

## Case Report

# Carcinoma of the Ectopic Breast

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### Abstract

*A 43-year-old woman presented with bilateral ectopic breasts in both the axillae in Chittagong Medical College Hospital in July 1996. She was diagnosed having carcinoma in the left ectopic breast. She was successfully treated with local surgical excision and regional lymph node dissection, adjuvant chemotherapy, loco-regional radiotherapy and hormone therapy. The patient continued tamoxifen for 5 years. Till last follow-up in December 2011, the patient was asymptomatic without any evidence of residual disease or local recurrence and evidence of metastases.*

**Key words:** Ectopic accessory breasts, Adjuvant chemotherapy, Radiotherapy

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### Introduction

The incidence of ectopic accessory breast is uncertain, but it is generally found in 1-2% of humans.<sup>1</sup> An alternative classification of ectopic breast tissue has been offered by Copeland and Geschickter<sup>2</sup>, in which accessory nipple formation, areola formation or both, with or without glandular breast, is termed supernumerary breast, as opposed to aberrant breast, referring to ectopic breast tissue without a nipple or areola complex. Aberrant breast tissue can develop with any disease that affects the normal breast, including breast carcinoma.<sup>3</sup> Carcinoma of aberrant breast tissue is rare.<sup>4</sup>

Ectopic mammary gland includes both accessory and aberrant mammary glands. Ectopic breast tissue can occur anywhere along the primitive embryonic milk line, extending from axilla to groin bilaterally. It has also been reported within axillary lymph nodes<sup>5</sup> and along the 'milk line' that runs from the axilla to the inguinal region, the most common sites being the chest wall and the vulva.<sup>6</sup> Ectopic breast parenchyma is subject to changes similar to those of the orthotopic organ, including lactational changes, benign tumors and carcinoma.<sup>6</sup>

The incidence of ectopic mammary gland is not low, but the development of malignancy within these

anomalies has been scarcely reported. In view of the relative rarity, to remind the surgeons and oncologists regarding its good prognosis provided diagnosed early and properly treated, it was thought worthwhile in publishing the following case.

### Case report

Mrs. Rowshan Ara, aged 43 years and mother of a son and two daughters, was admitted in Chittagong Medical College & Hospital (CMCH) on July 28, 1996 with the complaints of a painless lump on the upper part of the medial wall of the left axilla for 8 months which was gradually increasing in size.



Fig 1. Bilateral accessory breasts with carcinoma of the left (excised)

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She had been on homeopathic treatment since development of the lump without any improvement. On admission, physical examination revealed a nontender, slightly mobile, palpable lump of about 5 cm × 5 cm in size, partly fixed to the underlying structures and free from overlying structures. There was no palpable lump in any breast and no palpable lymph gland could be detected either in the axillae or elsewhere in the body. On careful examination of the lump, there was small rudimentary nipple-like structure over the lump. The nipple-like structure of the same size was also found on the same site of the right axilla but without any lump or swelling. She was menopausal for the last two years and was hypertensive. She also observed coming out of milk from both these nipple-like structures of the axillae simultaneously during breastfeeding from original breasts following her every child birth. No abnormality was detected in her haematological profile, chest radiography, ultrasonogram of the abdomen and pelvis. She underwent local surgical excision and regional lymph node resection on 16.09.1996. Histopathology revealed an invasive ductal carcinoma in the breast tissue, with foci of necrosis and moderate lymphocytic infiltration. Axillary lymph nodes showed reactive change. Estrogen and progesterone receptor positivity tests were performed and revealed estrogen and progesterone positivity. Hence the diagnosis was confirmed as infiltrating duct cell carcinoma of the left accessory breast. Then she attended the radiotherapy Outpatient Department (ROPD), CMCH on 10.10.96. Adjuvant combination chemotherapy including cyclophosphamide, adriamycin and 5-fluorouracil was prescribed after satisfactory wound healing. This protocol was repeated on every 3 weeks with proper hematological care up to total of 6 cycles. The hematological parameters before each cycle of chemotherapy was normal and toxicity of the above cytotoxic drugs was on tolerable limit.

