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Case Series

Mouse in the axilla: a case series of fibroadenoma in the axillary ectopic breast tissue - a rare entity

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ABSTRACT

Axillary polymastia is a common variant of ectopic breast tissue (EBT) with reported incidence of 2% to 6% in women. EBT can undergo the same physiological and pathological processes as the normally located breast. Though fibroadenoma commonly occurs in the breast, it is rare in the ectopic breast tissue. We report a series of four cases of fibroadenoma in axillary breast tissue over past 10 years in our hospital including a giant axillary fibroadenoma which we claim to be the largest till date in the English literature.

Keywords: Axilla, Ectopic breast tissue, Fibroadenoma, Supernumerary breast

INTRODUCTION

Ectopic breast tissue occurs in 2 to 6% of the general population and is classically distributed along the embryonic milk line which extends from the axilla to the pubic region.[1]The axilla is the most common site, accounting for approximately 60 to 70% of accessory breast tissue.[2]

The diagnosis of ectopic breast tissue is important because this tissue is also subjected to the same alterations and diseases, whether benign or malignant, which affect naturally positioned breasts.[3] Although carcinoma of the axillary accessory breast is rare, accounting for 0.3% of all breast cancers, the most frequent condition in the accessory breast is breast cancer followed by mastopathy and fibroadenoma.[4] Since publications describing this anomaly are rare in English literature, we decided to present a case series of fibroadenoma arising from axillary ectopic breast tissue over the past 10 years in our hospital. To the best of our knowledge, this is the first case series reporting four cases of fibroadenoma of the axillary breast tissue including one which fits into Giant axillary fibroadenoma.

CASE SERIES

Case 1

A 35 years old lady presented to us with a painless mass lesion in left axilla since 2 years. The mass was initially small to start with and then size started increasing since, one year to reach the present status. She was the mother of two healthy children. She had the history of excision of fibroadenoma from the left breast when she was 15 years old. Family history was negative for any breast disease. Local examination revealed a mobile, painless, subcutaneous, hard mass of about 10×10 centimeters in the left axilla which was completely isolated from the breast.

Both the breasts and nipple were clinically normal for her age except for the scars of previous surgery in the left breast and burn scar bilaterally. There was no axillary lymphadenopathy or lump in the right axilla. Fine needle aspiration cytology suggested fibroadenoma with no evidence of malignancy. Ultrasound examination of the urogenital system was normal. Lump was excised completely. Histopathology revealed picture of conventional intracanalicular fibroadenoma (Figure 1).

Case 2

A 40 years old female patient presented to our hospital with complaints of right axillary swelling for duration of 5 years. There is no history of cough, fever, weight loss or night sweating. On physical examination, there was an approximately 5×4 cm, firm, well-defined, mobile, non-tender, solitary mass in the right axilla that was completely separated from right breast. Fine-needle aspiration and cytology suggested a diagnosis of fibroadenoma in axillary accessory breast tissue. The mass was completely excised and histopathologic examination confirmed the diagnosis. Her recovery was uneventful. She was informed about the diagnosis, reassured and discharged from care (Figure 2).

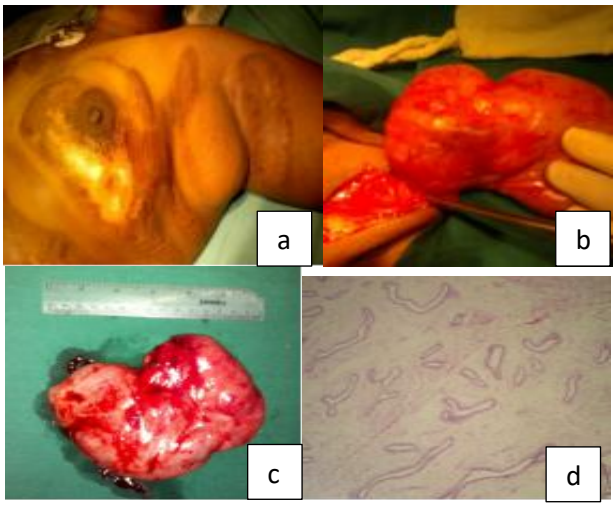

Figure 1: (a-d) Case 1- pre-operative image, intraoperative image, excised specimen, histopathological image.

Figure 2: (a-d) Case 2- pre-operative image, intraoperative image, excised specimen, histopathological image.

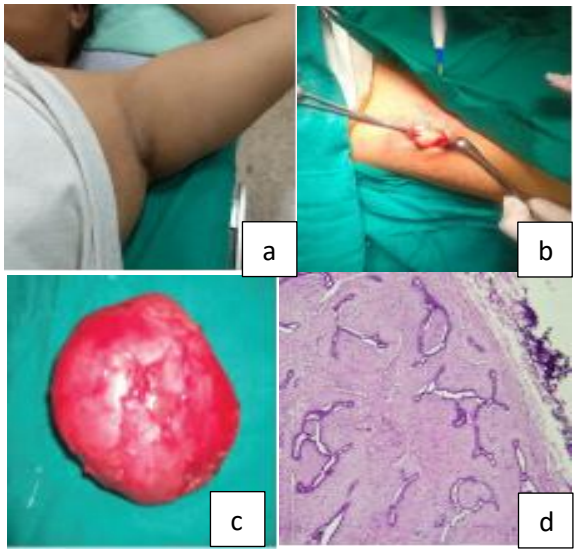

Figure 3: (a-d) Case 3- Pre operative image, intra-operative image, excised specimen, histopathological image.

