

## Basal Cell Carcinoma in African-Americans: Two Case Reports

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### Introduction

Skin cancer affects mainly Caucasian people. It is rare in blacks, because of the higher melanin content and also the dispersion pattern of melanosomes protect against the carcinogenic effects of sunlight [1]. The most frequent skin cancer in this ethnic group is the Squamous Cell Carcinoma, especially when comes from previous damages in the skin such as burns and carcinogenic aggressions [2]. Melanoma is the second most common skin cancer in the black population, represented by the acral type, due to the low melanin content in the acral areas [3].

We report two cases of African-Brazilians men referred to the Hospital of Oncology Aldenora Bello for assessment and excision of Basal Cell Carcinoma (BCC), each patient presented with one tumor, both in the nasal area. It is known that BCC is the third most representative skin cancer in the black population, rare presentation in this population. To the best of our knowledge, few cases of BCC in African-Brazilians are reported in the literature, especially in the northeast area of Brazil, which is closer to the Equator, so the incidence of UV rays are really high the whole year.

### Methodology

Two case reports of African-Brazilians men that have presented with Basal Cell Carcinoma treated by the team of the Hospital of Oncology Aldenora Bello, in the city of Sao Luiz, Maranhao, Brazil, in the year of 2012. A research in the databases PubMed, Lilacs and UpToDate was held with the descriptors "Basal Cell Carcinoma", "Skin Cancer", "Dermoscopy" and "Skin Cancer in Black" to better approach the subject. The images of the skin lesions included in this study were from the digital data base of the team of the Pathology Department of the Hospital of Oncology Aldenora Bello and they were taken under the patient's authorizations.

### Case Reports

#### Case 1

A 53-years-old male, black, rural worker for 40 years was referred for this Hospital presenting a plaque lesion with pearly and pigmented edges on the nasal dorsum with small telangiectasias (Figure 1). Patient said he has had the plaque for around 13 years; it started as a small pruritic plaque, with some crusts, that didn't heal along the years, he went to a primary care doctor in his city in the countryside of the state of Maranhão, and the doctor referred him to the dermatology department of the Hospital Aldenora Bello. Patient refuses to use sunscreen and denies use of long-sleeved shirts, hat or other forms of protection against UV rays; denies alcoholic consumption and smoke; also refers being hypertensive, but in control. He did not know about occurrence of skin cancer in his family.

Dermoscopy was performed so as to exclude the diagnosis of melanoma, and then the team opted for a wide resection with safety margin, followed by reconstruction with a graft of frontal region (Figure 2).



Figure 1: plaque lesion with pearly and pigmented edges on the nasal dorsum.

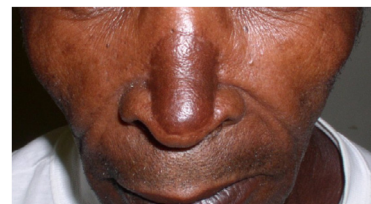


Figure 2: After reconstruction with a graft of frontal region.

#### Case 2

A 57-years-old male, black, peasant for 47 years, smoker of 12 cigarettes per day for 32 years, was referred for this Hospital by his primary care doctor in the rural zone of Sao Luiz, with a nodular-ulcerated lesion with pearly and pigmented edges on the right nasal ala (Figure 3). Patient said the lesion started as a papule 8 years ago, itchy, with slow evolution over time and occasional nosebleeds. Patient is not aware about sunscreen and said he has used long-sleeve shirts but never used hats while working. Also refers that an uncle has died "with something similar" (according to the patient's discuss), but he has never looked for medical assistance.

A resection with a wide safety margin was made, followed by reconstruction with flap of right genian region, bent at its end to reconstructing the inner portion of the nostril after two weeks (Figure 4).

In both of the cases the diagnosis the medical team opted for performing the surgery with wide margin so could be performed an

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**Figure 3:** Nodular-ulcerated lesion with pearly and pigmented edges on the right nasal ala.



**Figure 4:** After reconstruction with flap of right genian region.

excisional biopsy, which was convenient in both of the cases since neither of them lived in the city and had no funds to stay so long waiting for a biopsy to confirm. However, the diagnosis was confirmed through histopathology, which showed clear surgical margins.

## Discussion

Basal Cell Carcinoma (BCC) consists of cells which resemble epidermis basal cells, which gives the reference of keratinocyte tumor [4]. It can also be called as “epitheliomas” because of their low metastatic potential [5]. It is the less aggressive type of skin cancer due to be considered unable to metastasize, except a few of cases reported in the literature [6]. Even though is the less aggressive type of skin cancer, it has high local malignancy due to the aggressive, invasive and destructive power against the skin and its surrounding structures, including bones [7].

Environmental factors associated with genetic predisposition can lead to the development of BCC. Among the risk factors, ultraviolet (UV) radiation due to chronic photoexposure plays the major role in the carcinogenesis; chronic arsenic exposure, therapeutic radiation, immunosuppression, and basal cell nevus syndrome are also considered risk factors [8]. Also, increased age is an important risk factor, since people aged from 50 to 75 years old have approximately 100-times higher incidence of BCC when compared to those younger than 20 years old. Outdoor occupation and low socio-economic status has to be considered as risk factors as well, appropriated with the two cases reported here [9]. Male gender, with an incidence 30 per cent higher than in women [10] seems to be a factor to be considered.

The three most common subtypes are the nodular, superficial and morpheaform, which can be pigmented or not, supporting the importance of the biopsy and of confirming the diagnosis to exclude the two main differential diagnoses: squamous cells carcinoma and melanoma. The incidence of BCC in the general population has been estimated to be from 65% to 75% among all skin cancers, with more than one million of people diagnosed per year in the United States of America [11]. Its occurrence in black skin patients has been estimated as 1,2% to 4.6% of the BCC documented [12].

Even though it is a common type of skin cancer it is very rare type to happen in black-skinned individuals. When documented in the African-American population it is described to most likely appear in the sun-exposed areas, the highest rates being found in the neck and head regions [12]. The reason for the low appearance in this population is thanks to the higher melanin content in their skin added to the dispersion pattern of melanosomes which are able to protect the individual against the carcinogenic effects of sunlight [13].

The two reported patients were both over 50 years old, group most affected by skin cancer, and both performs a job that submits them to high and chronic photoexposure due to either the amount of hours spent in the sun working and for being in an area on the northeast of Brazil, whose UV light concentration tends to be high the whole year, since is so close by the Equator. Both of them denied contact with carcinogenic materials that might have been a potential cause, and also the social aspects played a big role in the delay that they took to look for assistance, making the tumors evolve leading to a malignant local destruction. We ratify that the genetic predisposition triggered by the high and chronic sun exposition can always be a risk for the development of BCC, no matter the skin color, even though Caucasians represents the majority of the cases.

Diagnosis was made clinically and confirmed by histopathology. Surgical resection was curative in both cases, since it was accomplished with good safety margin. It is important the follow-up with a multiprofessional therapy, once the repair surgery makes the recovery of the patient easier not only for medical aspects, but also psychologically for the patient himself. The patients were taught about the importance of the sun protection and of the follow-up appointments in the prevention of more skin cancers. For patients of this social class the acquisition and application of sunscreen may be a burden, not only economically, but also due to the difficulty of including it in the routine of rural workers. In this case, it is important to educate them about the importance of other materials of photo protection, such as long-sleeved shirts and long brimmed hats, besides avoiding sun exposition at the time of high concentration of UVB rays (10 am to 4 pm).

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