

## Uncommon Presentation of Giant Gluteal Basal Cell Carcinoma: A Case Report

Fatima Zahrae Benchekroun<sup>1,\*</sup>, Mohammed Attar<sup>2</sup>, Ilias Jerrar Oulidi<sup>3</sup> and Mohamed Amine Ennouhi<sup>2</sup>

<sup>1</sup>Faculty of Medicine, Pharmacy and Dentistry of Fez, University of Sidi Mohamed Ben Abdellah, Morocco, 30000

<sup>2</sup>Department of Plastic Surgery, Hospital Militaire Moulay Ismail, Meknes, Morocco

<sup>3</sup>Department of Internal Medicine, MUSC Health, United States of America

\***Corresponding Author:** Fatima Zahrae Benchekroun, Faculty of Medicine, Pharmacy and Dentistry of Fez, University of Sidi Mohamed Ben Abdellah, Morocco, 30000, E-mail: fatimazahraebenchekroun@outlook.com

**Citation:** Fatima Zahrae Benchekroun, Mohammed Attar, Ilias Jerrar Oulidi, Mohamed Amine Ennouhi (2024) Uncommon Presentation of Giant Gluteal Basal Cell Carcinoma: A Case Report, J Case Rep Stud 12(2): 203

**Received Date:** August 02, 2024 **Accepted Date:** September 02, 2024 **Published Date:** September 07, 2024

### Abstract

Basal cell carcinoma (BCC) is one of the most common skin cancer and is usually found in sun-exposed areas. It generally has a favorable prognosis due to its slow growth and low metastatic potential. However, if left untreated, it can lead to the destruction of surrounding tissues.

Herein, the case of a female in her 60s, with a giant BCC laying on the upper left gluteal skin. The tumor measures 12 centimeters in size, and has been neglected for over 15 years. We believe that our case is rare by its size and unusual location, as BCC only rarely occur in non-sun-exposed sites.

**Keywords:** Basal Cell Carcinoma; Gluteal Region; Giant Lesion; Histopathology; Surgical Removal

**List of Abbreviations:** BCC: Basal Cell Carcinoma; Ber-EP4: Antihuman epithelial antigen; DNA: Deoxyribonucleic acid; EDF: European Dermatology Forum; PTCH1: Patched 1; RTD: Relative Tumor Density; SMO: Smoothened; TP53: Tumor Protein p53 gene; UV: Ultraviolet

## Introduction

Basal Cell Carcinoma (BCC) is the most common type of skin cancer, occurring in 80-85% of cases in the head and neck region, 15% on the trunk, and less than 2% in other areas [1]. Although BCC in uncommon sites has been described in the literature, reports of BCC in the gluteal region are rare, accounting for less than 0.3% of all cases [2]. These lesions are uncommon, with less than 1% reaching more than 5 cm in size. The occurrence of BCCs in non-sun-exposed, such as those in the gluteal region, often grow unnoticed until they reach significant size. The inability to examine these areas compared to sun-exposed regions is mainly the reason behind late diagnosis. Thus, the presentation of a 12 cm gluteal BCC is extremely rare and necessitate the need for further awareness in dermatological practice.

## Materials and Methods

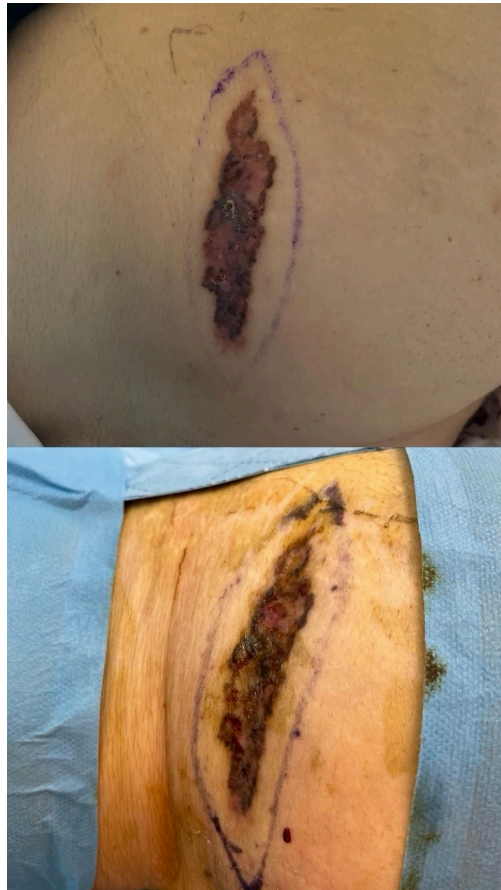
We present the case of a female patient in her mid-60s with no significant medical history, who presented to our institution with a progressively growing lesion on her buttock. Informed consent was obtained from the patient for publication, with all relevant information provided and understood prior to proceeding with the case report.

