

Pearls in Dermatology

How I perform dermoscopic examination of pigmented skin lesions

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The dermoscope is a useful instrument which helps dermatologist to make an accurate diagnosis of pigmented skin lesions. It renders the epidermis transparent and gives a magnified view into a lesion. Three examples are quoted: a basal cell carcinoma in conjunction with a seborrheic keratosis, multiple basal cell carcinoma and a malignant melanoma. They demonstrate how a dermoscope helps dermatologists to diagnose and manage pigmented lesions.

Keywords: Basal cell carcinoma, dermoscope, malignant melanoma

Introduction

The dermoscope is a very useful instrument which helps dermatologists to make accurate clinical diagnosis of pigmented skin lesions. Over the past ten years, studies on dermoscopy have accumulated enough data to give information on the diagnostic performance on various kinds of lesions. Yet this instrument is not popular locally. Some may not aware of the usefulness of a dermoscope, whereas other may be skeptical about the usefulness despite of the published data. Dermatologists are well trained in clinical diagnosis of cutaneous tumors. They are confident in judging clinically which lesion is benign and which lesion is malignant. In face of unsure clinical

diagnosis, many will prefer to cut the lesion out. Yet even for dermatologist with their wealth of knowledge and experience, there are situations in which a dermoscope may help. Here are three examples.

Case examples

Figure 1 shows a lesion presents on a gentleman's left temporal area. At a glance it is a straight forward seborrheic keratosis: it is verrucous, brownish, flat with keratin cysts on it. At a closer look, the anterior part of the lesion (left one quarter of the lesion at the centre of the photo) is not as verrucous as the remaining part, it is black instead of brown, and there is no keratin cysts. This quarter does not match with the remaining part of the lesion. Could it be a basal cell carcinoma in conjunction with a seborrheic keratosis? Viewing it with a dermoscope solves the problem: the suspicious part demonstrates dermoscopic features (Figure 2) of a basal cell carcinoma (absence of pigmentary network, large gray-blue ovoid nests, maple leaf-like areas and

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Figure 1. A seborrheic keratosis with its suspicious part marked with an arrow.

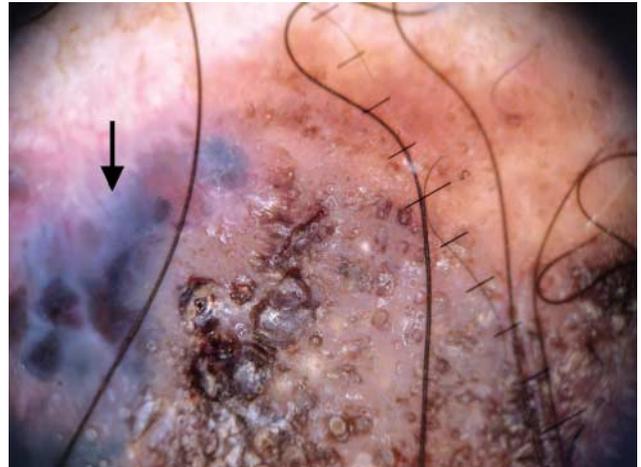


Figure 2. Dermoscopic view with features (arrow) of a basal cell carcinoma in conjunction with seborrheic keratosis.

telangiectasia though without the typical arborisation), whereas the remaining part is stereotypically seborrheic keratosis (milia-like cysts, comedone like openings and is rather well demarcated). The biopsy report confirms the basal cell carcinoma on the dermoscopically BCC portion. With a dermoscope the dermatologist does not need to hesitate to proceed to a skin biopsy despite of the fact that a large part of the lesion is clinically a seborrheic keratosis.

Figure 3 shows a lesion on another gentleman's right temporal area. Clinically, the ulcerated larger lesion is highly suspicious of a basal cell carcinoma, and a biopsy confirmed the diagnosis. He was referred to our Cutaneous Oncology Clinic at Prince of Wales Hospital. While contemplating the best treatment for this patient, another lesion, not as typically a basal carcinoma, was found behind the biopsied one (above the ulcerated lesion in the picture). Could it be another basal carcinoma and should we do a biopsy on that one before a definitely treatment can be decided? Again a dermoscope exam solved the problem (Figure 4). It shows the absence of pigmentary network, multiple blue-gray globules and arborising telangiectasia, which are features highly suggestive of a basal cell carcinoma. Definitive surgery was planned for the two lesions.



