

Case Report

Benign Intracystic Papillary Phyllodes Tumor - A Rare Case

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Abstract

Phylloides tumor is a circumscribed biphasic tumor of the breast, analogous to fibroadenoma. They frequently contain clefts or cystic cavities; however the tumour rarely shows a morphologically intracystic growth pattern. We experienced a rare case of a benign phyllodes tumor with a solid mass growing into the cyst. A 45 years old female noticed a swelling in her left breast. The swelling increased in size and the patient presented to our OPD. The tumor was resected and we received a mass measuring 7X5X4 centimeters. Cut surface showed a cystic space containing a papillary mass. Histological examination revealed a benign case of phyllodes tumor showing an intracystic papillary growth pattern.

Key Words : Phyllodes Tumor (PT) Benign, Intracystic

Introduction

PT is a rare distinctive fibroepithelial tumor of the breast. They frequently contain clefts or cystic cavities. PT showing intracystic growth is so rare that the frequency of PT showing this pattern is unclear and there are few reports about the difference between intracystic and general PT. Here we report a rare case of benign intracystic papillary phyllodes tumor.

Case Report

A 45-year old female presented with complains of swelling in the left breast, measuring 4X3 centimetres, gradually increasing in size for one month. A clinical diagnosis of carcinoma breast was made and FNAC of the swelling was advised. After repeated aspirations a diagnosis of benign breast lesion with features suggestive of complex fibroadenoma with atypia was made and excisional biopsy was advised. We received a large irregular, globular mass measuring 7X5X4 centimetres. Cut surface showed a cystic space containing a papillary mass (figure-1). Microscopic examination revealed a cystic cavity lined by flattened epithelium, and a solid papillary mass inside, attached by a narrow stalk to the cyst wall at many places(fig-2). The

leaflike papillae were composed of stromal connective tissue core covered by double layered epithelium. Typical intracanalicular growth pattern with leaflike projections in the dilated lumina was seen throughout the tumor(fig-3 & 4). Mild epithelial proliferation was seen in few ducts. Stroma was fibromyxoid, collagenous and oedematous. At places cellular areas were also seen. There was no evidence of cytological atypia or mitosis. Surrounding breast tissue showed many mammary lobules, dilated ducts with secretions, fibrosis and a sparse mononuclear cell infiltrate. A histopathological diagnosis of benign intracystic papillary phyllodes tumor was made.



Fig. 1- Cut surface showing a cystic space containing a papillary mass.

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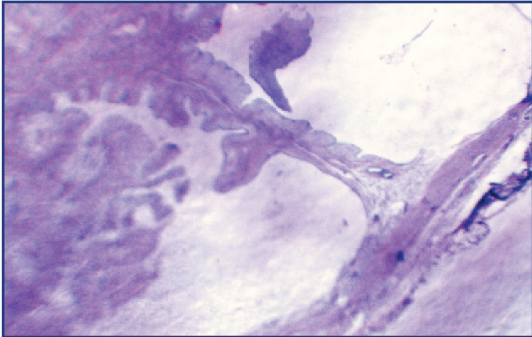


Fig. 2 - Solid papillary mass inside, attached by a narrow stalk to cyst wall

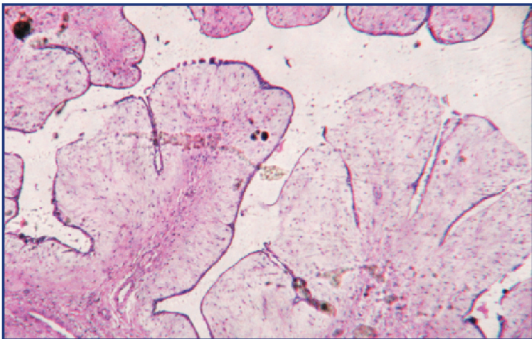


Fig. 3 : The leaflike papillary projections in the dilated lumina seen throughout the tumor

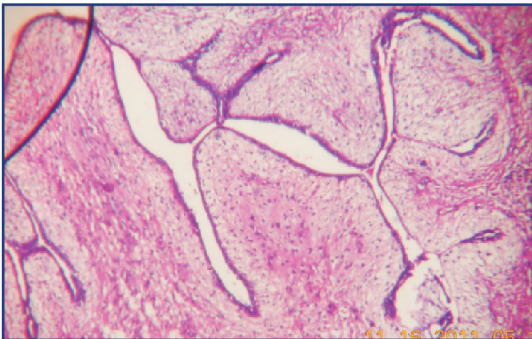


Fig. 4 : Typical intracanalicular growth pattern

Discussion

Phyllodes tumor is a rare fibroepithelial neoplasm accounting for less than 1% of all breast tumours. It has a leaf-like architecture and infiltrating margins with marked stromal overgrowth and hypercellularity. Phyllodes

tumour usually presents with a clinically benign lump, which may be rapidly growing. Prevalence is higher in Latin American white and Asian populations(1)

