

How We Do It: Biopsy of a Suspicious Pigmented Lesion and How to Reduce Scarring and Improve Cosmetic Outcome

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With the rising incidence of melanoma among all age groups, it has become increasingly important to correctly diagnose a suspicious pigmented lesion while also keeping surgical scarring to a minimum. When melanoma is suspected and there is a high likelihood of surgical reexcision, performing excisional biopsy without dog-ear repair will result in a smaller final surgical scar and ultimately an improved cosmetic result.

CASE REPORT

A 35-year-old male with Fitzpatrick skin type II and history of extensive sun exposure and blistering sunburns presented to our clinic complaining of a 1-year history of an enlarging pruritic mole on his back. The patient did not have a personal or family history of skin cancer and the remainder of his medical history was unremarkable. On physical examination he had a 1.2×1.0-cm irregular tan and brown patch (Figure 1). Dermoscopic examination showed an atypical pigment network, with areas suggestive of regression.

Given our high index of suspicion for melanoma we performed an excisional biopsy to subcutaneous tissue with 1-mm margins (Figure 2), followed by subcutaneous

closure with 3.0 vicryl and superficial closure with 4.0 nylon interrupted sutures. There was no dog-ear repair performed, with a final wound size of 2.1 cm (Figure 3). The patient tolerated the procedure well and had no complications postoperatively.

We present this case to demonstrate that dog-ear repair in highly suspicious excisional biopsy specimens should be avoided to minimize the final scar size and thereby enhance the cosmetic outcome in patients that may need reexcision with additional margins.

COMMENT

With the alarming and rapid increase incidence in melanoma, in all age groups, it is critically important to properly diagnose suspicious pigmented lesions.¹ The recommended biopsy technique for suspected melanomas is excisional biopsy with small margins, except in situations where the index of suspicion is low or in large lesions in cosmetically sensitive areas.^{2,3} This allows the pathologist the opportunity to fully assess the lesion, minimizing sampling error.⁴ This also allows the pathologist to obtain an accurate measurement of depth of the lesion.³ The importance of complete excision of suspicious pigmented lesions has been well described

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Figure 1. Enlarging pruritic 1.2×1.0-cm irregular tan and brown patch on the back. Dermoscopic examination showed an atypical pigment network with areas suggestive of regression.



Figure 2. Defect following surgical excision to subcutaneous tissue.

in the literature, as partial biopsies can result in inaccurate diagnoses.⁴

As the incidence of melanoma has rapidly increased, particularly in the young, female population, balancing the need for appropriate surgical management while optimizing final cosmetic outcome has become of greater importance.⁵

Herein we describe a case where we had a high index of suspicion for melanoma and performed an excisional



Figure 3. Final surgical wound of 2.1 cm following subcutaneous and superficial suture closure. Note that no dog-ear repair was performed.

biopsy to subcutaneous tissue; however, dog-ear repair was not performed. It is our belief, in these situations, given the need for reexcision with 0.5 cm margins for melanoma in situ, and larger margins for invasive melanoma, avoiding dog-ear repair with the initial biopsy should be considered, as it minimizes the length of the initial surgical scar. As such, in those patients requiring surgical reexcision the final surgical scar will be shorter in length, leading to an improved cosmetic outcome. If reexcision is not required, then scar revision surgery removing any remaining dog ears can be performed at a later date.

In this patient, the final surgical length was 2.1 cm, which is much smaller than the expected length of 3.6 cm if a traditional fusiform excision with a 3:1 length to width ratio was performed.

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