

Basal cell carcinoma on the conchal bowl of the ear of a young man

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Basal cell carcinoma (BCC) is the most common form of non-melanoma skin cancer. A review of the literature revealed only a few reports of BCC on the auricle or conchal bowl, usually occurring in elderly patients. Herein, we report an exceptional case of BCC in a young man with an unusual anatomical location of the tumor as a solitary erythematous to black-colored plaque located in the conchal bowl of his right ear. By thoroughly reviewing the literature, there was no other documented case of BCC located in the conchal bowl of the ear of a young adult. Dermatologists should be aware that skin tumors may also occur in uncommon anatomical locations and with unusual presentations in the young population, even if they have no known predisposing factor. Unusual presentations make clinical suspicion of skin tumors very difficult, so these lesions can easily be missed. Early diagnosis can prevent further growth, extensive destruction, and severe consequence of invasive treatments.

Keywords: basal cell carcinoma, ear, skin cancer

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INTRODUCTION

Non-melanoma skin cancer is the most frequently encountered cutaneous tumor, and basal cell carcinoma (BCC) is its most common form ¹. The tumor can spread and invade local structures but it rarely metastasizes ². BCC's incidence increases with age and is mainly reported in elderly patients. The average age of patients at diagnosis is 60 years and younger patients are less likely to present with BCC ³. As a consequence of decades of sun exposure, this type of skin tumor is typically found in light-skinned older adults, located in sun-exposed areas such as the face, scalp, and neck regions ⁴.

We report an exceptional case of BCC in a young man with an unusual anatomical location of the tumor. After thoroughly reviewing the literature, we found no other documented case of BCC located in the conchal bowl of the ear of a young adult.

CASE REPORT

A 34-year-old man with Fitzpatrick skin type III presented to our dermatology clinic with a solitary erythematous to black-colored plaque located in the conchal bowl of his right ear. The lesion had appeared as a painless papule two years ago and had grown in size over time to form an ulcerated plaque. It was not associated with any troublesome symptoms. The patient did not mention symptoms such as pain, pruritus, or bleeding, but described mild paresthesia. The patient had had no previous cutaneous neoplasms and his past medical history was negative. He had worked in a rubber manufacturing company since 13 years beforehand and there was possible exposure to chemical agents in his workplace. However, he denied any excessive sun exposure or applying any irritant substances to his ear, and recalled no

trauma to the area. He had no significant family history of skin cancer or any related syndromes.

Upon physical examination, we noticed a 2×1 cm ulcerated plaque with an irregular border that included translucent black papules in the inner part of the lesion (Figure 1). There was no involvement of the external ear canal and no regional lymphadenopathy was detected. Total skin examination did not reveal any other skin lesions. The clinical differential diagnoses included BCC, squamous cell carcinoma (SCC), discoid lupus erythematosus (DLE), and atypical fibroxanthoma.

The histopathological examination revealed a neoplasm composed of solid nests of uniform basaloid cells with peripheral pseudopalisading surrounded by a loose stroma that contained myofibroblasts (Figure 2). On the basis of both clinical presentation and histopathologic findings, the lesion was diagnosed as BCC.

The patient was consulted with the ear, nose, and throat (ENT) department and a wide local excision was the therapeutic solution chosen for

him. The patient encountered no complication and in follow-up appointments, no evidence of recurrence was noticed.

DISCUSSION

The clinical presentation and histological findings of the lesion in our patient were consistent with BCC. In BCC, the average age of patients at diagnosis is 60 years. Younger adults are less likely to present with BCCs on the head and neck³. Jarell and Mully found that the average age of occurrence of BCC on the ear is about 69-70 years⁵. In another descriptive cohort study, Gustaityte-Larsen and Illum reported that the affected patients with BCCs on the auricle were between 60 to 89 years old⁶. In contrast, the patient in our case was 34 years old. Predisposing conditions should always be considered when BCCs present in young adults.

Exposure to UV radiation has been classified as a recognized group one carcinogen for all types of skin cancers. Other etiologic factors for BCC might



Figure 1. An ulcerated erythematous to black-colored plaque with an irregular border, including translucent black papules in the inner part of the lesion

