

COMPELLING COMMENTS

Dermoscopy: Past and Future

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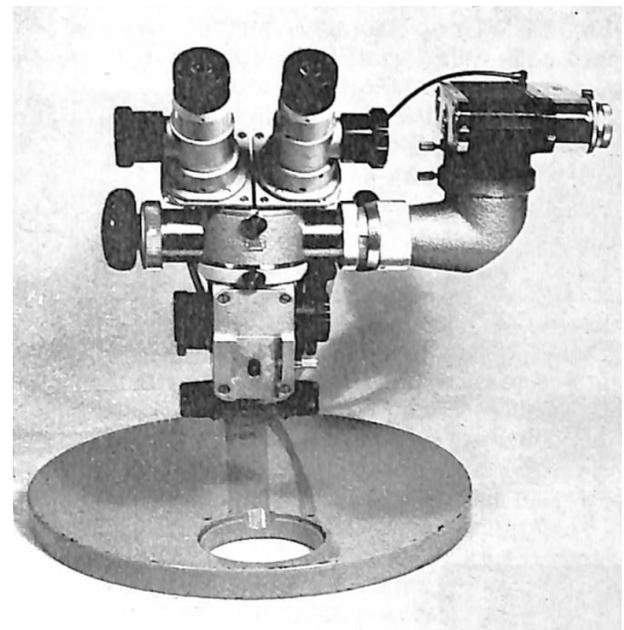
In vivo cutaneous microscopy was born in the mid-17th century when nascent microscopes were employed to examine nailbed vessels [1]. In 1878, German physicist Ernst Abbe discovered that oil applied to the epidermis rendered it translucent [1]. Dermoscopy was first applied in the United States by dermatologist Jeffrey Michael of Houston, Texas in 1922.¹ American surgeon Leon Goldman described dermoscopy's effectiveness in pigmented skin lesions¹ and in 1971, Scottish dermatologist Rona MacKie argued that dermoscopy could be used to distinguish benign and malignant lesions.¹

Despite these advances, widespread use of dermoscopy was still limited by impracticality (Figure 1).¹ Initially, the size of microscopes a limiting factor and the first portable dermatoscopes emitted light weakly. In 2001, a stronger, polarized light with a cross-polarization filter was added to the handheld dermatoscope¹, allowing the viewer to examine deeper structures in the skin by eliminating reflected light from the highly refractive stratum corneum. This advance also provided the flexibility to use the dermatoscope without contact fluid.¹

Eighty one percent of dermatologists report using dermoscopy regularly, including 98% of dermatologists recently graduated from

training², and the study of dermoscopy has evolved to become a field unto itself. The first consensus conference on dermoscopy was held in 1989. Today the International Dermoscopy Society boasts over 13,000 members from 168 countries, holds annual meetings and publishes a journal dedicated to dermoscopy.

Figure 1: The Zeiss operation microscope utilized by Dr. Rona MacKie in a 1971 study on cutaneous microscopy. Reproduced with permission from *British Journal of Dermatology*.



Dermoscopy may prove an essential part of a virtual evaluation as the practice of teledermatology widens. Arzberger et al. reported excellent correlation in the management decisions of pigmented lesions (e.g. self-monitoring, short term follow up, excision) between in-person and teledermoscopic evaluation in a high-risk melanoma cohort, a finding which has been replicated in other studies.³ These data speak to the potential benefit of teledermoscopy for providers and patients who may not have in-person access to a dermatologist and reflect the bright future of dermoscopy in the house of dermatology.

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