

Red Dot Basal Cell Carcinoma: An Unusual Variant of a Common Malignancy

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ABSTRACT

Background: Red dot basal cell carcinoma is a distinct but rare subtype of basal cell carcinoma (BCC). It presents as a red macule or papule; therefore, in most cases, it may easily be mistaken for a benign vascular lesion, such as a telangiectasia or angioma.

Purpose: A red dot BCC in an older woman is described. Clinical and histological differences between red dot BCCs and telangiectasias are described.

Method: A 72-year-old woman initially presented with a painless red macule on her nose. Biopsy of the lesion established the diagnosis of a red dot BCC. Pubmed was searched for the following terms: angioma, basal cell carcinoma, dermoscope, diascopy, red dot, non-melanoma skin cancer, telangiectasia, and vascular. The papers were reviewed for cases of red dot basal cell carcinoma. Clinical and histological characteristics of red dot basal cell carcinoma and telangiectasias were compared.

Conclusion: Red dot BCC is an extremely rare variant of BCC that may be confused with benign vascular lesions. Although BCCs rarely metastasize and are associated with low mortality, they have the potential to become locally invasive and destructive if left untreated. Thus, a high index of suspicion for red dot BCC is necessary.

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INTRODUCTION

Basal cell carcinoma (BCC) is the most common type of malignancy diagnosed in the United States. Although BCCs generally do not metastasize and are associated with a low mortality rate, they may become locally invasive if left untreated, leading to significant tissue destruction and potential disfigurement.^{1,2}

Several subtypes of BCC have been described in the literature, including nodular, infiltrative, morpheaform, superficial, and pigmented BCC.^{3,4} We present a woman who had an unusual variant of BCC, termed “red dot” BCC, which has seldom been described in the literature.⁵⁻⁷ We also summarize the features that differentiate red dot BCCs from telangiectasias, since the latter is a benign vascular lesion which morphologically mimics red dot BCCs.

CASE REPORT

A 72-year-old woman with a history of BCC and squamous cell carcinoma presented for a complete skin examination and was found to have a red macule on her distal left nasal bridge. A glass slide was used to apply pressure to the lesion; the macule blanched with diascopy, which was consistent with telangiectasia; therefore, a decision was made to observe and closely monitor the lesion. Three months later, the patient again presented for evaluation of the lesion; however, she mentioned that there was occasional bleeding from the site.

Cutaneous examination revealed a red macule on the distal left nasal bridge measuring 1x1 mm, with an underlying

superficial 2x3 mm flesh-colored papule (Figure 1). A biopsy was performed. Microscopic examination showed small nodular aggregates of basaloid tumor cells extending from the epidermis into the reticular dermis. Several dilated blood vessels and occasional extravasated erythrocytes were present in the papillary dermis (Figure 2). Correlation of the clinical morphology and pathologic findings established the diagnosis of red dot BCC.

The patient subsequently underwent Mohs micrographic surgery, and the tumor was removed in two stages. The final post-operative size was 10x10 mm. The wound was repaired with a full-thickness skin graft. Follow up examination one week later showed excellent healing of the surgical site and no evidence of recurrence.

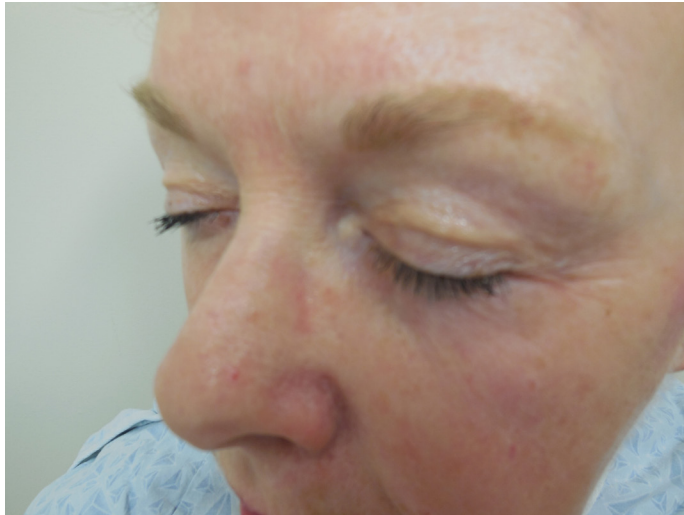
DISCUSSION

Nodular BCCs classically present as waxy papules with central depression and pearly appearance.¹ The papule may have telangiectasias on the surface or have a rolled border with central ulceration. Very rarely, BCCs may present as an uncommon “red dot” variant, which may mimic benign vascular lesions such as telangiectasias, and thus present a point of diagnostic confusion (Table 1).

Diascopy is a test for blanchability that is usually performed using a glass slide.⁸ This test may not be a reliable method of differentiating between red dot BCC and telangiectasias, as

FIGURE 1. (A and B): Distant and closer views of red dot BCC, presenting as a 1x1 mm erythematous macule overlying a superficial 2x3 mm flesh-colored, flat-topped papule on the distal left nasal bridge.

