

BRIEF ARTICLE

Multidisciplinary Surgical Management of Extensive Basal Cell Carcinomas

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ABSTRACT

Basal Cell Carcinoma (BCC) is the most common malignancy that can cause local tissue destruction. While treatment options for BCC vary depending on the degree of malignant progression, surgical intervention is generally required when there is significant tissue involvement. We present a case of a 40-year-old woman with extensive BCCs requiring a multidisciplinary surgical approach for treatment. Our case highlights the importance of utilizing a multidisciplinary team as well as different surgical management options for late stage BCCs.

CASE REPORT

A 40-year-old uninsured, white female presented to the student-run free clinic with multiple nodules on her left preauricular area and an ulcer in her glabella. The patient first noticed the nodules two years prior to her visit when they initially appeared as small papules. The lesions have enlarged over time, and she has had no associated bleeding or pain. The patient had no vision changes, dry eyes, or excessive tearing. She reported intermittent bleeding and drainage from the ulcer and has had no treatment or interventions for the lesions. The patient reported delaying treatment over the last two years due to a lack of insurance and dermatologic accessibility. On physical examination, a sclerotic hypopigmented plaque surrounded by multiple pearly pedunculated nodules with telangiectasias was observed on the left pre-auricular area (**Figure 1**). The largest nodule measured to

be 15 mm in diameter. An additional 15x20mm ulcer with brown crust on the inferior border was appreciated at the glabella (**Figure 2**). Histopathology of the lesions revealed aggregates of basaloid cells with hyperchromatic nuclei and scant cytoplasm, some of which were connected to the undersurface of the epidermis. The aggregates exhibited peripheral palisading nuclei embedded in a fibrotic and myxoid stroma. A diagnosis of infiltrative and nodular basal cell carcinoma (BCC) was made.

SKIN



Figure 1. Sclerotic hypopigmented plaque surrounded by multiple pearly pedunculated nodules with telangiectasias.

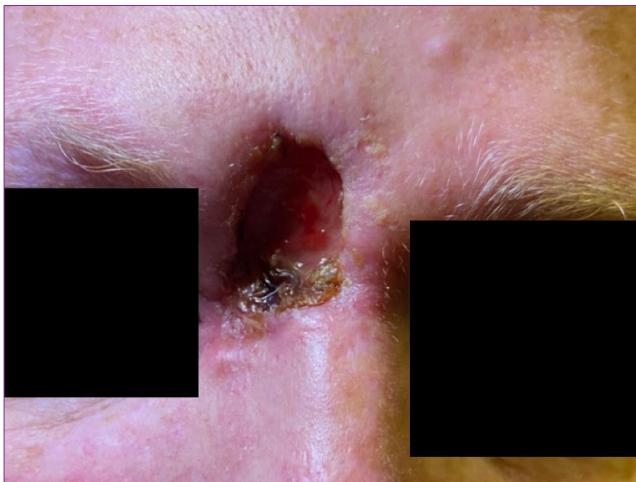


Figure 2. 15x20mm ulcer with brown crust on the inferior border on the glabella

Due to the patient's insurance status, a multidisciplinary team was accessed through a financial assistance program affiliated with

the local teaching hospital. Workup with computer tomography (CT) imaging revealed a 2mm osseous invasion of the right medial frontal sinus wall. A multidisciplinary team consisting of dermatology, radiation/oncology, otolaryngology-head and neck plastic surgery, ophthalmic plastic surgery, and oral and maxillofacial surgery recommended staged surgical excision and reconstruction after determining the BCC was stage T4a according to the American Joint Committee on Cancer guidelines. Three surgeries were scheduled to address the infiltrative and nodular BCCs, respectively. The first surgery consisted of a wide local excision of the infiltrative BCC at the glabella and right medial eyelid, including resecting the medial nasal/lacrimal bone and anterior table of the frontal sinus bone. This procedure included reconstruction of an anterior table defect along with the medial and lateral canthus prior to closing with a left paramedian forehead flap (PMFF) (**Figure 3**).



Figure 3. Closure with a left paramedian forehead flap.

The patient recovered without complications and returned two and a half weeks later for the second surgery. The second procedure consisted of a wide local excision of the left preauricular skin, a left superficial parotidectomy, and left modified radical neck dissection due to the extent of tumor invasion. A split-thickness skin graft from the right forearm was utilized for closure. The patient recovered without complications and returned a week later for the last procedure, which consisted of a division and inset of the left paramedian forehead flap. The patient recovered well and had no complaints at one-week post-operative follow-up.

DISCUSSION

BCC is the most common malignancy.¹ While typically indolent, it may cause local invasion and destruction of adjacent tissue if treatment is delayed. Thus, early recognition and intervention are essential to minimize complications and disfigurement. In choosing a treatment plan for BCC, several factors must be considered, including the cancer stage and area involved. Mohs micrographic surgery is an option which involves precise surgical technique and complete excision of skin cancer that is checked by microscopic margin control. This technique confers benefits of reduced morbidity, decreased loss of function, and more favorable aesthetic outcome due to the reduced volume of tissue removed while maintaining clear margins.²

After excision, reconstructive procedures can restore appearance, facial symmetry, and function. For simpler superficial defects with an adequately vascularized wound bed, skin grafting can be used for reconstruction. Split thickness skin grafts (STSG) include the epidermis and part of the dermis. Compared to full thickness skin grafts, STSG are advantageous with more uniform thickness,

less contracture, and more favorable take due to lower metabolic needs.³ For larger, complex deformities of the face, paramedian forehead flaps (PMFF) are often employed. A vertical flap of skin and subcutaneous tissue is elevated from the forehead and rotated 180° to the region of defect. PMFF are useful for closing nasal deformities, restoring breathing, and rebuilding nasal landmarks. The incorporation of the subcutaneous tissue in PMFF allows replacement of volume lost during tumor resection and can be debulked and contoured to define landmarks.⁴ This procedure has low morbidity because the pedicled flap receives a robust vascular supply from the supratrochlear artery with multiple collaterals.⁵ Primary closure of the donor site incision can usually be achieved without difficulty, and the local facial donor site allows excellent texture and color match.⁵

As seen in this case, there have been other reported cases of advanced skin neoplasms requiring a multidisciplinary approach.⁶ Different causes of delay in diagnosis may be attributed to fear of diagnosis and treatment, inadequate access to care, lack of health literacy, and inadequate hygienic culture. This case calls for the importance of accessibility to dermatologic care. The patient reported she delayed diagnosis due to lack of insurance and inability to pay for an office visit. Despite making up 27% of the general population, only 5% of uninsured patients make up the prevalence of patients at dermatology practices.⁷ This disparity highlights the significant barriers uninsured individuals may have with accessing dermatologic care. In addition, homeless and uninsured individuals are presumed to have a higher prevalence of skin cancer than the general population.⁸ As highlighted in this case, delayed detection of BCC may lead to a more invasive treatment requiring multidisciplinary teams for management.

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