

Advancement flap reconstruction in supraclavicular Basal Cell Carcinoma. A case report

Jesús Alonso Panduro Solórzano M.D.
Valeria Yadira Camberos Cordova M.D.
J Jesús Panduro Pulido M.D.

Jalisco, Mexico

Case Report

Plastic Surgery



Background: Basal cell carcinoma (BCC) represents the most common cutaneous malignancy worldwide. Despite its indolent behavior and extremely low metastatic potential, it stands out for its significant local destructive capacity. We present the case of a 52-year-old male patient who presented with a 2 cm nodular growth in the right supraclavicular region, an unusual anatomical location. Following diagnostic confirmation via incisional biopsy, thorough surgical planning was performed, resulting in complete tumor resection and immediate reconstruction using a local advancement flap, achieving a highly satisfactory clinical and aesthetic outcome. Additionally, the clinical decisions are correlated with the most recent European Interdisciplinary Guideline (EADO) for the diagnosis and treatment of BCC, reaffirming the role of surgical excision with margin control as the gold standard and analyzing current clinical classifications.

KEYWORDS: Basal Cell Carcinoma, flap reconstruction.

Basal cell carcinoma (BCC) is the most frequent malignant tumor in the white population, accounting for approximately 75% of keratinocyte cancers. It arises primarily from the epidermis in areas chronically exposed to ultraviolet (UV) radiation—such as the head and neck—with the nodular subtype being the most common histological variant. Although the metastatic rate is extremely low (<1%), BCC can cause massive and disfiguring local tissue destruction if management is neglected or inadequate. Furthermore, the chronicity of the disease is notable, with a 5-year cumulative risk of 36% for developing a second primary BCC. Therefore, timely diagnosis and a refined reconstructive technique are crucial to preserve function and optimize the patient's aesthetic outcomes.

Case report

A 52-year-old single male patient presented to a private dermatology clinic with a slow-growing nodular lesion of 2 years of evolution, located in the right supraclavicular region, an infrequent topographic site for this pathology. Physical examination revealed a well-demarcated nodular growth measuring 2 cm in diameter. As an initial approach, an incisional biopsy was performed, and the histopathological study confirmed the diagnosis of basal cell carcinoma.

Taking into account the dimensions and location of the lesion, an exhaustive surgical intervention was planned. Complete resection of the tumor was executed, ensuring clear peripheral and

deep safety margins. To repair the resulting skin defect, a local advancement flap was designed and executed. The surgical procedure was uneventful; during the post-operative period, the patient showed a highly satisfactory clinical evolution, with excellent healing, preservation of regional mobility, adequate cosmetics, and no signs of tumor recurrence at short-term follow-up.

Discussion

1. Definition, epidemiology and EADO classification

BCC is a keratinocyte-derived neoplasm strongly linked to cumulative actinic damage. Recently, the European Association of Dermato-Oncology (EADO) introduced a practical classification oriented to "real-life" medical practice, segmenting tumors based on their therapeutic complexity. *Easy-to-treat* tumors encompass the vast majority of common early-stage BCCs that are successfully resolved with standard surgery or local therapies. Conversely, *difficult-to-treat* tumors include locally advanced variants (laBCC), multiple recurrences, or common BCCs that pose technical challenges due to their size, poorly defined borders, prior radiation therapy, or location in critical anatomical sites (eyes, nose, lips, ears).

This approach divides the disease into 4 clinical stages: Stage I (low-risk common BCC); Stage III (difficult-to-treat common BCC due to tumor/patient characteristics [IIA] or multiple lesions [IIB]); Stage III (destructive laBCC outside critical areas [IIIA], in critical areas [IIIB], or giant/deeply invasive tumors involving extracutaneous tissue like



bone or muscle [IIIC]); and Stage IV (metastatic BCC). The reported patient fits into an *easy-to-treat* scenario (Stage I), given that, despite its atypical location, the tumor was well-defined and did not invade deep structures.

2. Diagnosis and histopathology

Initial clinical suspicion benefits substantially from the use of dermatoscopy (Strength of recommendation A), a technique that elevates diagnostic sensitivity to 91.2% through the identification of arborizing vessels, blue-gray ovoid nests, ulceration, maple leaf-like areas, and shiny white structures. Biopsy and histological confirmation remain mandatory in doubtful, large, or aggressive subtypes. Histologically, BCCs are stratified into low-risk (nodular, superficial, pigmented) and high-risk variants (infiltrative, morpheaform, sclerosing, micronodular, and basosquamous). In the presented case, the nodular subtype identified in the initial biopsy guided a resolute and safe therapeutic strategy.

3. Treatment and prognosis

Complete surgical excision with histological confirmation of margins represents the undisputed gold standard of treatment (Strength A). For common low-risk tumors, European guidelines dictate a clinical safety margin of 3 to 4 mm, extending in depth to the subcutaneous cellular tissue. Micrographically Controlled Surgery (3D / Mohs) should be offered as a priority (Strength A) for high-risk variants, recurrent cases, infiltrative/morpheaform subtypes, or tumors located in critical anatomical facial sites. Non-surgical alternatives (such as topical imiquimod 5%, 5-FU, or

photodynamic therapy) are restricted exclusively to superficial BCCs or patients who are not surgical candidates.

For advanced stages (Stage III and IV), management must be mandatorily evaluated by a Multidisciplinary Tumor Board. Hedgehog pathway inhibitors (vismodegib and sonidegib) are the first-line systemic therapy of choice (Strength B), followed by immunotherapy with cemiplimab (an anti-PD-1 monoclonal antibody, Strength B) as a second-line treatment for patients who progressed on or are intolerant to HHIs, benefiting from the high tumor mutational burden (TMB) of BCC. In the clinical case exposed, surgical resection with adequate margins fulfilled the criteria for oncological cure, and the use of the local advancement flap proved to be the ideal reconstructive alternative by providing adjacent tissue matching in color and texture, preventing functional sequelae in the supraclavicular zone.

Conclusion

Basal cell carcinoma in the supraclavicular region constitutes an unusual topographic presentation that requires a high index of clinical suspicion. Complete surgical excision remains the treatment of choice. Thorough surgical planning and the application of local advancement flaps consolidate as a highly safe, effective, and aesthetic strategy, mitigating the risk of recurrence while preserving the patient's regional function and anatomy. Furthermore, protocolizing treatment based on current international guidelines optimizes the long-term oncological prognosis.

References

1. Baba, P.U.F.; Hassan, A.u.; Khurshid, J.; Wani, A.H. Basal Cell Carcinoma: Diagnosis, Management and Prevention. *J. Mol. Pathol.* 2024, 5, 153-170.
2. Chen OM, Kim K, Steele C, Wilmas KM, Aboul-Fettouh N, Burns C, Doan HQ, Silapunt S, Migden MR. Advances in Management and Therapeutics of Cutaneous Basal Cell Carcinoma. *Cancers (Basel)*. 2022 Jul 30;14(15):3720.
3. Peris K, Fagnoli MC, Garbe C, Kaufmann R, Bastholt L, Seguin NB, et al. European consensus-based interdisciplinary guideline for diagnosis and treatment of basal cell carcinoma. *Eur J Cancer*. 2019;118:73-84.

Jesús Alonso Panduro Solórzano
Private Practice
Guadalajara, Jalisco, Mexico.