

## CASE REPORT

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## Primary Ectopic Breast Carcinoma in Man Mimicking Keloid

Jamal Alqahtani<sup>1,3</sup>, Nasser Alzoabi<sup>1,3</sup>, Bader Algamdi<sup>1,3</sup>, Saleh Busbait<sup>2,3</sup>, Ghada Alakloby<sup>3</sup>, Mohammed Hajla<sup>4</sup>, Nouf Alharbi<sup>4</sup>, Omar Alakloby<sup>1,3</sup><sup>1</sup>Department of Dermatology, College of Medicine, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia<sup>2</sup>Department of Pathology, College of Medicine, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia<sup>3</sup>King Fahd Hospital of The University, AlKhobar, Saudi Arabia<sup>4</sup>Dammam Medical Complex, Dammam Health Network, Ministry of Health, Dammam, Saudi Arabia**Corresponding author:** Jamal Alqahtani, MD, Department of Dermatology, College of Medicine, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia. Address: Al-Khobar 31952, Saudi Arabia Phone: 00966504773111. E-mail: jamqahtani@iau.edu.sa. ORCID ID: <https://orcid.org/0000-0002-0927-5540>.

## ABSTRACT

**Background:** Ectopic breast tissues (EBT) are developmental abnormality found in 1-6% of normal population. Like an orthotopic breast tissue, ectopic breast may have similar pathological changes including malignancy. Breast cancer as well as ectopic breast tissue in male are extremely rare. We present a case of ectopic breast carcinoma (EBC) in middle aged man mimicking keloid. **Case report:** A forty-two-year-old Indo-Aryan male referred from primary health care to the dermatology clinic with firm multi-nodular, non-tender, fleshy sessile mass on his right axilla measuring two by three cm in diameter. Excision of this lesion revealed moderately differentiated ductal carcinoma consistent with ectopic breast carcinoma. **Conclusion:** We report this case to shed light on such a rare condition and to keep in mind that ectopic breast carcinoma should be in differential diagnosis of any suspicious mass in axillae.**Keywords:** Ectopic breast, Ectopic breast tissue, Ectopic breast carcinoma, Keloid.

## 1. BACKGROUND

Ectopic breast tissues (EBT) are developmental abnormality found in 1-6% of normal population. It occurs when embryological milk lines fail to regress resulting in persistence of glandular tissues. The inframammary chest is the most common location but may be found along milk line form both axillae down to medial thighs. Breast cancer as well as ectopic breast tissue in male are extremely rare (1, 2).

## 2. OBJECTIVE

In this article we presented a case of ectopic breast carcinoma (EBC) in middle aged man mimicking keloid.

## 3. CASE PRESENTATION

A forty-two-year-old Indo-Aryan male referred from primary health care to the dermatology clinic at King Fahd Hospital of the University with a history asymptomatic skin swelling over his right axilla gradually increasing in size for more than one year duration. There was no history of bleeding or discharge from the swelling. The patient did not recall any preceding trauma or preexisting skin lesion. No previous family history of skin or breast malignancy. Skin examination revealed firm multi-nodular, non-tender, fleshy tumor measuring two by three cm in diameter on the right axilla (Figure 1). No axillary lymphadenopathy was noted. Systemic examination was unremarkable with no breast lumps nor hepatosplenomegaly noted. The differential diagnosis was keloid, dermatofibrosarcoma protuberant, ectopic breast carcinoma and adnexal neoplasms.

An Initial incisional biopsy was done which revealed mucin-producing carcinoma. So, wide excision with safety margin was advised. Patient underwent surgical excision of the lesion. Initially a frozen section of underneath lymph node demonstrates metastatic carcinoma. Level one and two axillary lymph nodes dissection was done and examined histologically and were all negative for metastatic carcinoma. The histopathology report was moderately differentiated ductal adenocarcinoma consistent with EBC (Figure 2a and 2b).

Mammogram of both breasts and axillae were negative and CT scans showed no evidence of distant metastasis. The patient was on regular follow up for the next five years with no evidence of recurrence.

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**Figure 1.** Fleshy multi-nodular tumor measuring two by three cm in diameter on the right axilla. Informed consent was obtained from the patient for publication of this case report.

