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Case Study

BENIGN PHYLLODES TUMOR ARISING IN AXILLARY BREAST TISSUE; A RARE CASE WITH AVAILABLE REVIEW OF LITERATURE

MONICA DASH[1], PRAGNYA PARAMITA MISHRA[2*], PREMANAND PANDA[3]

[1,2]Department of Pathology, Hi-Tech MCH, Rourkela, Odisha, India. [3]Department of Radiology, JP Hospital and Research Centre, Rourkela, Odisha, India

Email: panda.premanand@gmail.com

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ABSTARCT

Anatomical variation known as accessory breast tissue arises during embryogenic development. The axilla is where it most commonly occurs. Accessory breast tissue may experience both benign and malignant processes similar to those in normal breast tissue. We describe a 40-year-old woman who had a palpable mass at her left axilla and who later developed a benign phyllodes tumor in her axillary breast tissue. Microscopy revealed an encapsulated tumor composed of cells arranged in singles, compressing the epithelial cells into a leaf-like (phyllodes) pattern with a mild lymphocytic stromal response. Although phyllodes tumors in axillary breast tissue are a very uncommon occurrence, this case study provided additional information on the tumor, which might promote improvements in disease management.

Keywords: Axillary breast tissue, Fibroadenoma, Phyllodes tumor

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INTRODUCTION

An unusual hormone-responsive deviation from normal breast development, accessory breast tissue experiences physiological and pathological alterations that are comparable to those of regular breast tissue. According to reports, the prevalence of accessory breast tissue in the general population ranges from 2% to 6%, with women having a significantly higher prevalence [1]. With far less frequent occurrences in the thorax, abdomen, inguinal region, and vulva, it is mainly found in the axilla [2]. Among the pathologies are inflammatory conditions and a range of benign and malignant tumors that might present diagnostic challenges and are frequently undiagnosed clinically. Here, we report an extremely rare case of a benign phyllodes tumor growing in the left axillary accessory breast tissue of a lady aged 40.

CASE REPORT

A 40 y old female presented with a palpable mass at the left axilla, which had been present for a month with rapid growth. Breast ultrasound showed a huge mass with lobulated borders and internal cystic clefts at the left axilla with an approximate size of 10.0 x 9.0 x 9.0 cm (fig. 1).

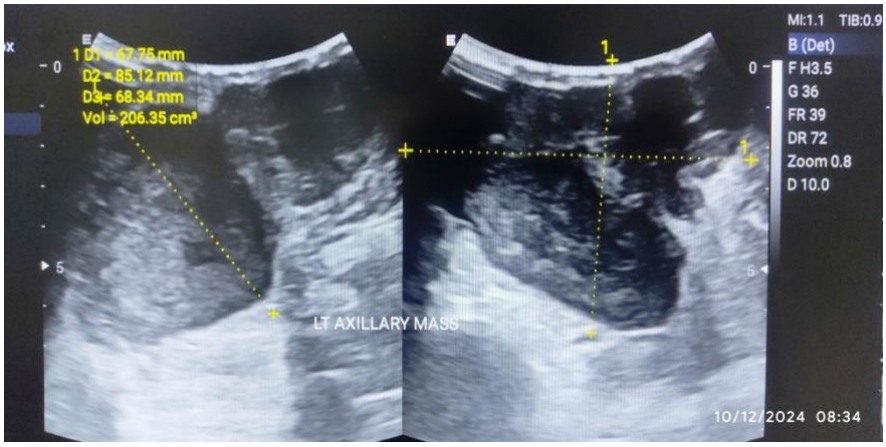

Fig. 1: Ultrasonography image showing huge mass with lobulated borders and internal cystic clefts with an approximate size of 10.0 x 9.0 x 9.0 cm at the left axilla

On FNAC, smears showed benign duct epithelial cells along with myoepithelial cells arranged in small clusters with many bipolar bare nuclei with few stromal fragments, prompting a diagnosis suggestive of benign breast disease. With proper pre-surgical workup, the mass was excised and sent to the pathology department. Gross examination showed a skin-covered excised specimen measuring 10.0 x 9.0 x 9.0 cm, and its cut surface revealed a tumor measuring 9.6 x 8.5 x 8.5 cm, which was grey-white and firm. Cut sections of the tumor showed myxoid areas (fig. 2).

Histopathological sections studied showed stratified squamous epithelium with underlying capsulated neoplasm with cells arranged in singles, compressing the epithelial cells into a leaf-like epithelial pattern (fig. 3). Cells exhibited mild pleomorphism and scattered mitosis. Mild lymphocytic stromal response with no increased

stromal atypia was seen. Also, two reactive lymph nodes were noted. These findings are compatible with benign phyllodes tumor.

