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INTRADUCTAL PAPILLOMA- A CASE SERIES

Radio-Diagnosis

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ABSTRACT

Introduction: Majority of patients come with nipple discharge. Mostly due to duct ectasia or intra-ductal papilloma. Here we present 10 cases of intra-ductal papilloma with their imaging morphology in mammography and ultrasonography. **Aims And Objectives:** To ascertain the better imaging modality for its diagnosis **Materials And Methods:** 10 patients of intra-ductal papilloma, Mammography- using Fujifilm amulet, Ultrasonography- Samsung Hs50. **Results:** In this study, nipple discharge was the most common complaint. Architectural distortion was absent in all patients. Type C/ D breasts and small size of the mass reduces the detectability on mammogram (80% breasts were Type D in the study). Most lesions were not appreciated on mammography. Targeted ultrasonography showed ductal pathology with associated vascular stalk in all 10 patients. **Conclusions:** USG and mammography are complimentary to each other, such that no architectural distortion rules out a suspicious lesion while targeted ultrasonography showing ductal pathology and vascular stalk was found to be the most specific feature.

KEYWORDS

Nipple Discharge, Intraductal Papilloma, Vascular Stalk, Colour Doppler, Mammography.

INTRODUCTION:

In clinical practice, a vast majority of patients come with complaints of nipple discharge. Most of the times these symptoms are related to duct ectasia. However, in few patients this discharge is secondary to intra-ductal papilloma.[1] The spectrum of imaging may be no mass, dilated ducts, or solid mass within the ducts, which can be solitary or multiple.[2] Here we present 10 cases of intra-ductal papilloma with their imaging morphology as seen in mammography and ultrasonography.

AIMS AND OBJECTIVES:

This study aims to describe the imaging morphology of intraductal papilloma and ascertain the better imaging modality for its diagnosis.

MATERIALS AND METHODS:

In this retrospective observational study, 496 patients with ages varying from 31-72 years were included. Mammography and targeted ultrasound imaging was done in all patients using Fujifilm amulet and Samsung HS50. 10 patients revealed intraductal papilloma of breast. All 10 patients underwent either biopsy or surgical treatment.

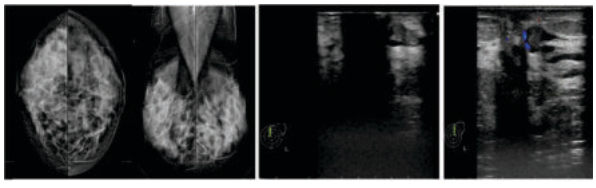

Fig 1: A 40-year-old multiparous female came with haemorrhagic discharge from nipple with small lump palpable beneath the nipple. Mammography reveals no mass lesion/architectural distortion. On USG, isoechoic intraductal lesion with vascular stalk.

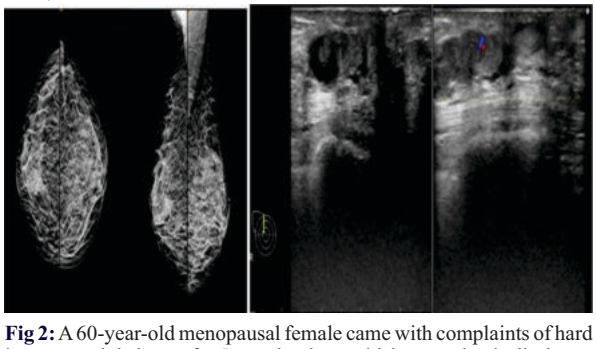

Fig 2: A 60-year-old menopausal female came with complaints of hard lump over right breast for 5 months along with haemorrhagic discharge from nipple. Enlarged solitary duct shadow is seen on mammography. On USG, Intraductal solid lesion in dilated duct with vascularity within.

