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CASE REPORT

Atypical Site of BCC Reported in a Saudi Female: A Case Report

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Abstract: BCC is the most prevalent form of skin cancer; thus, it is important to recognize that it poses a significant global health challenge. Various multifactorial risk factors can contribute to the development of BCC such as having fair skin, aging, chronic sun exposure, and tanning beds. Typically, exposed body parts are the frequent location identified for BCC. Here, we report a case of a 53-year-old Saudi female, who presented with an incidental pigmented lesion over her left axillary fold with features of suspicious of BCC.

Keywords: basal cell carcinoma, cancer, axilla, sun, aging, Saudi Arabia, female

Introduction

Skin cancer is a type of solid tumor characterized by abnormal growth of skin cells, and it has become one of the most frequent malignancies worldwide, with one in every three cancers diagnosed as skin cancer.[1] It is further divided into either malignant melanoma (MM) or nonmelanoma skin cancers (NMSC), encompassing mostly basal cell carcinoma (BCC) and primary squamous cell carcinoma (SCC).[1–4] According to the World Health Organization (WHO), between 2 to 3 million NMSCs are diagnosed annually worldwide, with BCC being the most common type accounting for 70% of reported cases.[1] A complex interplay of genetic, phenotypic, and environmental factors determines the likelihood of acquiring BCC. The primary and by far the most important environmental risk factor identified is cumulative ultraviolet radiation (UVR) exposure during childhood and adolescence, especially UVB light. Fitzpatrick skin types I and II, Caucasian descent, gender, aging population, the use of tanning beds, chronic immunosuppression, hereditary syndromes, and family history of skin cancer are all considered additional risk factors.[5–10] BCC often manifests as a solitary, painless, and slow growing lesion on sun-exposed areas, particularly the face.[11,12] Inspection of the lesion can help appreciate the subtypes of BCC depending on its morphology; including nodular, which is the most common, superficial, sclerosing, and pigmented BCC.[13,14] To confirm the diagnosis, and to further classify the lesion to direct the management, a skin biopsy is mandatory.[15] Although the metastatic protentional of BCC is extremely rare compared to other types of skin cancer, it is locally invasive and has high rates of future local recurrences.[16] The risk of recurrences is determined by the location, size, and borders of the lesion, and other factors such as immunosuppression, sites of prior radiation, perineural disease, and aggressive growth pattern on histology (infiltrative, micronodular, morpheaform, and sclerosing types).[17] For localized tumors, surgical approach is the preferred method of choice. Low risk BCC is either managed with surgical excision, or electrodessication and curettage (ED &C) while high risk tumors are treated with Mohs micrographic surgery (MMS) to achieve the highest cure rate. For patients that are not candidates for surgery, topical 5-fluorouracil (5-FU) or imiquimod, local radiation therapy, or photodynamic therapy (PDT), are alternative therapies that can be used, despite having lower cure rates. Smoothened inhibitors (SMO) such as Vismodegib can be used for locally advanced or metastatic BCC.[18–20] In the Kingdom of Saudi Arabia (KSA), skin cancer is not that common as substantiated by the latest Saudi Cancer Registry which revealed that NMSC incidence is 2.7% among

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both sexes in the year of 2020.[21] We hereby report a middle age Saudi female with no identified risk factors diagnosed with BCC on the axilla.

Case Presentation

A 53-year-old Saudi woman with Fitzpatrick skin type III came to the dermatology clinic for a follow-up of lichen planus over her legs. Upon detailed examination of the skin, an incidental finding was discovered of a solitary pigmented lesion over the left axillary fold (Figure 1).

The lesion was mainly asymptomatic but sometimes accompanied by dryness and pruritus. She denied any other symptom, discharge, or bleeding with trauma. The lesion did not seem to bother her and was never brought to her attention. History taking revealed that she had the lesion for approximately three years, insidious in onset, and had been slowly and gradually progressive over the years. It initially appeared as a small, pigmented macule with no symptoms, evolving into a large plaque that is sometimes pruritic. As the lesion did not concern her, she decided not to seek medical attention and the use of moisturizers was solely enough for dryness. No significant risk factors that might be attributed to the development of the lesion was appreciated as she denied chronic sun exposure, previous radiation, the use of tanning beds, personal or family history of skin cancer, or the use of immunosuppressant medications. Additionally, she also had no history of local trauma, any precented lesions at the same site, or previous application of irritant products. A year ago, and long after the development of the lesion, the patient was diagnosed with ulcerative colitis (UC) and has been receiving treatment with Mesalamine. Notably, her family history was only remarkable for breast cancer in her mother with axillary lymph nodes metastasis. Dermatoscopic evaluation of the pigmented skin lesion revealed findings of a peripheral leaf-like structure, arborizing vessels, shiny white blotches and strands, and blue gray ovoid nest and globules (Figure 2).