## Results

Upon clinical examination, we observed an ulcerated lesion with unclear boundaries and irregular contours in the upper left gluteal area. The lesion was covered with a scab that exhibited signs of bleeding, while the surface appeared clean. The lesion measured approximately 12 centimeters and had been slowly growing over a span of approximately fifteen years [Figure 1]. Given the appearance of the lesion, malignancy was the initial suspicion. Given the patient's low income and limited capacity to obtain additional imaging, the decision to proceed with surgical removal of the lesion for histopathological assessment was prioritized as the most feasible approach. This decision was made even before considering further imaging investigations. Local anesthesia with Lidocaine was the optimal choice since the excision was expected to be superficial and did not require the depth or complexity of regional or general anesthesia. Top of Form

Bottom of Form

The lesion was surgically removed with a 0.5 cm safety margin. The excised tissue was subsequently sent for histopathological examination. The results of the examination indicated the absence of infiltration into the surrounding adipose tissue or deeper tissues. Subsequently, the wound was appropriately closed [Figure 2]. Microscopic examination demonstrated nests and islands of basaloid cells invading the dermis. The tumor cells exhibited peripheral palisading, a characteristic feature of basal cell carcinoma. The cells displayed hyperchromatic nuclei, increased nuclear-to-cytoplasmic ratio, and mitotic activity. Additionally, there was evidence of fibrosis within the tumor stroma, consistent with the sclerodermiform component of the carcinoma. Immunohistochemical staining was performed, confirming the tumor cells' positivity for Ber-EP4 and cytokeratin-19, supporting the diagnosis of basal cell carcinoma. No evidence of perineural invasion or lymphovascular invasion was observed. The histopathological findings confirm the diagnosis of a solid basal cell carcinoma with a sclerodermiform component. The absence of tumor involvement at the margins indicated successful surgical removal of the lesion, with no need of further treatment or imaging recommended. The patient had a scar assessment 15 days after the intervention and adequate healing process was noticed. The sixth month follow-up, showed a well healed up lesion, with no signs of recurrence, so no further assessment was required. The patient expressed satisfaction and no additional concerns were reported.



**Figure 1:** BCC in the upper left gluteal region



**Figure 2:** Intra-operative removal of the tumor.

## Discussion

Basal cell carcinoma (BCC) is the most common cutaneous tumor, with its occurrence in non-sun-exposed areas being relatively rare and its etiology remaining unknown [1]. The development of BCC is a multistep process that involves a number of genetic alterations. Some of the most common genetic alterations in BCC include mutations in the genes PTCH1, but others such as TP53 and SMO have also been incriminated. These mutations lead to the activation of pro-growth signaling pathways, which can promote the development of cancer [2].

In addition to genetic alterations, environmental factors such as ultraviolet (UV) radiation can also contribute to the development of BCC. UV radiation can damage DNA, which can lead to mutations in genes that are involved in cell growth and proliferation. Other contributing factors such as dermatitis, chronic trauma, exposure to substances like arsenic, scars from burns, vaccinations, and post-radiotherapy [3-4]. The identification of tumor-specific genetic alterations in BCC is an active area of research, and this knowledge is being used to develop new targeted therapies for the treatment of BCC.

The definition of unusual sites for BCC is still not well-established. However, based on the Relative Tumor Density (RTD) index, breast, periungual region, palms, soles, gluteal, and intertriginous areas are considered as such [5]. When comparing our case to the available literature, only a few reported cases have described BCCs in the gluteal region. For instance, a case series by Abeldaño et al. reported that only 3 out of 611 patients had BCCs in the gluteal area, representing less than 0.3% of cases [6].

The association of tumor location with histological subtypes has also been studied, revealing that sun-exposed areas predominantly exhibit a nodular pattern, whereas non-sun-exposed areas tend to present mainly with superficial type BCC as exhibited in our case [7].

Regarding the size of the BCC, the 12-centimeter measurement is considered remarkable. The American Joint Committee on Cancer defines a BCC as "giant" if it exceeds 5 centimeters [8]. It is important to note that less than 1% of BCCs reach that size [9]. Typically, BCCs are diagnosed when they are still small in size, as patients often seek treatment earlier for tumors visible in sun-exposed areas, primarily due to aesthetic reasons.

While BCCs are rarely associated with a fatal outcome, prognosis is primarily related to recurrence after initial therapy. Treatment selection depends on factors such as patient age, gender, lesion site, size, and type. Biopsy is necessary to determine the histological type. According to The European Dermatology Forum (EDF) guidelines, peripheral margins of 3 to 4 mm are recommended for low-risk BCCs and 5 to 10 mm for high-risk BCCs. This is why, we opted for a 0.5 cm margin to ensure a more cautious approach, for our concern was that the tumor might be of a higher risk, necessitating a wider safety margin to ensure complete excision. [10] The main goal of therapy is complete tumor removal to prevent recurrence and achieve optimal functional and cosmetic outcomes [11-12].

## Conclusion

Basal cell carcinoma (BCC) is the most common cutaneous tumor, primarily associated with sun exposure, but its occurrence in non-sun-exposed areas is rare and its etiology remains unknown.

Unusual locations for BCC, such as the gluteal region, are infrequently reported in the literature, comprising a small percentage of cases.

The presented case of a giant BCC in the upper left gluteal area highlights the rare combination of an unusual location and a significant tumor size.

Successful treatment outcomes can be achieved through surgical excision with clear margins, emphasizing the importance of early detection and prompt management of BCC, even in non-sun-exposed areas.

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