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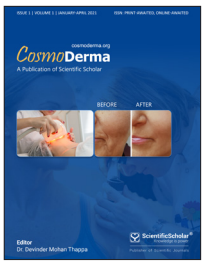

Innovations

Innovative use of tangential light for easy venesection

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PROBLEM

Venesection is a common method in medicine for collecting blood for various blood tests and therapeutic purposes, such as platelet-rich fibrin and platelet-rich plasma, particularly in dermatology. Even when the arm is tied with a rubber band, the engorged veins may not always be felt or visible in normal lighting conditions, potentially leading to venesection difficulties. In this circumstance, the location of the vein and its path must be established by palpating the skin. In this condition, venesection is often performed blindly, which leads to repeated failures and makes the process painful and non-aseptic. There are several types of vein finders on the market that use infrared technology.[1,2] However, they are expensive and difficult to obtain in clinics.

SOLUTION

To deal with this difficult situation, we employed a little torch. Tangential light is a light that is projected at a very acute angle, that is, along the skin's surface, to highlight minute lesions, structure, and movement on the skin surface by creating more visible, bigger shadows.[3,4] First, the arm is encircled in a rubber band to engorge the major forearm veins (cephalic and median) and make them visible. However, this strategy has sometimes failed [Figure 1a]. In

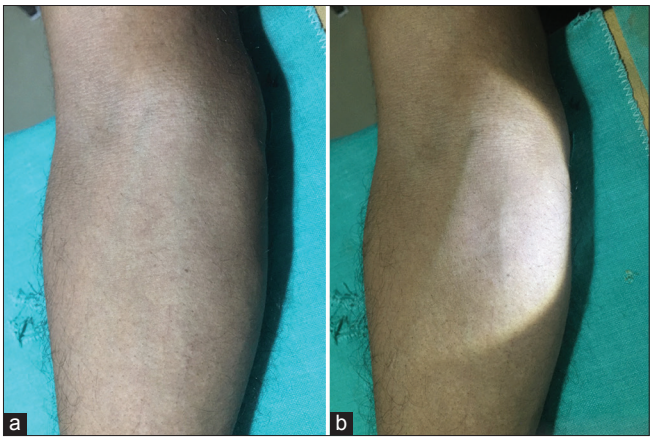

Figure 1: (a) The visibility of vein is less in normal or room light and (b) the visibility of vein is better in tangential light.

this case, tangential light is projected onto the skin's surface to highlight and make the vein more visible [Figure 1b]. Following this, the region is made aseptic, and venesection is performed without difficulty or confusion. Thus, using tangential light, vein traces can be easily identified for venesection.

Ethical approval

The Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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