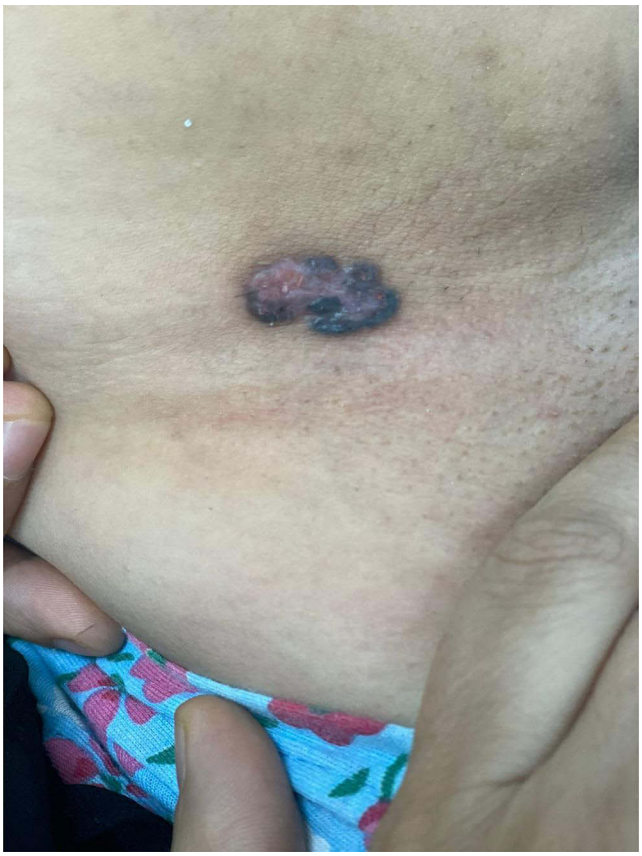

Figure 1 Pigmented plaque measuring 20x13mm in diameter with rolled borders, situated in left axillary fold.