Figure 3. The larger lesion is a basal cell carcinoma confirmed with a biopsy. The lesion in question is marked with an arrow.

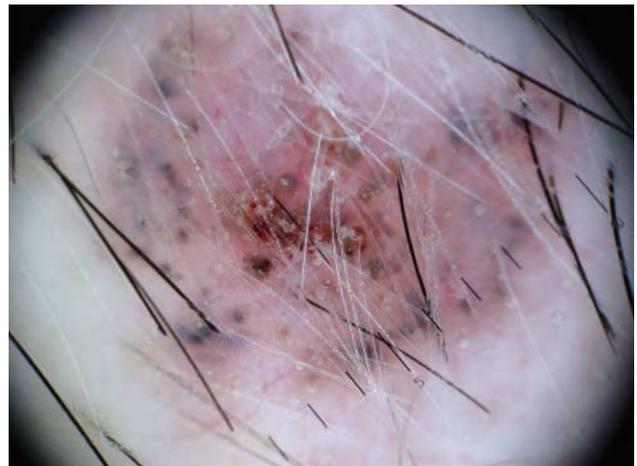


Figure 4. Dermoscopic view of the lesion in question showing features of a basal cell carcinoma.

Malignant melanoma is fortunately not common in our locality. This might also be the reason why we sometimes do not manage malignant melanoma as competently as when managing other cutaneous malignancies. Figure 5 is a lesion highly suspicious of a superficial spreading malignant melanoma: irregular border, variegated colour and its size. Unfortunately it was a punch biopsy that was ordered and the report for that small sample was a dysplastic nevus. If would have been a disaster if the clinician have had managed it as a dysplastic nevus. If one have had examined the lesion with a dermoscope in the first place, they will see definitely features of a malignant melanoma (Figure 6, multiple colours, multicomponents, atypical streaks, blue-white veil and regression structures). They would have ordered an excisional biopsy, which could have avoided the sampling error with a punch biopsy, gave the accurate diagnosis as well as the Breslow depth, which would have guided the plan for further management.



Figure 5. A clinically malignant melanoma.

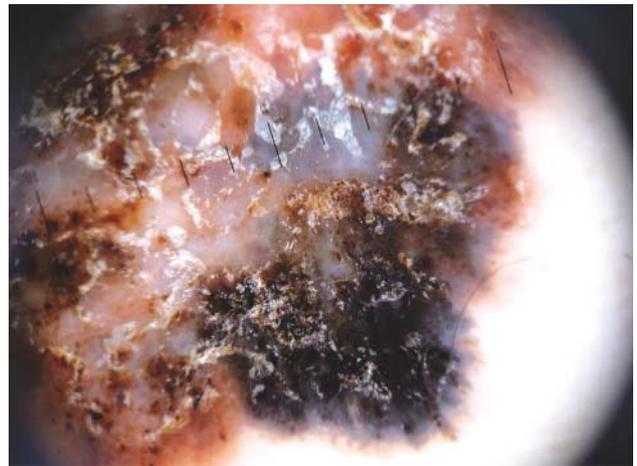


Figure 6. Dermoscopic features supporting the diagnosis of a malignant melanoma.

Discussion

Many will mistake the dermoscope as only a sophisticated looking magnifying glass, but in fact it is more than that. With the use of a medium (oil, alcohol or KY jelly in these pictures) or cross-polarizer lens, the epidermis is rendered relatively transparent and gives precious information on the upper dermal layer. With the advent of digital image storage technology, a dermoscope coupled with a digital camera allows images to be saved interpreted and re-interpreted. This avoids bias of interpretation from one's clinical impression, allows discussion between colleagues, and enables further learning when the biopsy report is back.

Dermatologists excel in employing the interpretation of visual pattern in making clinical diagnosis. Mastering the technique of the dermoscopy should not be difficult for us. I would like to recommend this handy instrument to all our colleagues without reservation.