

Case Report

Axillary ectopic carcinoma of breast

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Abstract

Carcinoma in ectopic breast tissue is rare. This is a case report of a 70-year-old postmenopausal female, who presented with a painless mass in right axilla, diagnosed as invasive ductal carcinoma of ectopic breast tissue on excisional biopsy. Postoperatively she was put on tamoxifen, and remained well 10 months after surgery.

Keywords: Ectopic breast tissue, Axillary lump, Carcinoma of ectopic breast, Invasive ductal carcinoma.

Introduction

During embryonic development, mammary ridges (milk lines) extend from the anterior axillary folds to the inguinal folds; usually this regresses except in the pectoral region where it forms normal breasts.¹ Sometimes the milk line fails to regress in other areas where it forms ectopic breast tissue (EBT).¹⁻³ Clinically EBT presents with tender or non-tender, fixed or mobile mass. Surgical excision is required when cosmetically disfiguring or causing discomfort and pain. Histopathologically, EBT exhibits all types of benign and malignant pathologies that can occur in normal breast tissue. Ectopic breast carcinoma is well-documented in literature, but is still a rare malignancy worldwide. This report describes a case of axillary ectopic breast carcinoma diagnosed on excisional biopsy and axillary dissection.

Case Report

A 70-year-old female, presented with the

complaint of lump in right axilla for one month. On examination, the lump was solitary, 8 x 7 cm in size, slightly oval, firm, non-tender and immobile; both breasts and all other lymph node regions were normal. Patient was hypertensive, well controlled on drugs. FNAC revealed reactive hyperplasia. Abdominal and breast ultrasound, x-ray chest and mammographs were normal. Excision biopsy was planned.

After general anaesthesia, a linear incision was made between anterior and posterior axillary folds. The encapsulated lump was dissected out and removed along with the fibrofatty tissue and lymph nodes lateral to pectoralis minor. The post-operative course was uneventful. Histopathology revealed invasive ductal carcinoma originating from ectopic breast tissue: mass measuring 6×5×3 cm was found attached with soft tissue revealing 3 gray white lymph nodes: The largest one measuring 2×2×1 cm and the smallest one 0.5×0.5 cm. Microscopy revealed an infiltrative malignant tumour composed of nests, sheets and glandular structures of pleomorphic atypical epithelial cell, with abnormal mitosis. Section of lymph node showed effaced architecture placed by the same malignant tumour.

Postoperative bone and chest scans revealed no metastasis. She refused radiotherapy. Chemotherapy was instituted with tamoxifen 20 mg twice daily. Patient was then followed monthly for evidence of recurrence or metastatic features. At 2 months, the repeat mammography and bone



Figure-1: Ectopic carcinoma of breast, right axilla; preoperative view above, & excised view below.

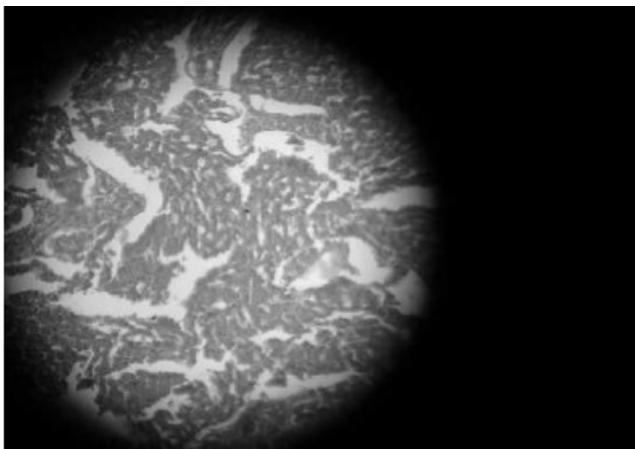
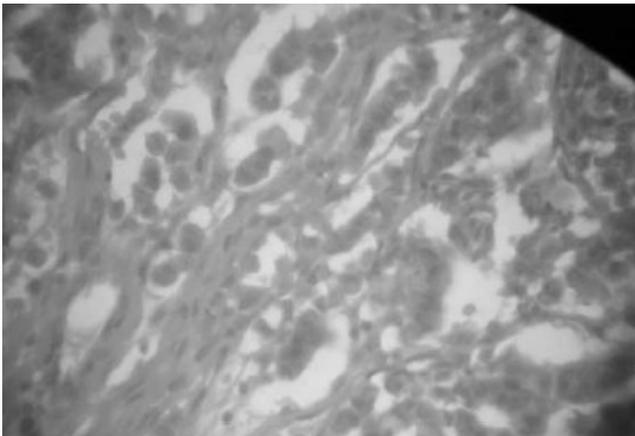


Figure-2: Histopathological appearance of ectopic carcinoma of breast, right axilla.

scan were normal but CT scan showed axillary nodal and pulmonary metastasis. She died 5 months after the primary surgery.