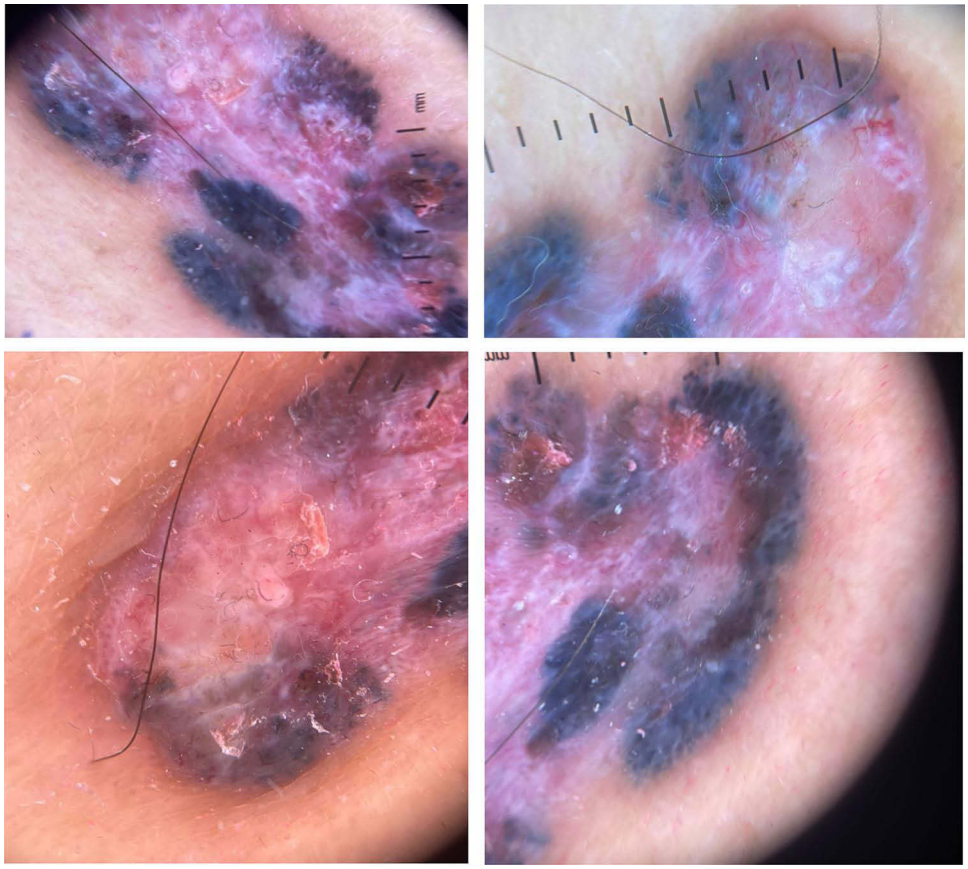

Figure 2 Peripheral leaf-like structure, arborizing vessels, shiny white blotches and strands.

Further physical and sonographic examination did not reveal lymph node metastasis. A punch biopsy of the lesion was taken, and it displayed features of pigmented BCC (Figure 3). The section showed solid basaloid cells with peripheral palisading, central cystic cavities separated by fibromyxoid stroma, and foci showing melanin pigmentation.

She was referred to the plastic surgery department and a wide local excision with 5 mm free margins was conducted. The patient was advised for breast cancer surveillance, but no masses were detected. She is currently following up in the dermatology department to detect any potential recurrences of BCC.

Discussion

BCC is the most common form of NMSC, and it imposes a significant concern due to its steadily increasing incidence worldwide.[22] It is defined as a slow-growing skin cancer, arising deep from the basal layer of the epidermis.[16] Sun-exposed areas such as the head and neck are the most affected, although it may occur anywhere on the body.[9] Despite that BCC has a low mortality rate given its rare tendency to metastasize, local tissues infiltration and destruction can result in significant morbidity.[23] Our patient presented with a pigmented BCC lesion that was discovered incidentally while inspecting the axilla, which is a well sun-protected area. Although pigmented BCC is more common in patients with Fitzpatrick skin types III to VI, such is in our patient, BCC in the axilla is still considered a rare occurrence with a prevalence estimated at 1 in 596 cases of skin cancers.[24–27] The majority of patients had no obvious BCC-associated risk factors. They were observed 1.2 times more often in men than in women and twice as often in the right axilla than the left axilla. They frequently presented as an asymptomatic nodule that may be associated with ulceration, or pigmentation. The axillary tumor was typically associated with either the superficial or the nodular histologic subtype of BCC. The prognosis for these patients was usually excellent following complete removal or destruction of the tumor.[24] Even though metastasis rate of BCC is reported at 0.0028–0.55%,[28] it is essential to do a full examination of skin and

