

A novel multipurpose dermoscope adapter

Problem

Dermoscopy, also known as surface microscopy, has evolved as a noninvasive technique allowing rapid and magnified *in vivo* observation of the skin. The increase in popularity has expanded the scope of utility of the dermoscope by leaps and bounds in recent times. However, the need for close contact with the lesional skin and restricted field of vision, has limited the use of the dermoscope.

Solution

We suggest a simple, reproducible adapter that expands the use of the dermoscope for various diagnostic and therapeutic modalities. Two plastic pipes of length 6.1 cm are fitted into each other. The inner pipe has a screw attached and the outer pipe has sockets created for the same, to enable change in the effective height of the adapter when required. Two windows of dimension 3×2 cm are created at the base for easy passage of any instrument through it [Figures 1 and 2].

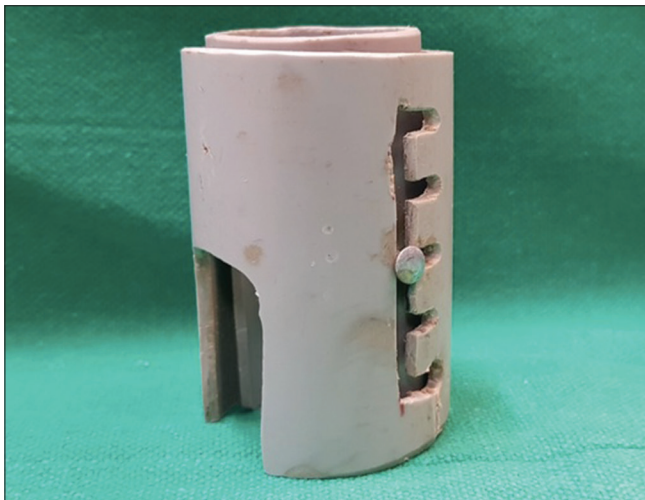


Figure 1: The dermoscope adapter with two plastic pipes fitted into each other

Principle

When a video dermoscope is placed over the adapter, the field of vision increases due to subsequent decrease in the magnification from $\times 500$ to $\times 200$ and increase in focal length to the created height of the adapter, i.e., 6.1 cm [Figure 3]. Further change in field of vision can be done by simply changing the length of the adapter.

Various other proposed uses of the adapter include:^{1,2}

1. Specific sample collection can be achieved by inserting forceps through the created windows under direct vision of the dermoscope, e.g., collection of corkscrew hair for KOH examination in tinea capitis.
2. A specific site for biopsy can be marked, e.g., a white dot or vellus hair.
3. The biopsy sample can be cut through a precise level with help of blade and forceps which can be passed through the windows in the probe. e.g., cutting a scalp biopsy at the level of isthmus [Figure 4].



Figure 2a: Two pipes unassembled and all the parts shown separately

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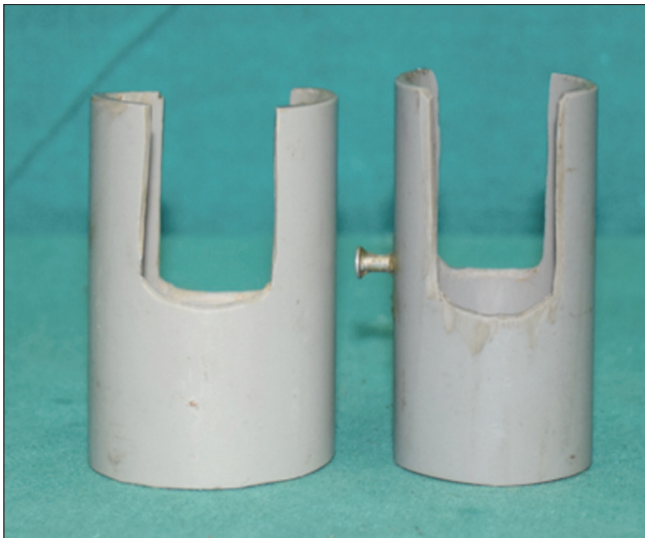