#### 4. DISCUSSION

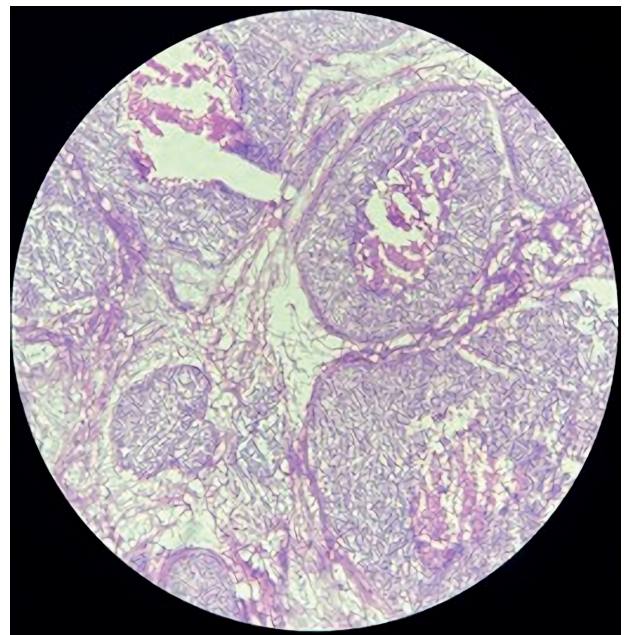
Ectopic breast can be classified according to the presence of nipple or areolar complex, isolated presence of either component is referred to as supernumerary breast and if the tissue lacking nipple or areola is referred to as aberrant breast (3). Like an orthotopic breast tissue, ectopic breast may have similar pathological changes including malignancy.

Despite the rarity of EBC, several articles have been published about this entity. In one retrospective study from Italy, four patients with EBC were found among 327 patients with ectopic breast (4). In another study in Japan, 94 cases of EBC were reported from 1978 to 2009, of which, eighty-nine patients were women, and five were men. The most frequent site of EBC was the axilla and the most common histopathological type was invasive ductal carcinoma (5). In case series study from Tunisia, five women with EBC were reported and all were located on the axillae. Four of these cases were managed by wide excision and lymphadenectomy with chemoradiation. No recurrence was reported among them, except one case which had hepatic metastasis (6).

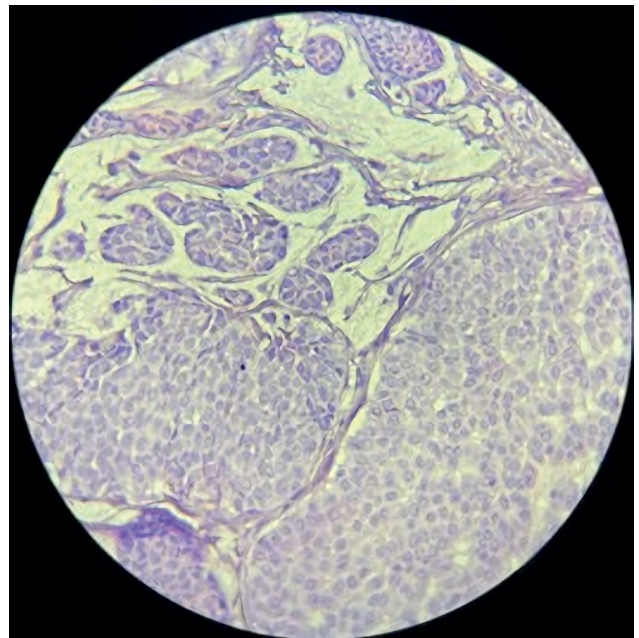
In a literature review done by Visconti G. et al. they concluded that the management of EBC must be identical to orthotopic breast cancer in terms of staging, prognosis and adjuvant treatments (7).

#### 5. CONCLUSION

We present a case of ectopic breast carcinoma (EBC) in middle aged man mimicking keloid. This case was re-



**Figure 2a.** The tumor embedded in fibrofatty stroma; H&E (20x)



**Figure 2b.** The neoplastic cells are mainly arranged in solid pattern along with a few groups arranged in broad trabeculae. The cells have low nuclear grade and showed occasional mitosis; H&E (40x)

ported to shed light on such a rare condition and to keep in mind that EBC should be in the differential diagnosis of any suspicious mass in axillae.

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- **Author's contribution:** JA, NA, BA, OA gave a substantial contribution to the conception and design of the work. JA, NA, BA, MH, NA gave a substantial contribution of data. NA, SB, GA, MH, NA gave a substantial contribution to the acquisition, analysis, or interpretation of data for the work. JA, BA, SB, GA, OA had a part in article preparing for drafting

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