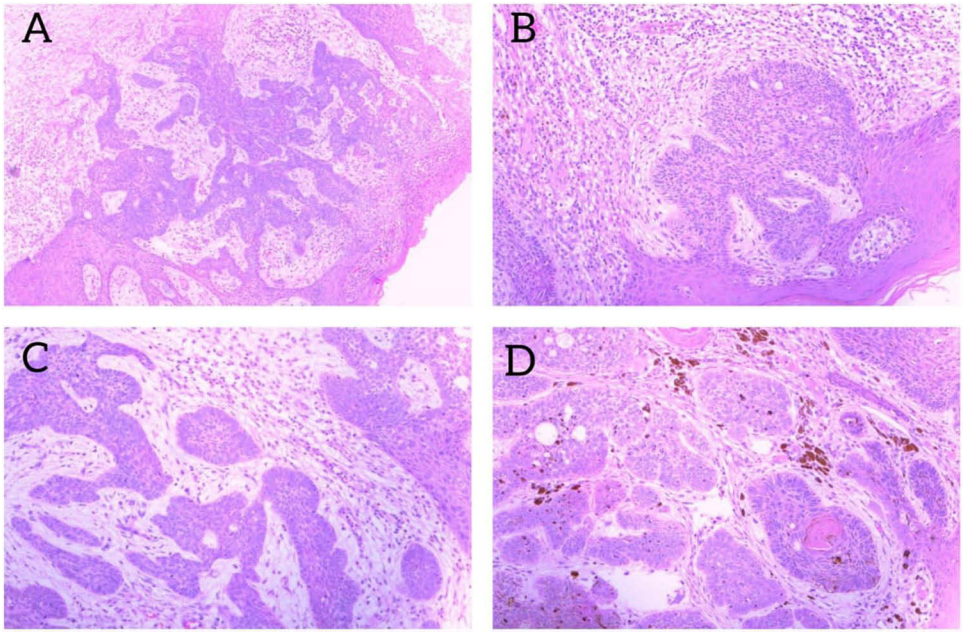

Figure 3 Histopathologic findings of basal cell carcinoma. (**A**), Infiltrative irregular cords and islands of basal cells. (**B**), The tumor demonstrate epidermal attachment and peripheral palisading arrangement. (**C**), Dermal infiltration of basal cells surrounded by edematous, inflamed and myxoid stroma. (**D**), Prominent melanin pigmentation. (hematoxylin-eosin; original magnifications X100 [A], X200 (**B**–**D**)).

lymph node as metastasis often occurs in the lymph nodes, and rarely the skin.[29] Thus, a full physical examination of the whole skin and lymph nodes is essential for any patient presenting with features of BCC. This was proven by a study published on a Japanese 80-year-old woman who presented with BCC over the axilla followed by the emergence of another BCC lesion on the chest closer to the primary lesion 5 years after. She sometimes complained of pruritus and serous discharge.[30] Unlike our patient, she is young and only presented with a single lesion, with no discharge, and was rarely associated with itching and dryness. BCC can sometimes mimic metastatic BCC as reported in previous research on a 71-years-old Caucasian male with a personal history of BCC, and SCC that presented with palpable painful left axillary tumour mostly attributed to lymphadenopathy. Lymph node biopsy was undertaken, and the lesion was identified as primary recurrent BCC with local infiltration to adjacent structures involving the lymph nodes.[31] Conversely, another article from Portugal, 2015 reported an 86-years-old female with a previous history of BCC over the forearm presenting with metastatic BCC to the axillary lymph node two years after excising the primary BCC lesions from the forearm.[32] In our case, it was confirmed after obtaining the histopathological examination of the lesion that the patient had findings of primary pigmented BCC without extensive invasion. Moreover, the patient had no palpable lymphadenopathy and normal ultrasound examination so, lymph node biopsy was not obtained. Certain genetic syndromes are also highly associated with BCC. One of the most important diagnosis is basal cell nevus syndrome (BCNS), also called Goltz-Gorlin syndrome. BCNS is an AD (autosomal dominant) syndrome, and it is the hallmark of multiple BCCs before the age of 20 years old. A report detailed a case of a 58-year-old female with Goltz-Gorlin syndrome who came presenting with multiple pigmented lesions over the back. She had similar lesions back when she was in her teens which were managed with surgical removal. Histopathology of the lesions demonstrated findings of BCC.[33] Furthermore, a female patient with Goltz-Gorlin syndrome was also reported in the literature for being diagnosed with aggressive form of axillary BCC.[34] Our patient's personal and family history was negative for genetic predisposition or genodermatosis. Additionally, she had no other risk factors that may attribute to the development of BCC, especially in an ambiguous location. Early recognition and classification contribute to the optimization of the management of the tumour. Surgical excision with negative margins was performed for our patient; and she is currently being followed up to recognise any recurrence or any development of new skin lesions.

Conclusion

This case underscores the critical importance of early detection and timely intervention to address the morbidity associated with BCC. Despite that BCC rarely metastasizes, its rising incidence prompts the need for implementing skin cancer detection campaigns to ensure proper treatment and prevent further progression of the lesion. As skin cancer is not common in our region, not many patients are mindful to seek medical attention for growing skin lesions, thus all dermatologists should carry out a thorough physical examination of the skin.

Ethical Considerations and Consent for Publication

No institutional approval was required. We only acquired the patient's consent for publication of case details and any accompanying images.

Disclosure

The authors report no conflicts of interest in this work.

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