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Case Report

A rare case of fibroadenoma in ectopic breast tissue of axilla: case report

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ABSTRACT

Developmental abnormalities of breast can lead to formation of ectopic breast tissue which may present as polymastia or polythelia or in form of swelling along the milk line. Ectopic breast tissue can also develop pathological changes similar to normal located breast tissue. This report is about a case of fibroadenoma developing in ectopic breast tissue of axilla. A thirty-four-year-old female presented with painful swelling in right axilla for 2 years and was diagnosed with fibroadenoma of axillary tail of right breast. Excision biopsy of the swelling confirmed the diagnosis of fibroadenoma. Fibroadenoma must be considered for any axillary swelling along with other differential diagnoses like lymphadenopathy, carcinoma arising from ectopic breast tissue, lipoma, sebaceous cyst, tuberculosis, vascular lesions, cutaneous malignancies or secondaries in lymph nodes. Ectopic breast tissue should be subjected to similar evaluation and screening as is recommended for normally located breast tissue. The patient should also be evaluated for possibility of kidney and urinary tract malformations.

Keywords: Axillary tail of the breast, Ectopic breast tissue, Fibroadenoma, Polymastia, Polythelia

INTRODUCTION

Mammary gland formation begins as budding of epidermis into the underlying mesenchyme. These buds normally form in the pectoral region along a thickened ridge of ectoderm, the mammary or milk line. This line or ridge extends from the axilla into the thigh on both sides of the body. Occasionally, accessory sites of epidermal growth occur, so that extra nipples (polythelia) and extra breasts (polymastia) appear. These accessory structures are usually found along the milk line in the axillary region.[1]

In normal development, most of the embryologic mammary ridges along the milk line resolve, except for two segments in the pectoral region, which later become breasts. When any of these ridges fail to involute, ectopic breast tissues develop and may lead to conditions like polymastia (supernumerary Breasts) and Polythelia (supernumerary nipples).[2] Ectopic breast tissue can develop same pathological changes as inflammation, fibrosis, fibroadenoma, cystosarcoma phyllodes, and carcinoma as the normally positioned breast.[3]

Here we report a similar case of fibroadenoma developing in ectopic breast tissue of axilla.

CASE REPORT

Clinical presentation

A thirty-four-year-old P2 L2 female patient presented to surgery OPD of KIMS Hubli in October 2015, with history of swelling in right axillary region for two years (Figure 1). History of pain in the swelling for 1 week. There was

no history of fever, cough or weight loss. No history of change in size or increased pain during menstrual cycle. No history of previous surgery. No history of OCP use.

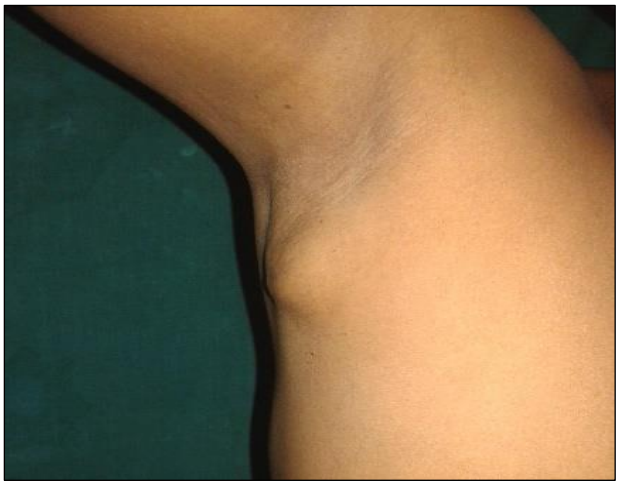

Figure 1: Fibroadenoma seen in axillary tail of right breast.

On examination patient had single swelling of 3×2 centimetres size of firm consistency, tender, freely mobile, in axillary tail of right breast. No lymph nodes were palpable.

Figure 2: Intra operative image of fibroadenoma being retracted with skin hooks.

On further evaluation, USG report was suggestive of a well-defined hypo echoic lesion of 3 × 2 centimetres seen in right axillary tail with both breasts being normal.

USG abdomen was done to rule out urogenital abnormalities and was normal. Fine needle aspiration cytology revealed benign ductal cells in branching clusters with bare nuclei against haemorrhagic background suggestive of fibroadenoma.

Treatment

Patient underwent excision (Figure 2) and the specimen (Figure 3) was sent for histopathological examination.

