Dermoscopic Global Pattern Criteria In Practice.

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Abstract. New Zealand dermatologists and trainees evaluated standardised macroscopic and dermoscopic digital images of 28 melanocytic skin lesions and 12 non-melanocytic lesions. For each lesion, a single global pattern was selected from 8 choices. Responses were compared to known diagnosis and to self-assessed dermoscopic experience of the participant.

For 11 of the lesions, four out of five participants selected the same global pattern. These included 3 melanomas with multi-component global features; 6 benign melanocytic lesions with reticular (2), globular, homogeneous, parallel or nonspecific features (1 each); and 2 non-melanocytic lesions with nonspecific features. For 10 lesions, less than half the participants agreed on the same global pattern; 9 were melanocytic naevi and one was subcorneal haemorrhage. Varying incorrect features were selected.

Over diagnoses of melanoma was made by 39, 16 and 15 participants in 3 lesions with reticular pattern; by 29, 21 and 22 participants in 3 lesions with nonspecific features; 21 in a starburst lesion and 20 in a lesion with multicomponent features.

New Zealand dermatologists and trainees find global dermoscopy features are difficult to apply to some skin lesions, irrespective of self-assessed experience of dermoscopy.

Introduction

Dermoscopy is increasingly being used as a tool for diagnosis of melanocytic lesions including melanoma. Like histology, there is considerable opinion and debate regards the descriptions and details of specific dermoscopic features and global patterns. The aim of this study was to determine the concordance of dermatologists in the selection of dermoscopic global pattern criteria.

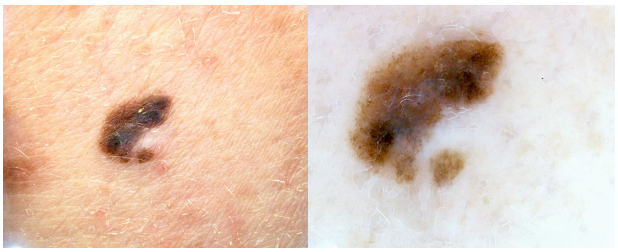

Figure. Melanoma showing multicomponent pattern.

Material and Methods

As part of an annual audit project of the New Zealand Dermatological Society Incorporated, all New Zealand dermatologists and trainees were required to evaluate standardised macroscopic and dermoscopic digital images of 28 melanocytic lesions and 12 non-melanocytic lesions. For each lesion, a single global pattern was selected from 8 choices. Responses were compared to known diagnosis and to the participant's self-assessed dermoscopic experience.

Results

Although all New Zealand dermatologists took part in the audit, only 39 dermatologists and 6 trainees agreed to their data being used in this study. Self-rated dermoscopic experience was expert (1), experienced (16), confident (19), limited (6), or beginner (3).

For 11 lesions, 4 out of 5 participants selected the same global pattern. These included 3 melanomas with multi-component global features; 6 benign melanocytic lesions with reticular (2), globular, homogeneous, parallel or nonspecific features (1 each); and 2 non-melanocytic lesions with nonspecific features.

Figure. Spitz/Reed naevus showing starburst pattern

For 10 lesions, less than half the participants agreed on global pattern; 9 were melanocytic naevi and one was a subcorneal haemorrhage. Varying other global patterns were selected.

Figure. Benign naevus showing parallel pattern.

Over diagnosis of melanoma was made by 87%, 36% and 33% of participants in 3 lesions with reticular pattern; by 64%, 49% and 47% of participants in 3 lesions with nonspecific features; 47% in a starburst lesion and 44% in a lesion with multi-component features.

All four melanomas had multi-component global features, which were recognised by 87%, 80%, 80% and 73% of participants respectively. Other choices were nonspecific (2-20%), reticular (2-7%)), globular (2-4%), homogeneous (0-7%) and lacunar (0-2%). Melanoma was correctly diagnosed by 100% in 2 cases and by 98% in another. A superficial melanoma with a nodular component was not considered as the primary diagnosis by 11%, even though some had identified multi-component features.

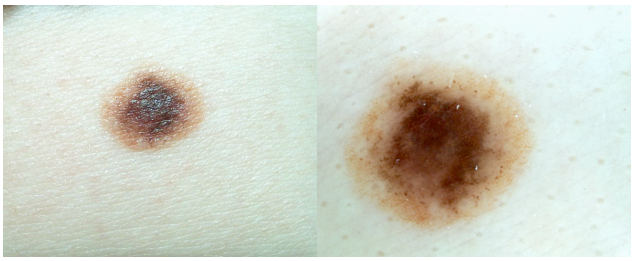

Figure. Atypical naevus showing multi-component pattern

Figure. Combined naevus showing homogenous pattern.

Incorrect global scores correlated poorly with self-assessed experience of dermoscopy.

Discussion

New Zealand dermatologists and trainees find global dermoscopy features are difficult to apply to some skin lesions, irrespective of self-assessed experience of dermoscopy.

References

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