Most dermatological conditions are diagnosed by simple inspection of the skin lesions with the naked eye or with a hand lens. Cases with diagnostic difficulty often are resolved by a skin biopsy, which though a minor procedure, is still invasive. Dermoscopy is one of the newer non-invasive techniques used in the diagnosis of dermatological conditions.

Dermoscopy is done using a device similar to an otoscope, which generates a beam of light that falls on the cutaneous surface. A gel like fluid is placed at the interface between the skin and the dermoscope’s glass slide. This prevents reflection from the stratum corneum, allowing clear visualization of characteristic features produced by the presence of haemoglobin and melanin in the various skin layers.

Polarized Light Dermoscopes are also available with the advantages that these do not require the use of fluid interfaces. Many of the newer hybrid compact dermoscopes have both contact and polarized light modes. The usual magnification provided by common hand held dermoscopes is 10x (Figure 1). Sophisticated video-dermoscopy equipments are available with much higher magnifications. These can be used in the studying nail fold capillary patters in the context of connective tissue disorders (Figure 2). Some companies have developed complex dermoscopy equipment with sophisticated camera attachments and software, which can be used to map the skin of the whole body, with the data being stored in a standardized format for easy follow up of the patient. Adapters are also available which can enable hand held dermoscopes to be attached to smart phones, thus making the imaging and data storage procedure even more easy.

Other than melanocytic nevi and melanoma, specific dermoscopic patterns were highlighted in other conditions like hemangiomas, basal cell carcinoma, seborrheic keratosis, actinic keratosis, Bowen’s disease, squamous cell carcinoma etc. and even infections and infestations like scabies and warts (Figure 3a & 3b).

Recently more researchers have started exploring the use of dermoscopy in the application related to RECENT ADVANCES

common skin disorders like psoriasis, vitiligo, infections and infestations in the context of both diagnosis and response to treatment as well as prediction of relapse. Another area where the use of dermoscopy is increasing is in the diagnosis of hair disorders (trichoscopy). The changes that are observed on dermoscopy of different hair conditions are very specific.
Allopecia areata produces yellow dots, Lichen Planopilaris shows peripheral peripilar casts and androgenetic alopecia shows peripilar brown depressions.

Structural defects like monilethrix can also be demonstrated using this technique (Figure 4). It is likely that in future the hand held dermoscope will be a standard tool in the hands of the dermatologist to improve diagnostic efficacy in all types of skin lesions.

End Note

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Conflict of Interest
None declared

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