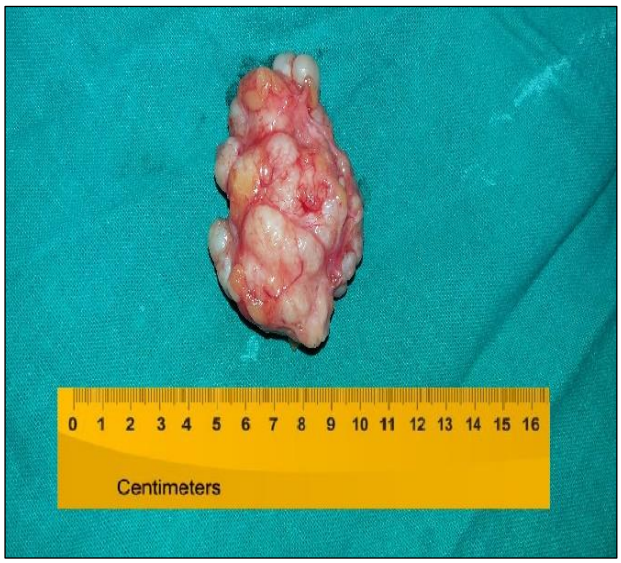

Figure 3: Excised specimen of fibroadenoma.

Post-operative period was uneventful, and patient was discharged on POD 2 with advice to follow up on OPD basis.

DISCUSSION

The prevalence of accessory breast tissue has been shown to be dependent on a few factors, including gender, ethnicity, geographical area, and inheritance. Overall, the occurrence averages between 0.22 per cent and 6 per cent of the general population.[4]

Ectopic breast tissue is a developmental anomaly and can present in form of accessory breasts or lump anywhere along the milk line, though there have been cases reported of ectopic breast tissue found in face, foot, lumbar region, vulva and perineum.[5]

Ectopic breast tissue in location other than milk line is explained by the possible migratory arrest of breast primordium during chest wall development or that it develops from the modified apocrine sweat glands.

In 1915, Kajava published a classification system for supernumerary breast tissue that remains in use today.[6]

- Class I: 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).

Present case belonged to class IV.

Clinical Significance

The clinical significance of the polythelia and polymastia lies in the fact that apart from the psychological and cosmetic impact, it develops the same pathological changes as the normally located breast tissue such as inflammation, fibrosis, fibroadenoma, cystosarcoma phyllodes, and carcinoma.[7]

Usually carcinoma arising from the ectopic breast presents late with poorer prognosis due to delay in the diagnosis. This delay happens due to a broad differential diagnosis for an axillary lesion, including lipoma, sebaceous cyst, vascular lesions, suppurative hidradenitis, lymphadenopathy, secondaries in lymph nodes, tuberculosis and malignancies.

Breast cancer in the axillary tail of Spence is extremely rare. Ampil et al. reported a frequency estimated at 0.1%.[8] Occult breast cancer with axillary lymph node metastasis is also rare, with frequencies reported from 0.12 to 0.67%.[9] Axillary lymph node metastasis can be the result of several primary tumours, including those from the breast, the gastrointestinal tract, the genitourinary tract, the skin, the thyroid, and the lung, as well as head and neck cancers. It is therefore imperative that appropriate and sensitive imaging be carried out.

Patients with accessory breast tissue may also be more prone to other congenital anomalies. Urogenital anomalies occur in 1 per cent to 2 per cent of the general population, whereas an estimated 14.5 per cent of patients with accessory breast tissue have been diagnosed by ultrasound with kidney and/or urinary tract abnormalities.

This high association has led some researchers to suggest that there may be a common supernumerary breast tissue/renal field defect. In 1996 Urbani CE et al reported a significantly higher frequency of kidney and urinary tract malformations in the accessory mammary tissue affected patients compared to controls (7.53% vs. 0.68%, $P < 0.001$).

A broad spectrum of kidney and urinary tract malformations was discovered in association with accessory mammary tissue that included adult dominant polycystic kidney disease, unilateral renal agenesis, cystic renal dysplasia, familial renal cysts, and congenital stenosis of the pyeloureteral joint.[10]

If EBT is associated with any suspicion of pathology, then further investigation with FNAC, ultrasonography, mammography, and biopsy should be done as for any other breast lesion. In routine screening programmes for breast cancer, a clinical examination should be made for the presence of EBT, and, if present, that should be subjected to routine screening as well, along with the normally positioned breast.

CONCLUSION

Fibroadenoma must be considered as one of the differential diagnoses for any axillary swelling while keeping in mind conditions like lymphadenopathy, carcinoma arising from ectopic breast tissue, lipoma, sebaceous cyst, tuberculosis, vascular lesions, cutaneous malignancies or secondaries in lymph nodes.

Ectopic breast tissue should be subjected to similar evaluation and screening as is recommended for normally located breast tissue. The patient should also be evaluated for possibility of kidney and urinary tract malformations.

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