Discussion

EBT can occur as supernumerary breasts (having a nipple, areola or both), or as aberrant breasts (without nipple or areola).^{4,5} It is most commonly found in axilla but is also reported in vulva and chest wall.^{1,4} Ectopic breasts, either supernumerary or aberrant, have an incidence of 2-6%.^{1,4,5} EBT is under the same hormonal influences as the normal breast and can develop similar proliferative changes as well as carcinoma.^{1,2,6} Mastitis, cysts, papillomas, fibroadenoma, duct hyperplasia and carcinomas arising in EBT have been well-documented.^{1,2}

Ectopic breast carcinoma (EBC) is an uncommon occurrence, forms about 0.3% of all breast cancers.⁷ The majority are found in axilla comprising 55-65% of the cases reported.⁴ Histologically, infiltrating ductal carcinoma is the most common type comprising 79% of all EBC; however, medullary, papillary and lobular carcinoma as well as cystosarcoma phylloides are also described.^{2,4} A possible mechanism described for the development of carcinoma is hormonal stimuli causing stagnation in ductal lumen.⁴

As in this case axillary EBT usually presents as superficial lump, and may cause symptoms like discomfort/pain during pregnancy, lactation or in the premenopausal period.⁶ Clinical differential diagnosis includes axillary tail of breast, lipoma, neurofibroma, lymphadenitis, lymphoma, metastatic lymphadenopathy, sebaceous cyst and hydradenitis suppurativa.^{1,6} Invasive carcinoma in the axilla may arise from skin appendage glands, EBT or it may be metastasis.⁷ Mammography and breast ultrasound helps in excluding or detecting associated breast pathologies. Ultrasound of the lump itself helps in defining the nature of the lump. FNAC or tru-cut biopsy helps in making a diagnosis. In this case the mammogram and breast ultrasound were normal while FNAC showed reactive hyperplasia. So to confirm the diagnosis excision biopsy was planned.

In this case histopathology showed infiltrative malignant tumour composed of nests, sheets and glandular structures of pleomorphic atypical epithelial cells with abnormal mitosis leading to a diagnosis of invasive ductal carcinoma. Histopathologically if a tumour accompanies normal apocrine ducts between dermis and subcutaneous fatty tissue that is infiltrative with solid and tubular architecture, it leads to a differential diagnosis of invasive ductal carcinoma originating from axillary tail of breast, invasive ductal carcinoma of EBT and carcinoma of skin appendages.⁸ For the diagnosis of primary tumour of EBT, benign breast tissue adjacent to tumour must be seen in the

specimen.⁸

As EBC is rare so it is diagnosed late in advanced stage and has a poor prognosis,⁸ which depends upon staging and lymphatic involvement. The incidence of lymphatic spread in EBC is 59-88% which is more common than superior outer quadrant tumour of the breast.⁹ Early metastasis, ectopic site or delayed diagnosis leads to high rate of lymphatic spread.^{2,9} As EBC has a poor prognosis and a higher incidence of metastasis because of delayed diagnosis, prophylactic excision of EBT may be recommended.⁸

In this case excision biopsy includes wide excision of the mass, as well as attached lymph nodes (lateral to pectoralis minor). Wide local excision and axillary node dissection is considered the optimal treatment of EBC.^{3,8} If mammary glands are normal having no additional lesions, mastectomy has no additional benefit for survival. Adjuvant therapy should be guided by the same principles as in orthotopic breast carcinoma.³ Due to higher recurrence rate radiotherapy is necessary for the control of local spread.⁷ Tamoxifen is very effective in the control of recurrence in both receptor-positive and receptor-negative patients.¹ As this patient refused radiotherapy, tamoxifen was the only adjuvant therapy that she received, in spite of non-availability of

receptor status. As expected, she developed recurrence in axillary nodes, as well as pulmonary metastasis. In conclusion, any superficial lump around the periphery of the breast should be viewed with suspicion and managed appropriately.

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