Melanoma Incidence in Shaved Pigmented Lesions

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Abstract

Introduction: The debate over proper biopsy technique for pigmented lesions is ongoing. Surgical literature and international guidelines warn against the use of shave biopsy to prevent sampling error. Current NCCN guidelines state excisional biopsy is preferred, but suggests shave biopsy is acceptable when the index of suspicion is low. Although controversial, shave biopsy is frequently performed on pigmented lesions. The goal of this study is to determine the incidence of melanoma in shave biopsies of pigmented lesions and to define the impact of this practice on the appropriate treatment for the patient.

Methods: A retrospective chart review was performed on all patients from 2009 to 2010 who had a shave biopsy performed by the Dermatology Department for the diagnosis of a pigmented lesion. Using an institutional database, a natural language search was conducted. The pre-biopsy diagnosis, final diagnosis and any comments were recorded.

Results: Eighteen hundred twenty-seven shave biopsies of pigmented lesions were performed during the 24-month study period. One hundred thirty-eight (7.6%) of the shaved specimens were melanoma. Of the 138 melanomas shaved, 62% had a positive margin and 16% had a positive deep margin. Out of the 1827 biopsies, 25 (1.4%) required an “upstage” or a change in treatment due to inadequacy of the biopsy. (Figure 1)

Figure 1. Summary of shave biopsy results.

Conclusion: Tumor thickness is the most important histologic factor in determining prognosis and treatment of melanoma. Shave biopsies can be unreliable at determining the full depth of a tumor. The possible consequences include: an “upstage” in treatment, the chance of missing important histological features such as the number of mitosis, and exclusion from clinical trials. However, recent studies have challenged the surgical dogma that shave biopsy should not be used for the diagnosis of melanoma as no change in long-term survival was observed when comparing shave to excisional biopsy.
The incidence of melanoma and the incidence of upstage in treatment in our study population were low. Our results suggest that the use of deep shave biopsy in pigmented lesions may have minimal impact on the subsequent melanoma treatment, although further studies are necessary to confirm these findings.

References:


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