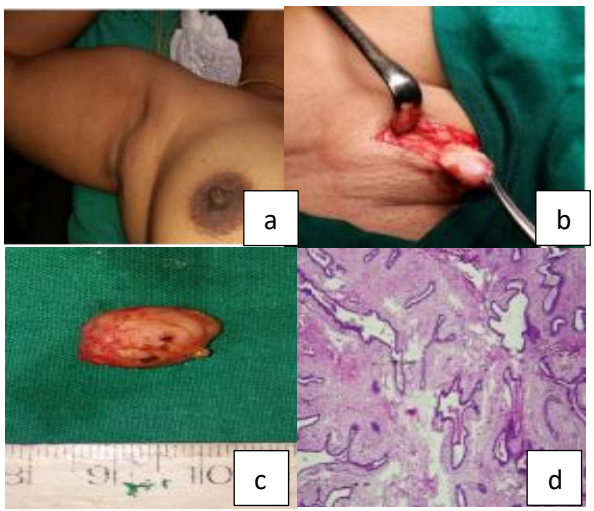

Figure 4: (a-d) Case 4- pre-operative image, intra-operative image, excised specimen, histopathological image.

Case 3

A 47 years old female patient presented with complaints of mobile left axillary swelling for 3 years. On examination, the swelling was freely mobile, soft to firm in consistency measuring approximately 3×2 cm, had smooth surface with regular margins. Overlying skin appears normal. No ulcer or discharge was present. The breast was bilaterally symmetrical with no lump or nipple discharge. Fine-needle aspiration and cytology suggested a diagnosis of fibroadenoma in the left axillary accessory breast tissue.

The surgical exploration was carried out through axillary incision. The histopathology of an excised specimen confirmed the diagnosis (Figure 3).

Case 4

A 42 years old female patient presented with complaints of solitary, right axillary swelling for 1 year. On examination, the swelling was freely mobile, smooth, rubbery in consistency measuring approximately 2×2 cm with regular margins. Overlying skin appears normal. No ulcer or discharge was present. The breast was bilaterally symmetrical with no lump or nipple discharge. Fine-needle aspiration and cytology suggested a diagnosis of fibroadenoma in the Right axillary accessory breast tissue. The surgical exploration was carried out and the mass was completely excised. The Histopathology report confirmed the diagnosis of fibroadenoma (intracanalicular type) (Figure 4).

DISCUSSION

During the early weeks of embryonic development in human, the mammary milk lines, extend from the axillary region to the groin. In normal development, most of the embryologic mammary ridges resolve, except for two segments in the pectoral region, which later become the breast, failure to involute may lead to ectopic breast tissue with (polythelia) or without (polymastia) a nipple/areolar complex.[3] Polythelia, in particular, has been associated with cardiac and urinary anomalies, which can be explained by the parallel embryologic development of mammary structures and the genitourinary system.[3,4] In our patients, we have excluded urological or cardiac abnormalities. Two hypotheses have been proposed on the embryogenesis of the supernumerary breast. One attributes the anomaly to the failure of regression and displacement of the mammary milk line, while the other believes it develops from the modified apocrine sweat glands.[5]

As compared to pectoral breast tissue, EBT demonstrates the same hormonal effects and is at risk of developing breast diseases. The possibilities of malignant masses include breast cancer, epidermoid carcinoma, rhabdomyosarcoma, neuroendocrine tumors, lymphoma and melanoma. Axillary lymph node metastases from carcinoma of the breast (or of any another cancer) are the single most important abnormality to exclude, as they are an important prognostic factor in breast cancer. Sometimes it could cause psychological disturbances in adolescence and it may give pain and discomfort especially during menstruation, pregnancy and lactation.[1,6]

In 1915, Kajava et al published a classification system for supernumerary breast tissue that remains in use today. Class I consists of a complete breast with nipple, areola and glandular tissue. Class II consists of nipple and glandular tissue but no areola. Class III consists of areola and glandular tissue but no nipple. Class IV consists of glandular tissue only. Class V consists of nipple and areola but no glandular tissue (pseudomamma). Class VI consists of a nipple only (polythelia). Class VII consists of an areola only (polythelia areolaris). Class VIII consists of a patch of hair only (polythelia pilosa).[7] All our cases belong to class IV. However, presently fibroadenoma is considered as hyperplasia of a single lobule of the breast, classified under ANDI (aberrations of normal development and involution).

Ectopic breast tissue without the presence of a nipple can cause delay in the diagnosis of malignancies. So earlier and more frequent metastasis, poorer prognosis is seen in ectopic breast tissue malignancies. Vigilant self-examination of accessory breasts similar to that of normal breasts is encouraged, for earliest detection of lesions. Complete clinical examination of swellings of accessory breasts supplemented with FNAC is basic tool for management. Follow up after excision biopsy of Fibroadenoma in axilla is the most essential to detect at the earliest any further pathological changes.

Fibroadenoma is a very common benign condition in young females. However, they are very rare in axillary EBT with only few sporadic case reports in English literature. After extensively reviewing the English literature, found about 53 case reports since 2000. The mean size was 3.5 cm and largest was 11 cm. Our case is unique due to its size (15 cm). We have not found any case in the literature having such a large sized fibroadenoma.

CONCLUSION

Fibroadenoma of accessory breast in axilla is a very rare occurrence with only 53 cases reported in the English literature (after 2000). The knowledge of this entity is essential for the clinicians because it poses diagnostic dilemma. High index of suspicion is mandatory for early diagnosis and management. Fine-needle aspiration cytology plays pivotal role for diagnosis.

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