She was referred to Radiology department for mammography.

Her mammography including craniocaudal and mediolateral oblique views of both breasts done which shows Grade II scattered fibroglandular parenchyma (Fig 1b and 1c). There was a well define soft tissue

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density lesion seen in left nipple. Foci of few coarse ductal calcifications seen in lower inner quadrant of left breast. Both breast shows no any mass or architectural distortion.

Complimentary gray scale ultrasound with high frequency linear probe revealed a round well-demarcated hypoechoic solid mass under the nipple of the left breast measuring about 1.5 x 2.0 cm (Fig. 2a). Colour doppler ultrasound shows mostly peripheral vascularity (Fig. 2b). It is associated with ductal dilatation in subareolar region of about 3.2 mm (Fig. 2c). Left Axilla showed benign lymph nodes with intact fatty hila. Right breast and axilla was unremarkable. On shear wave elastography lesion showed benign characteristics with homogenous blue colour and Q box mean value of 33.5 Kpa (Fig. 2d). She advised biopsy which revealed adenoma of left nipple. No evidence of atypical cells seen. Subsequently she underwent curative surgical excision of adenoma and was discharged uneventful.

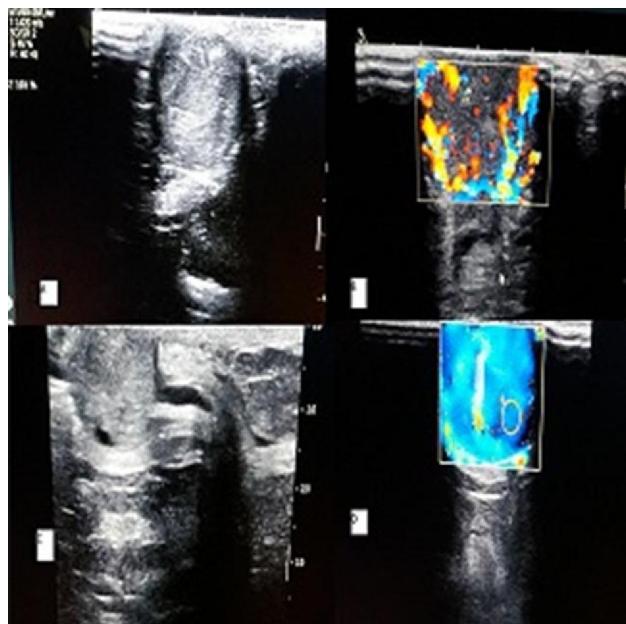


Figure 2 (A): Gray scale ultrasound image shows solid hypoechoic mass, **(B)** Colour Doppler shows increased peripheral vascularity, **(C)** associated ductal dilatation, **(D)** Shear wave elastography shows homogenous blue colour with Q box mean value of 33.5.

Discussion

Nipple adenoma is an uncommon benign tumor of the breast. It is variably referred to as adenoma of

nipple, erosive adenosis or florid papillomatosis and was first described in 1955.⁴

The term adenoma of the nipple was preferred by Taylor et al. and Goldman et al due to the presence of adenomatous proliferation into the nipple stroma rather than into the lumen of the duct.¹ The Japanese Breast Cancer Society defined adenoma of the nipple as a tumor developing papillary or solidly in the lactiferous duct of the nipple or just under the areola.² Nipple duct adenoma, usually a unilateral lesion occurs predominantly in the female breast, but it also occurs occasionally in the male breast.⁵ It usually occurs most often in 40 to 50 year old patients .

In literature, the most common complaint is nipple discharge present in 65-70% of the patients, followed by enlargement and induration of the nipple associated with ulceration.⁶ As in our case clinically it resembles Paget's disease.

A nipple adenoma is usually not revealed on mammography owing to its small size and location but can appear as an indistinct oval density that is contiguous with the nipple.⁷ But it is very obvious and distinct in our case on mammography.

In different studies the coexistence of carcinoma and nipple adenoma has been noticed. Fisher et al., found in a group of 967 patients with carcinoma, 1.2% had associated nipple adenoma.⁸

Nipple adenoma can be diagnosed on conventional multimodality imaging including mammography, ultrasound and MRI. In our case its benign nature is also revealed by shearwave elastography followed by biopsy.

Complete excision with a narrow rim of uninvolved breast tissue is adequate treatment.

Conclusion

In conclusion we report a rare case of nipple adenoma mimicking Paget's disease of breast which is a diagnostic challenge. Nipple adenoma should also be considered as a part of differential diagnosis in patients presents with nipple lump and erosion. As this is a benign condition the diagnosis of adenoma of the nipple must be confirmed so that unnecessary surgery can be avoided.

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