CASE REPORT

Case Report: Synchronous adenoid cystic variant of basal cell carcinoma in the right lumbar region: case report of an incidental finding in a patient with breast carcinoma [version 1; peer review: 1 not approved]

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Abstract

Skin cancer has emerged as a major problem for light-skinned people globally. Basal cell carcinoma (BCC) is one of the most common forms of skin cancer. BCC is associated with significant morbidity. There are multiple histological patterns of BCC, wherein the adenoid cystic variant is a rare form. A 75-year-old female with a history of breast carcinoma visited our centre for a routine follow-up. The patient was diagnosed with invasive breast carcinoma and underwent left breast conservation surgery in August 2018. At follow-up, the patient complained of itchiness, redness, and ulceration over a long-standing mole located at the right lumbar region. The lesion was excised and histopathologically diagnosed as the adenoid cystic variant of BCC. Adenoid cystic variant of BCC is an uncommon presentation. Identifying the mole in the lumbar region with clinical signs and symptoms was an incidental finding. In most cases, skin moles are benign. However, this case is of considerable interest as the patient presented with two primary cancers of different pathological characteristics within 3 months. The patient is currently doing well and is due for follow-up.

Keywords

Basal cell carcinoma, adenoid cystic, non-melanoma skin cancer
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Introduction
Skin cancer has emerged as a major problem for light-skinned people worldwide. Skin tumours are classified based on the melanin concentration. There are two types of skin tumours, non-melanoma skin cancer (NMSC) and malignant melanomas (MM). As compared to NMSC, MM has a more aggressive modality with an estimated mortality of 85% for all fatal skin cancers. The most common NMSCs include basal cell carcinoma (BCC), which constitutes approximately 80% of new cases, and squamous cell carcinoma (SCC), which constitutes approximately 20% of new cases. BCC is derived from the basal cells while SCC is derived from the squamous cells of the epidermis. SCC is an aggressive form of skin cancer with a high risk of metastasis. BCC is attributed with a slow growth tendency, high risk of recurrence, and a low mortality rate. We present a case report synchronous adenoid cystic, a rare variant of BCC of right lumbar region in a patient with breast carcinoma.

Case report
A 75-year-old woman with previously diagnosed breast cancer came for a routine follow-up in November 2018 at HCG Manavata Cancer Centre, Nashik, India. The patient was diagnosed with Stage IIA (T2N0) breast cancer in August 2018. The patient underwent left breast conservation surgery in August 2018. She was referred for radiotherapy. She completed radiotherapy (52.7 Gy in 20 fractions) for 20 days in September 2018. At follow-up, the patient complained of itchiness, redness, and ulceration on the long-standing mole. The lesion measured 1.4×0.6 cm. The patient underwent wide local excision at our centre. The lesion was sent for haematoxylin and eosin (H&E) histopathological examination.

Diagnostic assessment
The multiple sections that were examined showed ulcerated epidermis. The dermis was observed to have a tumour with basaloïd pattern and peripheral palisadisation, arising from the basal layer of the epidermis. Multiple punched out cystic spaces were observed. Multiple pigment laden macrophages were also observed. The mitotic rate was 9–10 per HPF). Necrosis was not observed. Perineural invasion or lympho-vascular emboli were not observed. Morphological examination of the cells resulted in a diagnosis of the adenoid cystic variant of BCC (Figure 1 and Figure 2). The patient is under close observation.

Discussion
Adenoid cystic variant of BCC is a rare histological entity. Furthermore, ADBCC in the lumbar region is an unusual site of presentation. The diagnosis of ADBCC is important considering its poor prognosis as compared to other variants of BCC. Skin moles are usually benign in nature. However, skin mole presenting with clinical symptoms should not be ignored in patients with already diagnosed malignancy. Our multidisciplinary team of experts ensure robust and comprehensive patient care services. Due to our strengths, the second primary malignancy (ADBCC) was diagnosed early.