Figure 2b: Two pipes unassembled and all the parts shown separately

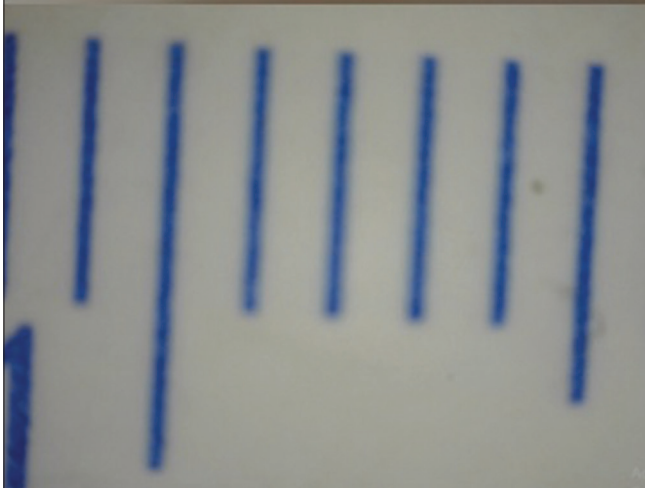


Figure 3a: Field of vision using a video dermoscope at (×200)

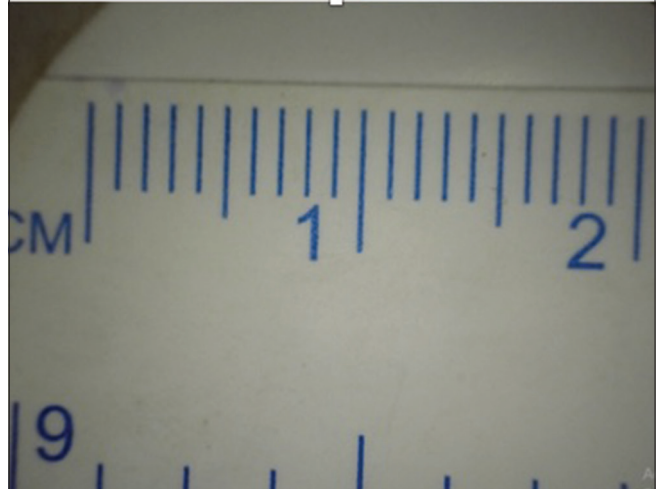


Figure 3b: Increase in the field of vision using the adapter

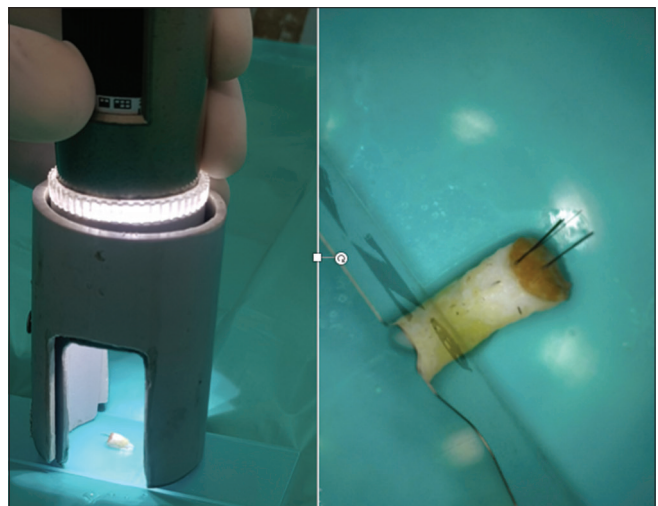


Figure 4: Cutting a scalp biopsy at the level of bulb of terminal hair

4. By introducing the probe inside the mouth, mucoscopy can be performed more easily. It is patient friendly because it becomes easier for the patient to hold their mouth open for a longer period. Also, the clenched tube

indirectly provides stability to the dermoscope aiding in better and easier dermoscopic visualization of the oral mucosa. With the use of this plastic tube holder, good quality dermoscopic images can be obtained.³

5. Dermoscopic guided biopsy can be done with the help of a motorized punch mounted on an angled hand piece.

Although there are many adapters described till now, none include the scope for intervention and reusability as described with this multipurpose dermoscope adapter. Through the use of this adapter we aim to ease and expand the potential of the humble dermoscope which has become an essential tool in everyday practice.

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Conflicts of interest

There are no conflicts of interest.

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