The chemotherapy schedule was continued regularly up to 22.04.97. After completion of 6 cycles of chemotherapy, the patient was asymptomatic except some sorts of weakness and mild loss of appetite and on physical examination, no abnormality could be detected. Considering her age and menopausal status, tamoxifen (20 mg daily) was advised to continue it for 5 years. Three weeks after completion of

chemotherapy, she was planned for radiotherapy by a direct field to the operated axilla with a field size of 12 × 12 cm and total dose given was 4000cGy in 20 fractions up to 29.06.97. The total period of radiotherapy was uneventful. Six weeks after completion of radiotherapy, she was asymptomatic and there were no sign and symptom of recurrence or residual disease especially in the operated accessory breast. Opposite accessory breast and both normal breasts were also normal. No features of organomegaly and lymphadenopathy (locally or distant) were observed. Complete blood profile, chest radiography, ultrasonogram of the abdomen and pelvis were normal. CT scan of the chest and abdomen were also normal. So all sorts of antimetabolic treatment were stopped, except tamoxifen which was advised to continue for 5 years. The patient was also advised to come for follow-up at 6 weeks interval. After completion of 5-year courses of tamoxifen, the patient was asymptomatic. Physical examination and relevant investigations were normal. The patient underwent last follow-up examination in December 2011. She was asymptomatic without any sign and symptom of recurrence or residual disease locally or elsewhere in the body. Relevant investigation reports were also normal.

### Discussion

In most cases, the accessory breast tissue was either bilateral or confined to the right side.<sup>5</sup> In the present case, the accessory axillary breast tissue was bilateral and carcinoma was found only in the left ectopic breast. A frequency of 14% seen in one series appears so high that the occurrence of malignant changes in the accessory breast is not actually rare.<sup>7</sup> Although the incidence of ectopic breast tissue is about 1-2%<sup>8</sup>, it is more prone to develop malignant change than normal breast parenchyma.<sup>9</sup> Malignant tumors occur more frequently than benign tumors in ectopic mammary glands.<sup>10</sup>

In this article, we used the term 'ectopic breast cancer' for neoplasm developed in the left accessory gland. Review of Nakao et al<sup>11</sup> showed that out of 37 cases 33 (89%) occurred in the axilla, 2 in the parasternum and 2 in the inframammary region. Marshal<sup>7</sup> reported that 58% of ectopic breast cancers were found in close proximity to the axilla. In Japan, ectopic breast cancer occurred more frequently in the

axilla.<sup>11</sup> In this case, cancer also occurred in the ectopic breast of the left axilla. Accessory breasts and nipples have been known to function during lactation.<sup>12</sup> In this case, lactation of both the ectopic breasts was observed during every pregnancy. Accessory breast tissue responds to the hormonal influences of the menstrual cycle, pregnancy and lactation as normally situated breasts. In this case, response to hormonal influence and carcinoma of the axillary accessory breast tissue was observed. If ductal carcinoma is confirmed to the ectopic breast, the differential diagnoses of primary mammary carcinoma of the axilla, metastatic breast carcinoma, primary skin appendage carcinoma, lymphoma, metastatic carcinoma from other sites, eg, lung should be considered. A thorough metastatic workup should be performed, with attention directed toward detecting a primary site in breast by history, physical examination and radiological examination. Suspicious lesions of the breast should be evaluated by biopsy. If axillary mammary duct carcinoma is confirmed, current treatment strategy of breast cancer to establish a sensible management approach should be followed. Although the prognosis of this case seems to be very good, prognostic conclusions could not be made by studying a case only.

### Conclusion

If accessory breast carcinoma is diagnosed earlier and optimal treatment can be offered, a very good outcome can be achieved. The patient must be cooperative and should be regular in follow-up examination to have a disease free survival.

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