

# **Dermoscopy: An underutilized diagnostic tool in Pakistan**

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Dermoscopy has emerged as a safe, rapid and effective diagnostic tool that assists in clinical examination and management decision in dermatology and has established a useful link between macroscopic clinical dermatology and microscopic dermatopathology. In clinical practice, while the stethoscope gives insight into a patient's lung, heart and abdomen, the dermoscope enables the dermatologist to see beyond the surface of the skin. Therefore it can rightly be regarded as the dermatologists' stethoscope which helps to pick up additional information we are not able to see with our naked eyes.<sup>1,2</sup> There has been controversies among dermatologists, on its potential value but gradually dermoscopy has gained an irreplaceable role in the clinical evaluation of skin tumors, and has significantly improved the diagnostic performance of clinicians in large variety of dermatological disorders.<sup>1</sup>

The technique involves inspecting the lesion using a hand-held, illuminated microscope (dermoscope) with or without applying a liquid or gel. The images seen through this are different from clinical and histopathology images. Dermoscopic image is a sort of aerial view of the superimposed skin layers as from a helicopter or drone, whereas, histopathology

image gives a deeper view comparable with that produced from a submarine visualization. Undoubtedly, histopathology being the gold standard of diagnosis in dermatology, dermoscopy can be suggested as additional diagnostic tool similar to the stethoscope that can decrease cost and morbidity related to skin biopsies by limiting the needs in daily practice.<sup>3</sup> Melanin is the main pigment that determine the dermoscopic color patterns and structures depending on distribution inside melanocytes, keratinocytes, melanophages in isolation or in clusters. Similarly hemoglobin determines structure and pattern of vascularization depending on its distribution in the lesions.<sup>4</sup>

Surveys in 2015 showed that in Western Europe and Australia, dermoscopy as diagnostic tool was used by 90% of dermatologists, while in the US, it was around 50% among dermatologists and over 90% in dermatology residents.<sup>3</sup> Unfortunately in Pakistan, it neither gained foothold in the clinical practice of dermatologists, nor in training of dermatology residents in Pakistan. Some institutions despite possessing the equipment were reluctant to start its use due to lack of training and psychological inertia. However, in past few years this trend has started changing and initiative has been taken by a leading institute for dermatology training in Lahore where a dedicated team having certified consultant in dermoscopy has launched its use as routine diagnostic modality in vast majority of pigmented as well as non pigmented dermatological disorders. They recently

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arranged a webinar to train and encourage the dermatologists and dermatology residents throughout the country to adopt and benefit from this useful modality in their routine practice.

We, in our institution (PNS Shifa) observed a dermoscopy week in Sep 2020, where we familiarized our residents with the equipment, techniques, uses and implications, through daily presentations followed by hands on sessions. For last 6 months we are using this technique in routine, expanding its uses and gathering data for research purposes.

Since dermoscopy was ignored for long time in our country, therefore, we see extreme dearth of published data on the subject. The first publication in this regard was an editorial published in 2009 about implications of dermoscopy in dermatology<sup>5</sup> but it took almost a decade to break psychological inertia of practicing dermatologists and residents to adopt it as an important tool in diagnosis and management. Now the awareness among dermatology community has increased considerably and increasing number of dermatologists and residents have started effectively using this important diagnostic tool and during last couple of years, few research papers have also been published in local literature on the subject.<sup>6-8</sup> As more and more dermatology training institutions and practicing dermatologists are adopting dermoscopy as essential component of their diagnostic armamentarium, we look forward to see its use in all major categories of skin disorders (pigmented, non pigmented, inflammatory, granulomatous, infections, mucosal, nail, hair and scalp, etc.) (Specific diagnostic utility and

accuracy must be mentioned, preferably in comparison with microscopy or even with clinical diagnosis).

Considering its ever expanding role in clinical diagnosis and evaluation, dermoscopy is suggested first to be included in the curriculum and subsequently be added in the list of clinical skills/ competencies for final assessment of dermatology residents in the form of TOACS (task oriented assessment of clinical skills) or OSCE (objective structured clinical examination) stations.

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