This tumor occurs in the same age group as breast carcinoma, the median age at the time of diagnosis being 45 years. Very few of the patients are younger than 25 years of age, in striking contrast with the age distribution of fibroadenoma. However, Phyllodes tumor can certainly occur in young adults and even in adolescents and therefore, the diagnosis cannot be excluded on the basis of age. Many Phyllodes tumors are large and some reach huge dimensions, but others measure less than 5cm in diameter. It follows then, that the diagnosis of Phyllodes tumor can be neither made nor ruled out by size alone. Tumors with the configuration of fibroadenomas having a cellular stroma without atypical features concentrated in the periductal areas are on the benign end of the spectrum(2).

Histologically, PT is composed of an extremely cellular stroma, accompanied by the proliferation of benign ductal structures. They typically exhibit an enhanced intracanalicular growth pattern with leaf-like projections into the dilated lumina(3).

The classification of PT as benign and low or high grade malignant reflects an estimate of the probable clinical course based on the histological appearance of the tumor. Benign PT will not metastasize and has a low probability (approximately 20%) for local recurrence after excision. A low grade malignant or borderline PT has a slight probability (<5%) of metastasis, but such a tumor is more likely than a benign PT to recur locally. Metastasis occurs in about 25% of high grade malignant PTs and these lesions are also prone to local recurrence. Recurrences occur earlier with high grade malignant PT than after

initial treatment of benign or low grade malignant tumors. Less than 1% of high grade PTs give rise to axillary lymph node metastasis(4).

Most phyllodes tumors, benign or malignant, commonly form a round or oval mass sharply circumscribed and encapsulated. Larger tumors frequently contain clefts or cystic cavities; however, the tumor rarely shows morphologically intracystic growth. In this case, the cut surface of the tumor was solid, papillary and was attached with many narrow stalks to the cyst wall. When a cystic lesion enlarges with fluid and leaflike papillary protrusions of stromal connective tissues extend to cystic areas, the tumor shows possible intracystic growth(5).

Only few similar cases have been reported in literature so far; two from Japan. Two separate reports of an intracystic growth pattern of phyllodes tumor, both borderline cases, were described in 1998 by Horiguchi et al. (5) and Shintaro et al(6). An intracystic phyllodes tumor which grew along the lumen of the lactiferous duct and caused nipple discharge was described in a Malay woman by Lian et al in 2007(7). More recently, a case of benign cystic papillary Phyllode tumor with an alarming gross appearance has been reported by Maimoon SA and Wilkinson AR(8).

The role of the pathologist in the preoperative diagnosis of phyllodes tumor of the breast is critical to appropriate surgical planning. However, reliable differentiation of phyllodes tumour from cellular fibroadenoma remains difficult. Preoperative diagnostic accuracy allows correct surgical treatment, avoiding the pitfalls of reoperation because of inadequate excision, or surgical overtreatment. Fine needle aspiration cytology has a high false negative rate. However, the value of FNAC in the diagnosis of phyllodes tumor remains

controversial, with an overall accuracy of 63%. Fibroadenomas and phyllodes tumours share a dimorphic pattern with both epithelial and stromal components. In addition to the presence of hypercellular stromal fragments, specific discriminating features included the percentage of long spindle nuclei in dispersed stromal cells (>30% found to be diagnostic of phyllodes tumour) and the size and shape of epithelial clusters >1 mm, elongated, and wavy/folded in phyllodes tumour, compared with smaller tubular or blunt-branching clusters in fibroadenoma(1).

The fundamental principle of therapy is complete excision to prevent local recurrence. A wide local excision with adequate margin of normal breast tissues irrespective of the histological features is preferred.

Features that predispose to local recurrence are incomplete excision, an invasive tumor border, and secondary tumor nodules at the periphery. Primary tumor size may be a factor in the success of local excision, because a more generous margin may be possible when tumors are small(4).

Local recurrence is deleterious especially because of the tendency of some PTs to have a higher grade in recurrent lesions than in the corresponding primary tumor and the risk of chest wall invasion. Due to the rapid growth and large size of the tumor at presentation, clinically a benign PT can be confused with malignancy. However with a proper cytological evaluation, benign nature of the lesion was suggested in this case that guided the surgeons in planning a proper therapy. The patient is disease free one year after the resection.

Both diagnostic and prognostic information may in future be gained from application of immunohistochemical and other techniques assessing the expression of proliferative markers including p53, Ki-67, and others(1).

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