

Case Report

BREAST LUMP - AN INTERESTING CASE REPORT

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ABSTRACT

Intraductal papillomatous lesions in the breast may be manifestations of different histological types of tumors, including papillomas and intraductal papillary carcinomas. Intraductal papillomas are relatively rare, with an incidence of 2–3%. They are benign tumors that arise from the mammary duct epithelium. We observed a tumor of this type in a 59-year-old woman presented with sonographic examination which revealed. A well defined hypoechoic lesion of with spiculated margin and cystic changes at retro areolar region right breast - BIRADS IV, which was surgically removed. Initially FNAC and frozen section revealed suspicious of malignancy. Final histopathological examination revealed that the lesion was benign (intraductal papilloma). This case illustrates the role of imaging, clinical diagnosis and histopathological report of papillomatous lesions. Histological confirmation is always necessary, however, to rule out the presence of malignancy.

Keywords: Breast Lump, DCIS, Papilloma

INTRODUCTION

Intraductal papillomas are benign tumors that originate from the epithelium of the lactiferous ducts. The incidence of these tumors is 2–3%; they develop in women between the ages of 30 and 77 years. Two types of intraductal papillomas are generally distinguished: central and peripheral. The central type develops in the subareolar region; they are solitary tumors and arise most frequently during the perimenopausal period. Peripheral intraductal papillomas tend to be multiple, and they develop in young women, arising within the terminal duct-lobular unit.

Macroscopically, the lesion presents as an oval or roundish mass located within a dilated lactiferous duct; the mass may be pedunculated or broad-based, and it generally measures a few millimeters in diameter. Histological analysis reveals proliferation of the ductal epithelium characterized by myoepithelial cells and a fibrovascular stroma. Clinically, 72% of all cases present with bloody discharge from the nipple caused by the fragility of the proliferating, disorganized epithelium, which tends to breakdown and bleed. Although these tumors are benign, there is a great deal of controversy surrounding their diagnosis. This is due to the fact that intraductal papillomatous breast lesions are associated with a broad range of histological types, with different characteristics. At one end of the spectrum are intraductal papillomas; at the other end are lesions such as intraductal papillary carcinomas.

CASES

A 59 year old postmenopausal woman with three children who had been born after normal labor and delivery and breastfed. Presented with lump in the right breast that was revealed in a mammogram during a general check up. O/E right breast 2x1 cm retro areolar lump felt. Routine investigations were done and serum cholestrol was found to be elevated along with LDL. FNAC of right breast lump was done revealed suspicious for malignancy for which excision biopsy and frozen section study was done and shows evidence of DCIS with one focus suspicious for invasion. Await paraffin sections. As the frozen section reports were inconclusive closure was done. Final histopathological revealed multiple ductal papilloma with florid epithelial hyperplasia & sclerosis.

DISCUSSION

Intraductal papillomas of the breast are benign lesions with an incidence of approximately 2-3% in humans. Two types of intraductal papillomas are generally distinguished. The central type develops near the nipple. They are usually solitary and often arise in the period nearing menopause. On the other hand,

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the peripheral type is often multiple papillomas arising at the peripheral breasts, and is usually found in younger women. The peripheral type is associated with a higher risk of malignancy. They are the most common cause of bloody nipple discharge in women age 20-40 and generally do not show up on mammography due to their small size, so the next step in treatment would be a galactogram to guide the subsequent biopsy. The masses are often too small to be palpated or felt. A galactogram is therefore necessary to rule out the lesion. Intraductal papilloma of ectopic breast in axillary lymph node has also been reported in literature (Tarallo *et al.*, 2012; Al Sarakbi *et al.*, 2006; Cilotti *et al.*, 1991; Ohuchi *et al.*, 1984; Muttarak *et al.*, 2008). Intraductal papilloma is a discrete benign tumour of the epithelium of mammary ducts. It shows a predilection for the extreme ends of the ductal system the lactiferous sinuses and the terminal ductless.

Histopathologically, a papilloma is a mass-like projection that consists of papillary fronds attached to the inner mammary duct wall by a fibro vascular core that is covered with ductal epithelial and myoepithelial cells. The epithelial component can be subject to a spectrum of morphologic changes ranging from metaplasia to hyperplasia, atypical intraductal hyperplasia, and in situ carcinoma. The relative risk with moderate or florid ductal hyperplasia ranges from 1.5 to 2.0, and the risk is independent of other risk factors such as family history. Even though these patients are at increased risk, the need for chemoprevention and heightened screening has not been supported by studies. Furthermore, surgical excision is not required after core biopsy unless there is a concern for additional disease or a question of concordance between pathology and the clinical picture (eg, mammogram findings, ultrasound findings, and physical examination).

Risk of malignancy arising from the papilloma depends on the extent of epithelial atypia. If epithelial atypia is confined to the papilloma, without surrounding atypia, the risk of subsequent invasive breast carcinoma is similar to that of non atypical papilloma.

Due to a marked variation in papillary lesions, a clear strategy toward their management has not been developed. Pathology reports of papillomas may include anything from single, solitary benign papillomas to malignant papillary invasive cancers. To better define these lesions, pathologists have tried to classify lesions according to two characteristics: the number of lesions and the presence or absence of atypia. Papillomas usually present as either a large, solitary, central papilloma or multiple, peripheral micropapillomas.

When atypical hyperplasia (within or surrounding the papilloma) is excluded, a solitary papilloma carries a relative risk of 2.04 to 2.1 compared to 3.01 to 3.54 with micropapillomas. When atypia is associated with the papilloma, this risk increases to a level of 5.1 to 13.1 for solitary papillomas and 4.4 to 7.0 for micro-papillomas.

Clearly, the presence of atypia and the number of lesions play a role in determining future breast cancer risk. Of note, the presence of papillomas does not predict laterality in cases of future breast cancer. Progression to malignancy is more common in peripheral papilloma than the central one. The risk of malignancy is 7% in women less than 60 years of age and 30% in more than 60 years of age. However epithelial atypia when present simultaneously both within and outside a papilloma is associated with moderate to highly increased relative risk. Solitary papillomas commonly occurring in premenopausal women are associated with a slightly increased risk (1.5–2.0 times) of developing breast carcinoma (Ohuchi *et al.*, 1984; Muttarak *et al.*, 2008; Singh *et al.*, 2010; Oyama and Koerner, 2004; Saddick and Lai, 1999; Werling *et al.*, 2003; MacGrogan *et al.*, 2003; Ellis *et al.*, 2000).

Conclusion

Intraductal papillomas are one of the most difficult lesions to be diagnosed on investigation and clinically may also mimic malignancy. Overall the risk of malignancy in intraductal papillomas is around 1.1%. Differential diagnosis and management of papillary breast lesions can be extremely complex. In the presence of a papillomatous lesion, it can be very difficult to arrive at a definitive diagnosis on the basis of clinical and radiological findings. Therefore, pathological confirmation is always needed. Since the risk of malignancy is high, wide local excision with close followup is necessary in case of multiple ductal papillomas.

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