

How informative are dermatopathology requisition forms completed by residents of dermatology?

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INTRODUCTION

Biopsy lies at the heart of the management of suspected melanocytic neoplasms and accurate clinical information provided on dermatopathology requisition forms is often very important to achieve correct diagnosis. Algorithms have been planned for facilitation of the clinical examination such as the ABCDE rule (asymmetry, border, color, diameter and evolution)^{1,2} and the "ugly duckling" sign³. Evolution is especially important in old patients as a changing lesion in these patients is more likely to be melanoma than in young patients⁴. The "Ugly Duckling" (UD) sign was introduced to demonstrate that nevi in the same individual tend to resemble one another and that melanomas

Background: Accurate clinical information provided on dermatopathology requisition forms is often very important to achieve correct diagnosis. We searched to evaluate the clinical information actually provided on the Dermatopathology requisition forms of melanocytic lesions submitted to our laboratory.

Method: The provided clinical information and given microscopic diagnoses were recorded for melanocytic lesions submitted as wet tissue to our dermatopathology department.

Result: Biopsy specimens were received from our dermatology clinics at our hospital that were filled in by residents of dermatology. According to ABCDE criteria, 76% of cases had none, 11.5% had one criterion, 19% had two criteria, 5.6% had 3 criteria, 1.1% had 4 criteria, and none had all 5 criteria. Asymmetry was provided in none of the requests, but border irregularity was provided in 7.6% of the time, color 10.1%, diameter 5.9%, and evolution 21.8%. No requisition forms mentioned the "ugly duckling" sign.

Conclusion: Actually, most of the requisition forms did not provide the clinical information that is very important for the clinicopathologic correlation in the diagnosis of the pigmented lesions.

Keywords: asymmetry (A), borders (B), colors (C), diameter (D), clinical pathology, melanoma, pigmented lesions

are often distinct from the individual's nevus pattern³. A number of studies have suggested which or how clinical information should be provided, including demographics, description of the clinical morphology, duration, and the clinical differential diagnosis and the role of self-examination of the skin for improving the use of the ABCDE criteria⁵⁻⁸. We searched to evaluate the clinical information actually provided on the dermatopathology requisition forms in wet tissue specimens of melanocytic lesions submitted to our laboratory.

PATIENTS AND METHODS

We reviewed provided clinical information

and microscopic diagnoses of 238 melanocytic lesions submitted as wet tissue specimens to our dermatopathology laboratory in a retrospective unblinded fashion from March 2009 to March 2011. Specifically, we recorded the patient's age and sex, and lesion site. In addition, we recorded whether a comment was added regarding asymmetry, border irregularity, color or color variegation, diameter/size, and evolution of the lesion. We also recorded whether there was any additional history provided on the form including a personal or family history of melanoma or prior therapy, trauma, or biopsy of this site. Finally, the type of specimen obtained (e.g punch biopsy, excision), the clinical differential diagnosis provided, and the histopathologic diagnosis were recorded. We chose not to include slide consults submitted to us because they often include the submitting clinician's (either dermatologist or pathologist) pathologic interpretation rather than the clinical information, and consultation cases tend to select for more complicated and/or suggestive lesions. Actually, we included wet tissue specimens submitted from dermatology clinics at our hospital. These are most often performed by residents who are supposed to be continuously educated of the importance of providing appropriate clinical information on the requisition form.

RESULTS

All wet tissue specimens were taken from dermatology clinics at our hospital. All specimens were submitted by residents of dermatology. All 238 cases specified gender, 226 out of 238 specified ages, and 223 out of 238 specified site of the lesion on the requisition form. The mean age of the patients was 58 years (range: 22-86 years). There were 112 female and 126 male patients. In all, 36 lesions were from the trunk, 48 from the head and neck, 85 from the lower extremities, and 38 from the upper extremities. There were 88 punch biopsy, 130 incisional biopsy, and 20 excisional biopsy specimens. Table 1 lists the frequency of the clinical criteria reported for the lesions. Table 2 lists the pathologic diagnoses for each case.

DISCUSSION

The clinical criteria for the diagnosis of melanoma

Table 1. Frequency of clinical criteria

Asymmetry	0%
Border irregularity	7.6%
Color	10.1%
Diameter/size	5.9%
Evolving	21.8%
"Ugly duckling" sign	0%
Other history	
History of prior treatment at this site	6.3%
History of previous biopsy	4.2%
Dermoscopic finding	0.4%
No ABCDE criteria	76%
1 ABCDE criterion	11.5%
2 ABCDE criteria	19%
3 ABCDE criteria	5.6%
4 ABCDE criteria	1.1%
5 ABCDE criteria	0%

Table 2. Pathologic diagnosis for each case

Intradermal nevus	32%
Intradermal nevus with congenital features	17%
Compound nevus	16%
Dysplastic nevus	9%
Junctional melanocytic nevus	8%
Spitz/Reed nevus	4%
Melanoma in situ	3%
Melanoma	10%
Other	1%

using the ABCDE checklist (A = asymmetry, B = border, C = color, D = diameter, E = evolving) and "ugly duckling" sign have been reported in some studies¹⁻⁴. Although there is clinical emphasis on the ABCDE criteria for melanocytic lesions, we found that about 75% of the requisition forms provided no ABCDE criteria and no cases included all 5 criteria. Of ABCDE criteria, the evolution of the lesion was the most frequently provided criterion (21.8%).

In a similar study by Jeanette and colleagues, more than half of the requisition forms provided no ABCDE criteria, 12% only provided one criterion, no cases included all 5 criteria and only two cases provided 4 of the 5 criteria; the color of the lesion was the most frequently provided criterion (39%) in the study. However, unlike our study, they had selected specimens sent from community dermatologists for obtaining the accurate reflection of a general dermatopathology practice. On the other hand, residents are supposed to be continuously educated and reminded of the importance of providing appropriate clinical information on the pathology requisition forms⁵.

The diameter of the lesion was provided in 5.9% of the cases. It seems that the diameter of the lesion is the most useful of the ABCDE criteria in dermatopathology practice. The lesion size gives us some valuable information for interpretation of some subtle pathologic features such as scattered intra epidermal melanocytes; certainly they should be interpreted more doubtfully in a large pigmented lesion versus smaller ones. On the other hand, in a sun-damaged area like the head and neck, a single lesion of lentigo maligna may demonstrate significant pathologic heterogeneity; so, the size of the lesion that represents a partial or complete sample is very important in the final interpretation of a dermatopathologist on these lesions, especially when there is the possibility of sampling error.

Our study did have some limitations including evaluation of the specimens in a retrospective unblinded fashion and inclusion of only our dermatology clinics at our hospital. According to this study, clinical information provided for dermatopathologic evaluation revealed that important information were often missed on the dermatopathology requisition form or minimal information is provided on them. It seems that some educational programs are needed to remind the importance of this information and its clinicopathologic correlation for residents of dermatology. Another suggestion for achieving more accurate diagnosis could be planning semi-structured blank dermatopathology requisition forms for obtaining important clinical information that are needed for more accurate evaluation of the specimens. This information would be the

standardized ABCDE criteria, "ugly duckling" sign, and other information such as whether the entire lesion is included in the biopsy specimen, a family or personal history of melanoma, dermoscopic findings, and history of prior treatment(s).

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