(A)

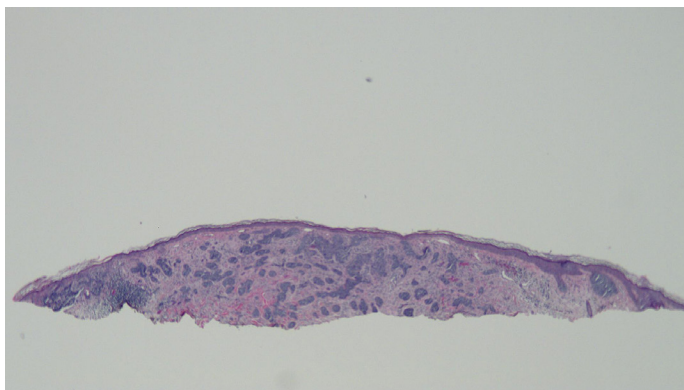


(B)

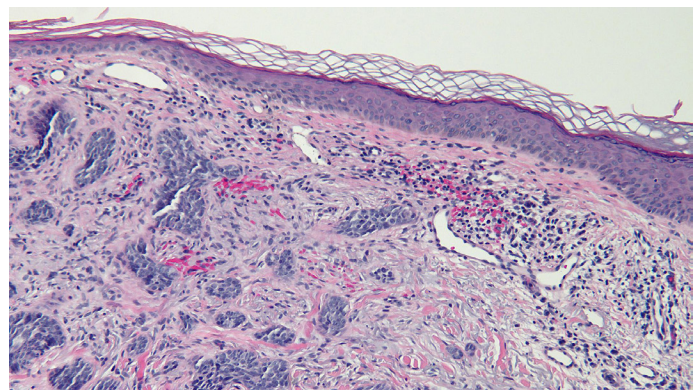


FIGURE 2. (A and B): Low (A) and higher (B) magnification from the microscopic examination of the tissue biopsy of the red dot BCC show small nodules of basaloid tumor cells that fill the upper dermis (A and B). Dilated endothelial-lined vessels and extravasated red blood cells are present in the papillary dermis (B).

(A)



(B)



both lesions often blanch or partially blanch with pressure. However, hand-held dermoscopy may be useful in distinguishing red dot BCC from benign vascular lesions.

"Red dot BCC presents as a small erythematous macule or papule, measuring about 1–2 mm."

The most common dermoscopic findings in BCCs (superficial, nodular, pigmented, and non-pigmented types) include: arborizing vessels, atypical red vessels, background of white-red structure-less areas, comma vessels, featureless areas, and a

scattered vascular pattern.^{9–11} In contrast to the irregular arborizing vessels seen in BCCs, telangiectasias more commonly have dilated linear and branched vessels on dermoscopy.¹² Literature on red dot BCC is scant and there have been no studies on their dermoscopic features.

Ultimately, clinical suspicion of red dot BCC can be confirmed with tissue biopsy, as was done in our patient. Histologic examination of the tumor revealed not only superficial nodules of basaloid tumor cells, but also telangiectatic blood vessels and extravasated erythrocytes. In contrast, microscopic examination of telangiectasias commonly shows a proliferation of dilated vessels containing red blood cells.^{13,14}

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TABLE 1.

Comparison of Red Dot BCC and Telangiectasia

Feature	Red dot BCC	Telangiectasia
Clinical presentation	Solitary lesion; may bleed	Solitary lesion; usually does not bleed unless irritated
Diascopy	Blanches	Blanches
Dermoscopy	Common to BCCs: scattered vascular pattern, featureless areas, atypical red vessels, arborizing vessels, comma vessels, background of white-red structure-less areas	Dilated linear and branched vessels
Biopsy	Superficial nodules of tumor cells, occasional extravasated RBCs	Proliferation of dilated vessels containing RBCs; there is either no or minimal RBC extravasation
Treatment	Excision (MMS an option depending on location)	Observation or laser therapy

Abbreviations: BCC=basal cell carcinoma; MMS=Mohs micrographic surgery; RBC=red blood cell

Previous reports of red dot BCC have commented on the small superficial appearance of these tumors, which may be misleading when compared to the final clinical margins.⁶ Specifically, Tromber et al.⁶ notes that the lateral spread of the tumor may be more extensive than expected from clinical exam; oftentimes, a small red crust or dot vessel is seen that may only reveal subtle pearly of the epidermis if the surrounding skin is stretched. Our patient's red dot BCC is consistent with this prior report; the wound diameter necessary to achieve malignancy-free excision margins was significantly larger than the size of the tumor observed on physical examination. These findings suggest that red dot BCC may potentially be more aggressive than clinical examination suggests.

CONCLUSION

Red dot BCC is an extremely rare, yet distinct, subtype of BCC; indeed, to the best of our knowledge, there are only a few reports of this BCC variant. Red dot BCC presents as a small erythematous macule or papule, measuring about 1-2 mm. However, its small size may be misleading; the margins of the excised tumor may be much larger than the clinical lesion. Hence, red dot BCCs may be locally destructive; however, they morphologically appear similar to benign telangiectasias or angiomas. Therefore, a high suspicion for red dot BCC is warranted, particularly in individuals with a history of multiple skin cancers. In the appropriate clinical setting, when red dot BCC and telangiectasia are being considered in the differential diagnosis of a new erythematous skin lesion, dermoscopy may be helpful. Biopsy provides definitive confirmation of the diagnosis when red dot BCC is suspected. The treatment of red dot BCC is complete excision using the Mohs micrographic surgical technique.

DISCLOSURES

The authors have no relevant disclosures or conflicts of interest to report relating to the content of this manuscript.

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