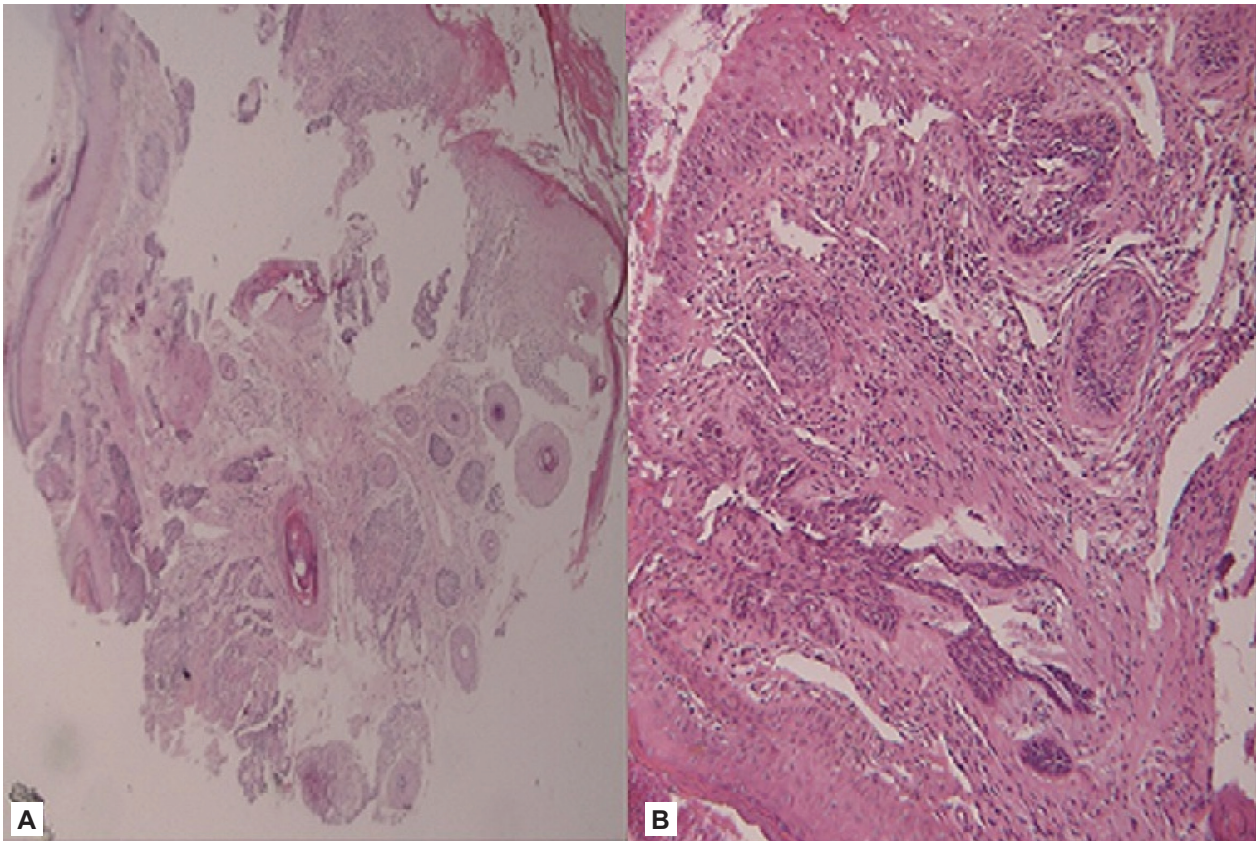


Figure 2. A neoplasm composed of solid nests of uniform basaloid cells with peripheral pseudopalisading surrounded by a loose stroma that contained myofibroblasts [hematoxylin and eosin, original magnification (a)×4, (b)×10]

include exposure to UV light (PUVA, tanning beds), ionizing radiation, environmental exposure (to hydrocarbons, tobacco, coal tar, arsenic, etc.), the skin phenotype, genetic syndromes, predisposing clinical settings (such as chronic non-healing wounds), and immune suppression ^{1,7}.

Our patient with Fitzpatrick skin type III had no personal or familial history of skin cancer or any known toxic exposure that may have predisposed him to BCC formation. He denied excessive sun exposure and the nature of his work did not require involvement in outdoor activities. A possible risk factor for the patient, in this case, could be possible occupational exposure to chemical agents, as he had been working in a rubber manufacturing company for the preceeding 13 years.

BCCs usually present on sun-exposed areas such as the nasal, mandibular, and periocular regions ². A review of the literature revealed only a few reports of BCCs on the auricle or conchal bowl ^{5,6}. Most reported BCCs of the ear were located on the helix, followed by the back side, concha,

antihelix, and lobules of the ear ⁶. Our patient was an exceptional case presenting with an ulcerated plaque in the conchal bowl of his right ear that had not been reported at this age before. Some variants of BCC such as the basosquamous, infiltrative, metatypical, morphoeic, and micronodular subtypes are considered more aggressive than superficial, nodular, and adenoid BCCs ⁸. By comparing the histological subtypes and anatomical location, it has been concluded that more aggressive subtypes of BCC are more likely to present on the head and neck ³, and the BCC on the ear tends to be one of the most aggressive phenotypes ⁵.

Treatment options for BCCs of the auricle are many and include surgical as well as non-surgical techniques. Surgical approaches may be in form of Mohs microscopic surgery or excision with post-operative margin assessment ⁹. Our patient underwent surgery and the margins were reported to be free of tumor cell involvement.

This case report supports few previous observations that BCCs can arise from the

conchal bowl of the ear. Dermatologists should be aware that skin tumors may also occur in uncommon anatomical locations and with unusual presentations in the young population, even if they have no known predisposing factors¹⁰. Unusual presentations make clinical suspicion of skin tumors very difficult, so these lesions can easily be missed. Early diagnosis can prevent further growth, extensive destruction, and the severe consequences of invasive treatments¹¹.

Conflict of interest: None declared.

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