Editorial

Dermatoscope-the dermatologist's stethoscope

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After a few decades of controversies on its potential diagnostic value, dermoscopy has gained an irreplaceable role in the clinical evaluation of skin tumors, since it has been demonstrated to significantly improve the diagnostic performance of clinicians.[1,2]

With this controversy solved, a new era of scientific arguments started with the initial reports of dermoscopic findings that can be seen in inflammatory or infectious skin diseases. Opponents of the method argue that, in the field of inflammatory dermatoses, "dermoscopy adds nothing to a pair of good clinical eyes" and that, when macroscopic morphology is not enough, only histopathologic examination can solve the diagnostic dilemma. One of their basic arguments is that, in contrast to pigmented skin tumors where the presence and distribution of melanin can be seen with the dermatoscope, the underlying alterations of inflammatory skin conditions cannot be dermoscopically appreciated.

Undoubtedly, histopathologic examination represents the gold standard of diagnosis in dermatology, and dermoscopy was never suggested as an alternative or competitive method. In contrast, the dermatoscope is a clinical tool that should be considered similar to the stethoscope of general practitioners.

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Access this article online	
Quick Response Code:	Website: www.ijdvl.com
	DOI: 10.4103/0378-6323.144141

Similar to any other ablative method, diagnostic biopsies potentially increase morbidity and related costs; they should be therefore reserved for selected cases in which the clinical differential diagnosis is difficult. The question that has to be answered is whether dermoscopy improves the clinical diagnosis – as the stethoscope does in general medicine – helping to reduce the number of diagnostic interventions. Learning from the example of skin tumors, one could assume that the answer to this question is very likely to be positive.

Indeed, during the last years, an increasing number of publications brought to light the dermoscopic patterns of several skin diseases.[3,4] In contrast to the argument of its opponents, dermoscopy has been shown to enable the visualization of sub-macroscopic morphologic structures invisible to the naked in the realm of inflammatory or infectious skin diseases also. The morphologic criteria highlighted by dermoscopy include vessels, hemorrhages, ulcerations or erosions, follicular disturbances, surface scales, keratin masses, and several others. The histopathologic correlation of several of these criteria has been investigated.[5-9]

A recently proposed "algorithm" for the dermoscopic examination of inflammatory diseases suggested four categories of criteria to be evaluated, namely vessel morphology and distribution, background color, surface scales or keratin and follicular disturbances, while additional clues that typify a specific diagnosis do also exist.[4]

The majority of the available evidence is in the field of papulosquamous skin diseases, including dermatitis, psoriasis, lichen planus, pityriasis rosea, and several others.[5-13] The dermoscopic criteria of these entities have been analytically described, and the diagnostic accuracy of dermoscopy in differentiating clinically equivocal cases has been assessed as significantly superior to clinical examination alone.[5] Furthermore, dermoscopy has been shown to add valuable morphologic information for the differential

How to cite this article: Lallas A, Argenziano G. Dermatoscope-the dermatologist's stethoscope. Indian J Dermatol Venereol Leprol 2014;80:493-4.

Received: September 2014. **Accepted:** September 2014. **Source of Support:** Nil. **Conflict of Interest:** None declared.

diagnosis between chronic dermatitis and mycosis fungoides, which might be extremely troublesome even histopathologically.[7]

In addition, dermoscopy was shown to improve the broad clinical differential diagnosis of facial erythematous plaques which includes numerous and pathogenetically different entities. Granulomatous skin diseases like sarcoidosis and lupus vulgaris, discoid lupus erythematosus (DLE), seborrheic dermatitis, rosacea as well as less common entities such as granuloma faciale have been shown to display characteristic dermoscopic patterns.[14-16]

The study by Thatte *et al*. in this issue of the Journal adds another valuable piece of evidence on the utility of dermoscopy in general dermatology.[17] In line with preexisting evidence, the authors highlight that dermoscopy facilitates the recognition of vitiligo, by revealing characteristic depigmentation patterns.[9] In addition, Thatte *et al*. demonstrated that dermoscopy might be useful for assessing the stage of the disease (evolution, stability or re-pigmentation), providing relevant information for the patient management.

It has to be underlined that dermoscopy adds only one piece to the puzzle of clinical diagnosis and its findings should be always combined with information provided by the overall clinical examination of a given patient. In everyday practice, the diagnosis is often made easily and quickly based on the characteristic clinical appearance of the eruption. In more equivocal cases, the clinical differential diagnosis includes more than one entity. The dermoscopic findings are meaningful only when interpreted within this particular clinical context, while the "critical" dermoscopic criterion depends on the diseases included in the clinical differential diagnosis. For example, the clue for the differentiation between rosacea and seborrheic dermatitis is vessel morphology (linear or dotted, respectively).[8] On the other hand, vessel morphology is completely useless for discriminating psoriasis from dermatitis (dotted in both), while the color of scales usually solves the diagnostic dilemma (white versus yellow, respectively).[5]

It should be mentioned that the dermoscopic criteria of inflammatory skin diseases have been mainly studied in Caucasian patients and, therefore, their validity and/or variability in other populations particularly those with darkly pigmented skin remains to be further elucidated.

In summary, dermoscopy reveals a previously unknown morphologic world of structures that can be seen when applying the dermatoscope on any skin lesion or rash. With this new morphologic universe being continuously explored, the dermatoscope gradually acquires an essential role in clinical practice, similar to the stethoscope of general practitioners.

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