Use of a mobile application to perform videodermatoscopy with a handheld dermatoscope



Prakash Acharya, MBBS, MD, and Mahesh Mathur, MD, DCP Bharatpur, Nepal

Key words: dermatoscope; dermoscopy; mobile application; phone; videodermatoscopy; videodermoscopy.

TECHNOLOGY CHALLENGE

Videodermatoscopes have the ability to display dermatoscopy images on a monitor. The monitor can be seen by multiple observers at a time, allowing for discussion among physicians, medical students, and patients. However, quality videodermatoscopes are more expensive than handheld dermatoscopes.

SOLUTION

The camera feed of mobile phones can be displayed on a laptop or computer monitor through various mobile applications. This feature can be used to stream the dermatoscopic video taken by a handheld dermatoscope connected to a mobile phone.

A camera streaming application, EpocCam, version 2019.5 (Kinoni, Oulu, Finland), available for free in the Apple App Store, was installed on an iPhone 8 Plus (Apple, Cupertino, CA). EpocCam driver software, also available for free from www.kinoni.com, was installed on a MacBook Pro (Apple). A handheld DermLite DL3N dermatoscope (3Gen, San Juan Capistrano, CA) was connected to the same phone, and the application was opened on the phone. This automatically opens the phone camera, which can be displayed on the laptop by using built-in software such as QuickTime player (Fig 1).

The phone and laptop are connected via Wi-Fi network, which makes the process wireless; however, they can also be connected via USB. The first-time setup takes less than 5 minutes to complete. Although we have described the method using an iPhone and MacBook, this can also be performed with Android phones and Windows laptops in a similar way. Compared with the free application that we used, paid applications (cost of approximately US\$5) provide added features.

REFERENCE

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From the College of Medical Sciences, Department of Dermatology, Bharatpur, Nepal.

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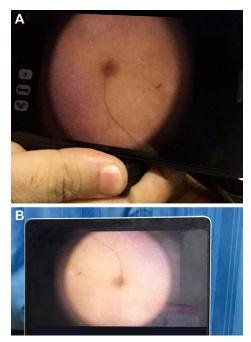


Fig 1. An image from the dermatoscope is displayed on (A) a mobile phone and (B) a laptop screen concurrently.