

A lobulated mass on the upper back with prominent vasculature: A giant basal cell carcinoma

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Abstract

Basal cell carcinoma (BCC) is characterized by slow but locally invasive growth. Although there is low metastatic potential, if not treated early, these skin cancers can lead to significant morbidity and mortality. In this case report, we present a man with a neglected BCC that developed into what is termed a giant BCC or one that is greater than 5 cm. This tumor was discovered only upon workup of orthostatic lightheadedness and iron deficiency anemia. Although rare, basal cell carcinoma must be included on the differential of a large cutaneous lesion and may be a source of significant blood loss.

Introduction

Basal cell carcinoma (BCC) is characterized by slow but locally invasive growth, a low metastatic potential, and a pearly pink appearance on physical exam.¹ Giant basal cell carcinoma is the term used to describe a BCC greater than 5 cm.¹⁻³ Most basal cell carcinomas are small lesions with only 0.5% meeting the size criteria for a giant lesion.⁴ Giant basal cell carcinomas are most common in elderly males and show a predilection for the head, neck, and upper back.^{1,3,5} We present a man with symptomatic iron deficiency anemia caused by a giant BCC.

Case Report

A 60-year-old Caucasian male with no personal history of skin cancer, immunosuppression, or radiation exposure presented to the emergency department for assessment of a three-day history of fatigue and orthostatic lightheadedness. The patient had

a history of essential hypertension treated with metoprolol but no other known chronic medical conditions. His initial labs were notable for a hemoglobin of 7.2 (reference 13.2-16.9 g/dl), mean corpuscular volume of 73.6 (reference 76.2-98.6 femtoliters), ferritin of 6 (reference 30-400 ng/ml), and unsaturated iron binding capacity of 371 (112-346 mcg/dl), consistent with iron deficiency anemia. On exam, he was found to have a 15×10×4 cm firm, fungating, lobulated, violaceous-pink tumor with areas of ulceration leaking serosanguinous fluid on his upper back (Figure 1). Along the surface of the tumor and extending inferolaterally into the peritumoral skin were radiating dilated violaceous vessels. Extending beyond the dominant growth was a rim of violaceous-pink patches. The total area of skin involvement (combining both the excrescence and rim of involved tissue) was 20×18 cm. Upon further questioning, the patient stated that the mass had been present and slowly enlarging for 18 years. On computerized tomography, the mass was found to be heterogeneously enhancing involving the skin and subcutaneous fat overlying the trapezius muscle with no bony or visceral involvement. The patient's lesion was excised primarily by surgical oncology leaving exposed left scapula, trapezius, spinous processes, and occipital fascia (Figure 2). Excisional margins were noted as less than 2 mm from the deep margin and greater than 2 cm from all other margins. Microscopic examination of the tumor specimen demonstrated dermal nodules of pleomorphic, hyperchromatic purple cuboidal and columnar cells with scattered keratin pearls in a background of loose fibrous stroma and a moderate lymphocytic infiltrate, consistent with a diagnosis of BCC (Figure 3). Two weeks later, plastic surgery performed a rotational skin flap from suboccipital region and split thickness skin grafting from lower back to upper back wound. This patient had no additional treatments.

Discussion

Prior to this case, approximately 14 cases of basal cell carcinomas greater than or equal to 20 cm have been reported in the literature.^{4,6-10} When they exceed 20 cm, they are termed super giant BCCs.⁷ The primary cause of a giant BCC is attributable in the majority of cases to either tumor neglect or local recurrence of a previously treated lesion.^{4,6-10} Relative to smaller tumors, giant BCCs are more likely to be of a histologically aggressive subtype (morpheaform,

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micronodular, metatypical) and are more likely to recur following simple excision.^{1,3} In contrast to the very low metastatic incidence of BCCs overall (0.03%), the rate has been reported to be as high as 45% in tumors greater than 10 cm and 100% in tumors greater than 25 cm.¹¹ The most common sites of metastasis are the lymph nodes and lungs, with a mean survival after metastatic spread of only 8-14 months.^{11,12} Although minor bleeding has been associated with BCCs secondary to tissue friability common to these neoplasms, only 10 cases of acute or chronic anemia subsequent to giant BCC have been reported.⁶

Wide and deep surgical excision is the mainstay curative treatment of giant BCC.¹³ The ideal margin size for large BCC is unknown given the rarity of the tumor, but



Figure 1. Clinical photograph. Gross view of mass on upper back demonstrating the pink-violaceous, lobulated, shiny surface with prominent vasculature extending from the inferolateral surfaces.