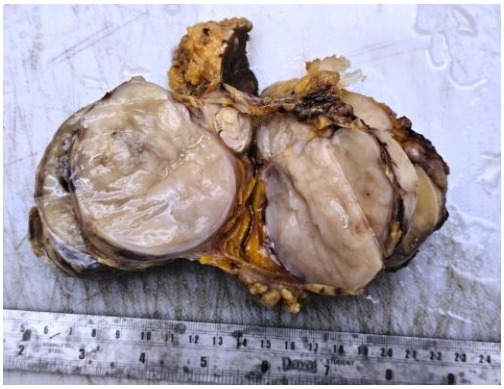

Fig. 2: Gross photograph of tumour measuring 9.6 x 8.5 x 8.5 cm, cut surface of tumour is grey-white and firm with myxoid areas

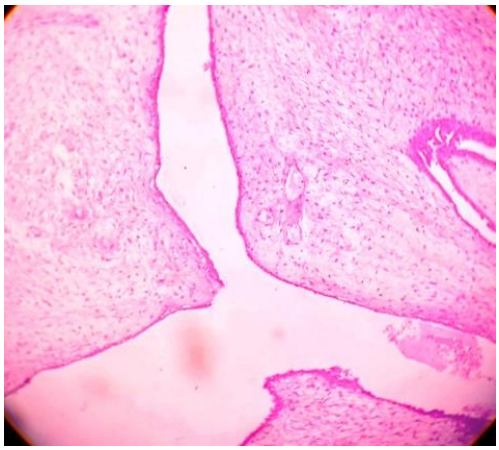

Fig. 3: Microscopic photograph of tumour showing epithelial cells arranged in leaf-like pattern with surround spindle cells

DISCUSSION

Remaining breast tissue from normal embryologic development is referred to as accessory breast tissue. It usually happens along the bilateral milk line, which runs from the medial thigh and inguinal regions to the anterior axillary folds. The axilla is where supplementary breast tissue is most frequently found [3]. A patient with accessory breast tissue may be asymptomatic or exhibit a palpable lump in the axilla. Normal breast tissue that reacts to hormones is the same as accessory breast tissue. Understanding accessory breast tissue is crucial for enhancing the standard of patient care because the diagnosis might be mistaken for a number of disorders, such as lymphadenopathy, lipoma, vascular malformation, or cancer. The pathophysiology of benign and malignant cancers that can develop in accessory breast tissue is crucial to resolving this issue [1, 3, 4]. Women between the ages of 30 and 40 are most likely to have benign proliferative breast lesions, which can occasionally result in severe breast asymmetry because of their size. Benign phyllodes tumors, juvenile fibroadenomas, large fibroadenomas with enhanced stromal cellularity, and pseudoangiomatous stromal hyperplasia (PASH) are among the differential diagnoses for these lesions [5]. Rare fibroepithelial breast cancers are called phyllodes tumors. Although the tissue's histopathology shows a typical leaf-like protrusion and enhanced stromal hypercellularity, its structural pathology is comparable to that of fibroadenoma.

Histopathological, radiographic, and clinical examination are used to evaluate phyllodes tumors [6, 7]. The World Health Organization's 2003 guidelines serve as the basis for diagnosing phyllodes tumors. Three histological categories are used to classify phyllodes tumors: benign, borderline, and malignant [8] (table 1).

Table 1: Comparing histopathologic features of benign, borderline and malignant phyllodes tumors [8]

Histologic features	Benign phyllodes	Boderline phyllodes	Malignant phyllodes
Tumor border	Well defined	Well defined, may be focal permeative	Permeative
Stromal cellularity	Cellular, usually mild, may be non-uniform or diffuse	Cellular, usually moderate, may be non-uniform or diffuse	Cellular, usually marked and diffuse
Stromal atypia	Mild or none	Mild or moderate	Marked
Mitotic activity	Usually low: <5 per 10 HPFs	Usually frequent: 5-9 per 10 HPFs	Usually abundant: ≥10 per 10 HPFs
Stromal overgrowth	Absent	Absent (or very focal)	Often present
Malignant heterologous elements	Absent	Absent	Maybe present
Relative proportion of all phyllodes tumor	60%-75%	15%-26%	8%-20%

Phyllodes tumors that develop in ectopic breast tissue are extremely uncommon. They have usually been observed in the axilla and vulva. According to a review of the literature, there are only six examples of axilla (excluding the current case) [9-13].

Each diagnostic group has its own set of surgical treatment guidelines for proliferative breast lesions. Except for phyllodes tumors, which make up 2.5% of fibroepithelial lesions, fibroepithelial lesions are benign [14]. Clinical signs such as advanced age and a big tumor with a history of rapid growth may raise the suspicion of phyllodes tumors. Preoperative tissue identification and surgical methods for breast rebuilding following tumor excision are crucial aspects of managing phyllodes tumors.

Excision of the lesion with wide margins is the standard treatment for phyllodes tumors. According to a number of papers, phyllodes tumors should have margins of at least 1 cm. Since local recurrence typically happens within the first few years after surgery, particularly if the excision was partial, the prognosis for phyllodes tumors can be significantly improved [5-7, 15]. When the tumors are big or larger, excision by total enucleation may be necessary, particularly in women over 35 [15, 16].

CONCLUSION

The present study reports a benign phyllodes tumor in axillary breast tissue, which is extremely rare and is misdiagnosed owing to the diagnostic complexity. In conclusion, the diagnosis, treatment, and prognostic details of the tumor presented in the case report will assist in improving further knowledge of the characteristics of this less-known, rarely diagnosed entity.

PATIENT CONSENT

Written informed consent was obtained from the patient for the publication of this case report.

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Nil

AUTHORS CONTRIBUTIONS

All authors have contributed equally

CONFLICTS OF INTERESTS

There are no conflicts of interest.

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