Clinicians should not ignore patients with different clinical manifestations other than those reported initially. Assessment of new lesions reported by patients at follow-up should be a norm in clinical practice.

It is essential to report such cases in the literature as it helps disseminate knowledge on synchronous malignancies.

BCC is the most commonly reported skin cancer. It is neither a lethal nor a metastatic disease. However, BCC is characterized by significant morbidity which is secondary to local invasion or destruction. Based on current evidence, the incidence of BCC is 226 per 100,000 people while the age-adjusted prevalence is 343 per 100,000 people. The major risk factor for BCC is ultraviolet light exposure. Other risk factors for BCC include ultraviolet A or psoralen therapy, immunosuppressive medications, radiation therapy, and chronic arsenic toxicity.

The increase in incidence rates of BCC is attributed with lifestyle or environmental changes along with behavioural risk factors. Exposure to UV light, specifically UVB induces mutations in tumour suppressor genes which play a key role in the overall pathogenesis of BCC. Younger age and history of blistering sunburn has been associated with BCC. However, intermittent or continuous exposure throughout life as a risk factor remains unclear to cause BCC. Exposure to UV radiation early in life should be considered as a key risk factor as compared to overall cumulative exposure.

BCC is a common, locally invasive epithelial malignancy of the skin and appendages. An estimated 10 million people are
diagnosed with BCC every year worldwide. The histology of BCC is predictable while certain variants are rare to observe. Some of the rare histological variants include adenoid, cystic, morpheaform, infundibulocystic, and miscellaneous variants. These variants account for nearly less than 10% of all BCCs.

Adenoid BCC (ADBCC) is a rare histopathological variant with an incidence of approximately 1.3%. The clinical appearance of the adenoid lesion can be pigmented or non-pigmented nodule or an ulcer without predilection for any particular site.

ADBCC is an extremely rare, low-grade, and differentiated malignancy. It is reported at various sites such as the inner canthus of the eye, leg, axillae, back, chin, and forehead. It has also been reported in the cervix and prostate. The rarity of this lesion is evidenced by the paucity of data in the literature. It is important for pathologists to differentiate and make an accurate diagnosis of ADBCC as it often mimics primary cribriform apocrine carcinoma or cutaneous adenoid cystic carcinoma. A similar case of BCC and breast cancer in a single patient was reported in 2014. It is essential to make an accurate diagnosis of ADBCC due to the prognostic differences of these conditions. By writing up this case we hope to contribute to the body of literature about ADBCC, in particular its unique histological characteristics. The treatment of BCC includes surgical and non-surgical options such as excision with primary closure, grafts, and radiotherapy.

In our case, the patient had undergone wide local excision.

Conclusion
Adenoid cystic variant of BCC is a rare histological entity. We report synchronous adenoid cystic variant of BCC of the right lumbar region in a patient with breast cancer. Clinicians should be vigilant about patients with different clinical manifestations. Multidisciplinary support was our core strength in assessing the patient with a new lesion which in turn led to an incidental finding of a rare skin cancer.

Data availability
All data underlying the results are available as part of the article and no additional source data are required.

Consent
Written informed consent for publication of their clinical details and images was obtained from the patient.

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The authors should provide more info on the primary breast cancer; what was the status of ER, PR and Her2 in primary breast cancer? It is unusual that primary breast cancer (pT2No) is only treated by radiotherapy.

What was the immunohistochemical profile of ACC variant of BCC? This must be clearly provided. There are also rare variants of primary ACC of the skin as well as ACC of the breast (including basaloid variants that are usually high grade cancers). It is not easy to appreciate mitotic figures in skin cancer (I am a pathologist).

Is the background of the case’s history and progression described in sufficient detail?
No

Are enough details provided of any physical examination and diagnostic tests, treatment given and outcomes?
No

Is sufficient discussion included of the importance of the findings and their relevance to future understanding of disease processes, diagnosis or treatment?
No

Is the case presented with sufficient detail to be useful for other practitioners?
No

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Pathology
I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

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