Figure 2. Clinical photograph. Gross view of upper back after surgical excision of mass demonstrating a large defect with exposed musculature.

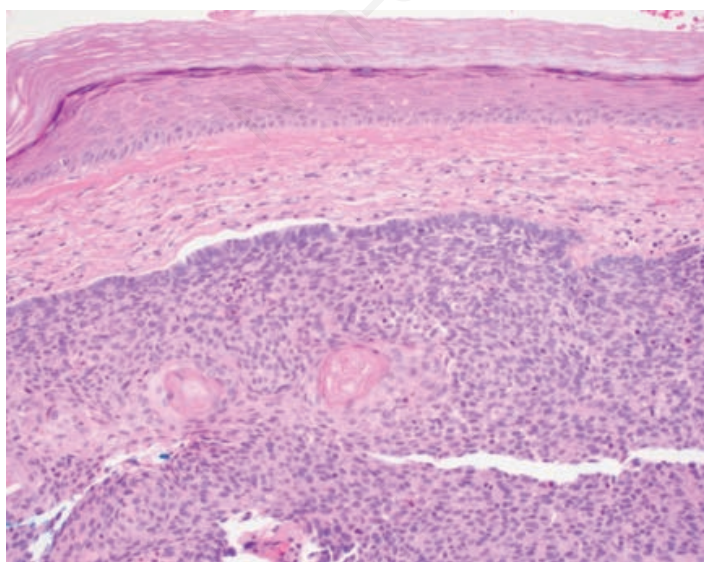


Figure 3. Skin histopathology. Hematoxylin & Eosin stain of a shave biopsy specimen at 100x magnification demonstrating a basaloid nodule in the dermis, with peripheral palisading of nuclei and retraction between tumor and stroma.

recommendations vary from 5 mm to 1 cm.^{2,4-5,13} Mohs micrographic surgery offers the advantage of assessing for residual tumor at the time of operation and has been recommended as the treatment of choice for lesions in cosmetically sensitive regions.^{2,14} Additional treatments can be considered including oral treatment with hedgehog pathway inhibitors, vismodegib and sonidegib, approved in 2012 for those with locally advanced, metastatic, or inoperable BCC.¹⁵ Vismodegib has been shown to have an overall response rate of 43% in locally advanced diseases and has been reported to be effective in giant basal cell carcinomas.^{4,16} Treatment can be therapeutic or neoadjuvant, with a successful case demonstrating a giant BCC treated with vismodegib as a debulking agent prior to surgery.¹⁷ However, another study documented that although there may be reduction in the cutaneous lesion of the giant BCC, there was no reduction in the deeper tumor plane, and the patient still required adequate deep margins.¹⁸ Furthermore, usage of this drug may be challenging secondary to tumor resistance, the side effect profile, and recurrence after cessation of the drug.¹⁸⁻²⁰ Other considerations must be taken into account when prescribing hedgehog inhibitors, including patient compliance. Monitoring a patient's response to treatment is essential in the case of a giant BCC.¹⁸ A patient who is at risk for non-compliance, such as those with giant BCCs, may not be ideal candidates for this intervention. The patient in this case had difficulty obtaining insurance and was lost to follow-up after surgical intervention; therefore, no additional treatments were performed.

Conclusions

This report presents a case of a very large neglected giant basal cell carcinoma, which was discovered upon workup of orthostatic lightheadedness and iron deficiency anemia. Although rare, basal cell carcinoma must be included on the differential of a large cutaneous lesion and may be a source of significant blood loss.

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