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Case report

# Lobular ectopic breast carcinoma: A case-report

*André Soares*, Joana Gonçalves, Isabel Azevedo, Helena G. Pereira*

*Radiotherapy Department, Instituto Português de Oncologia Francisco Gentil do Porto, E.P.E., Portugal*

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ABSTRACT

In about 1–2% of the population an incomplete regression of the embryonic mammary line occurs, which may result in the presence of ectopic breast tissue. An ectopic breast tissue carcinoma is a rare entity. The authors present a case-report of a 51-year-old female patient, with a lobular carcinoma in an axillary ectopic breast tissue submitted to surgery and adjuvant radiotherapy.



## 1. Background

In about 1–2% of the population an incomplete regression of the embryonic milk line occurs that extends from the axilla to the external genitalia, which may lead to the presence of ectopic breast tissue (EBT). Less commonly, accessory breasts appear in locations outside the milk line, such as the face, posterior neck, chest, middle back, vulva, flank, hip, posterior and/or lateral thigh, shoulder, and upper extremities.[1–6]

In 1915, Kajava published a classification system for supernumerary breast tissue that remains in use today. It divides an ectopic breast tissue into different groups according to the presence of different components, such as the areola, the nipple or glandular tissue.[2,5,7]

The presence of an ectopic breast tissue is a rare diagnosis, occurring in 0.2–6% of the population. The axilla is the most frequent location representing 60–70% of all cases, followed by the vulva and chest region. Nevertheless, accessory small nipples are commonly seen especially below the breasts.[1,4,6–11]

Ectopic breast tissue carcinomas are very rare, accounting for 0.2–0.6% of all breast cancers.[1,2,6–8] Ductal carcinoma is the most common histology with 45–80% of all cases followed by lobular carcinoma that represents less than 10%.[1,2,6–8]

The authors intend to present a case report of a rare diagnosis, warn about this entity and show the importance of prompt diagnosis and proper treatment.

## 2. Case report

The patient is a 51-year-old post-menopausal white female with no family history of cancer. She reported to her attending physician due to the appearance of inflammatory signals in the left axillary mass diagnosed as lipoma 20 years ago.

After 1 week of antibiotics, the patient returned to the physician referring no improvement of the inflammatory signs.

Afterwards, she was submitted to surgical excision of the left axillary mass. The pathology revealed a 2.5 cm invasive

* Corresponding author.
E-mail addresses: andre_coki@hotmail.com, cokimail@gmail.com (A. Soares).
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lobular carcinoma with involvement of the dermis (without ulceration of the skin). The immunohistochemical studies revealed positivity for estrogen and progesterone hormonal receptors (>95%) and HER2 negative.

After the diagnosis of cancer, the patient underwent image studies with mammography, breast ultrasonography and bilateral MRI that revealed two nodular formations in the left breast. The fine needle biopsy performed in both lesions showed no signs of malignancy.

Once admitted in our institution and evaluated by a multidisciplinary tumor board, the patient underwent an extended excision of the surgical scar and left axillary node dissection.

The histological study revealed residual lobular carcinoma with 0.8 cm in diameter and foci of lobular in situ carcinoma. In the axillary node dissection, 9 lymph nodes were isolated without metastasis. The surgical margins were free. The lesion was staged as a pT2N0M0.

After another assessment by the multidisciplinary tumor board, we proposed adjuvant treatment with hormonotherapy (Tamoxifen®) and adjuvant radiotherapy (RT).

In the first evaluation for radiotherapy treatment planning, she had a good performance status (Karnofsky score of 90%), with no other complaints except for pain in the left axilla and a small limitation in the abduction of the left arm.

The 3D Conformal RT (3DCRT) plan consisted of irradiating the following anatomical regions: left breast, left supraclavicular region and left axilla. A total dose of 50 Gy was prescribed to the isocenter in 25 fractions of 2 Gy, 5 times a week using 4 MV photons, plus a boost dose of 10 Gy in 5 fractions of 2 Gy with bolus.

The treatment occurred in 35 days, without interruptions and with a good clinical tolerance. After RT, the patient presented grade II skin erythema in the left breast and moist desquamation in the left axilla.

One month after RT, she had no skin reaction and was doing well, without major complaints.

## 3. Discussion

Ectopic breast tissue cancer is a rare diagnosis. A palpable mass followed by edema, tenderness, breast pain is the most common presentation. Common differential diagnosis includes lipoma, benign lymphadenopathy, lymphadenitis, metastatic carcinoma, lymphoma, and hydradenitis suppurativa. In the case of a pigmented axillary lesion, the differential diagnosis includes seborrheic keratosis, fibromas, and intradermal nevis.[1,5,6,11]

In most cases, the areola or the nipple is missing and the initial differential diagnosis does not take into account the EBT possibility.[1,5,6,12] Consequently, a correct preoperative diagnosis is rarely made and in case of EBT cancer, the necessary diagnostic procedures that would have led rapidly to a correct treatment approach are delayed.[1]

The clinical evaluation and staging of EBT cancer should follow the same guidelines as for anatomic breast cancer. In the case of axillary EBT, an MRI of the anatomic breast should be made to exclude a primary breast cancer.[1,2,8]

Current treatment approach, after exclusion of metastatic disease, includes local excision with wide margins and regional lymphadenectomy. In case of axillary EBT carcinoma, as for the vast majority of all breast cancers, there is no benefit of radical or modified ipsilateral mastectomy over local excision.[1,4,8,12]

The principles of adjuvant treatment are the same as for anatomic breast cancer and pos-operative radiotherapy to the tumor site and regional lymph nodes is indicated.[3,4,7,8] In cases of infiltration or ulceration of the skin, an additional dose using bolus is also recommended. Since there is no clear benefit to irradiate homolateral anatomic breast it is not performed systematically.[4] Some authors report that it must be considered in cases of uncertainty between an axillary EBT or axillary metastasis from unknown primary breast cancer.[2,4]

We decided to irradiate the homolateral breast due to aggressive histology and tumor location, which would include part of the anatomic breast in the radiation field.

The prognosis is similar compared with carcinoma of the anatomic breast with the same tumor stage and histology, although ectopic axillary breast carcinoma has a higher rate of lymph node involvement,[4,6,11] which is a known important prognostic factor for overall survival.[13,14]

## 4. Conclusion

Carcinoma of an EBT is a rare diagnosis. All EBT around the breast, especially in the axilla must be considered suspect until proved otherwise. Due to the atypical location the correct diagnosis of axillary EBT carcinoma is usually made at a late stage. Primary local excision with exploration of the axillary lymph nodes is the main treatment of choice. Adjuvant radiation therapy should include the primary tumor site and to the lymph nodes following the same guidelines as normal breast cancer. If any level of uncertainty exists about the diagnosis of the axillary EBT versus axillary metastasis from unknown primary breast cancer, irradiation of the homolateral breast should be included as part of the treatment plan.

## Conflict of interest statement

None declared.

## Financial disclosure

None declared.

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