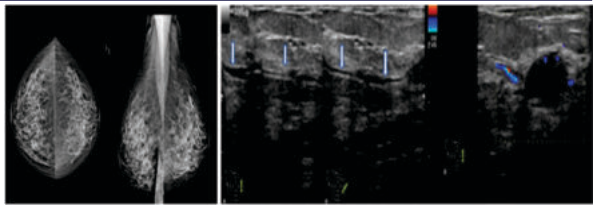

Fig 3: A 34-year-old female presented with complaints of lump on lower and inner quadrant of right breast since last 1month. She had previous history of haemorrhagic nipple discharge. Small iso to high density lesion with obscured margins. On USG, micro-lobulated hypoechoic solid mass with distal prominent duct with vascularity in and around the mass.

Fig 4. Pie charts showing distribution of patients according to size and margins of lesion

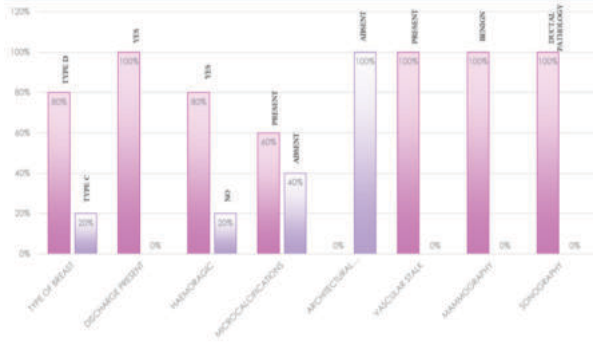

Fig 5. Chart showing distribution of patients according to various other imaging parameters

RESULTS:

- Intraductal papilloma of breast- institutional incidence is 2% (10/496).
- Nipple discharge is the most common complaint.

- Type C/ D breasts and small size of the mass reduces the detectability on mammogram (80% breasts were Type D in the study).
- Most common feature on mammography is no mass lesion.
- Targeted ultrasonography showed ductal pathology with associated vascular stalk in all 5 patients.

CONCLUSIONS:

- Architectural distortion on mammography is absent in all patients.
- Vascular stalk is present in all patients on USG.
- USG and mammography are complimentary to each other and both should be performed compulsorily in suspicious cases of intraductal papilloma.
- Absence of architectural distortion in mammogram helps in ruling out a suspicious lesion. An intraductal papilloma is a benign, or noncancerous breast lesion originating from the epithelium of mammary ducts in a milk duct. Histopathological examination reveals fibrovascular stroma supported by luminal epithelial and outer myoepithelial cell layers resulting in formation of epithelial fronds.[3] Central papilloma often accompanied by pathological nipple discharge originates from large ducts, while most peripheral papillomas involves small ducts in terminal ductal.lobular unit (TDLU).[4] There is controversy regarding treatment of intraductal papillomas, while some advocate resection of all lesions, despite benign pathological features, others advocate removal only of atypical lesions with malignant features.[5]

Diagnostic work-up in patients presenting with nipple discharge includes mammography and ultrasound as the initial imaging modality. In this study mammography in majority of patients revealed no mass lesion or architectural distortion. However, mammographic findings can be confounded by dense breast[6]. As seen in this study, type C/ D breasts and small size of the mass reduces the detectability on mammogram. On ultrasound, the picture is that of an iso to hyperechoic mass within a dilated duct with flow on colour Doppler, which is highly sensitive, as confirmed in this study.

Although diagnosis of papillary lesions featuring typical imaging features is straightforward, a proportion shows overlapping features, posing diagnostic challenges. Malignant intraductal papillary lesions are commonly associated with microcalcifications, which may be detected on mammography.[7] Benign and malignant lesions cannot be differentiated solely based on imaging.[8] For definitive diagnosis, histopathological examination is considered.

DISCUSSION:

An intraductal papilloma is a benign, or noncancerous breast lesion originating from the epithelium of mammary ducts in a milk duct. Histopathological examination reveals fibrovascular stroma supported by luminal epithelial and outer myoepithelial cell layers resulting in formation of epithelial fronds.3 Central papilloma often accompanied by pathological nipple discharge originates from large ducts, while most peripheral papillomas involves small ducts in terminal ductal.lobular unit (TDLU).4 There is controversy regarding treatment of intraductal papillomas, while some advocate resection of all lesions, despite benign pathological features, others advocate removal only of atypical lesions with malignant features.5

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