Use of blunted needle of insulin syringe as a simple method for precise delivery of drug during chemical reconstruction of skin scars (CROSS)

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Abbreviations used:

CROSS: chemical reconstruction of skin scars
TCA: trichloroacetic acid

THERAPEUTIC CHALLENGE

In chemical reconstruction of skin scars (CROSS), 100% trichloroacetic acid (TCA) is applied with a toothpick.[1] Despite care, TCA may touch the surrounding skin with subsequent dyspigmentation, leading to reduced patient satisfaction. Inability to reach the base of tapering ice pick scars can lead to a suboptimal response.

THE SOLUTION

The sharp tip of an insulin syringe needle is cut with scissors, and the blunt end is used as an applicator (Fig 1). The needle is dipped in the TCA solution (TCA is not aspirated). Capillary action on dipping the needle in the TCA solution creates a TCA reservoir replacing imbibition as the mechanism of creation of a TCA reservoir in a wooden toothpick. We used this technique in 3 patients, applying TCA with a toothpick on one-half of the face and with a blunted insulin needle (separate needle for each patient) on the other half.

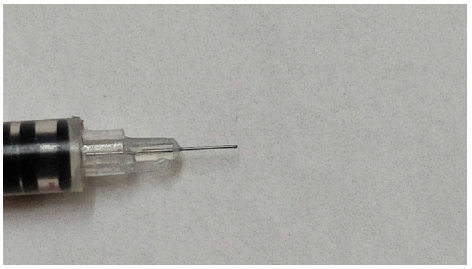

Fig 1. Blunted insulin needle: The sharp tip has been cut off with clean scissors.

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For precise determination of TCA delivery, magnification of frosted areas was done using nonpolarized dermatoscopy (Dino-Lite; AnMo Electronics Corp, New Taipei City, Taiwan). Comparing magnified images showed more precise deposition of the drug into the depth of the scar and less onto the surrounding skin using the needle (Fig 2, *A*) than the toothpick (Fig 2, *B*). Moreover, despite keeping the needle immersed in 100% TCA for 1 minute, there were no visible alterations in the physical properties of the needle.

Development of dedicated applicators with technological aid that precisely deliver TCA to the base of ice pick scars would be valuable in ice pick scar management.

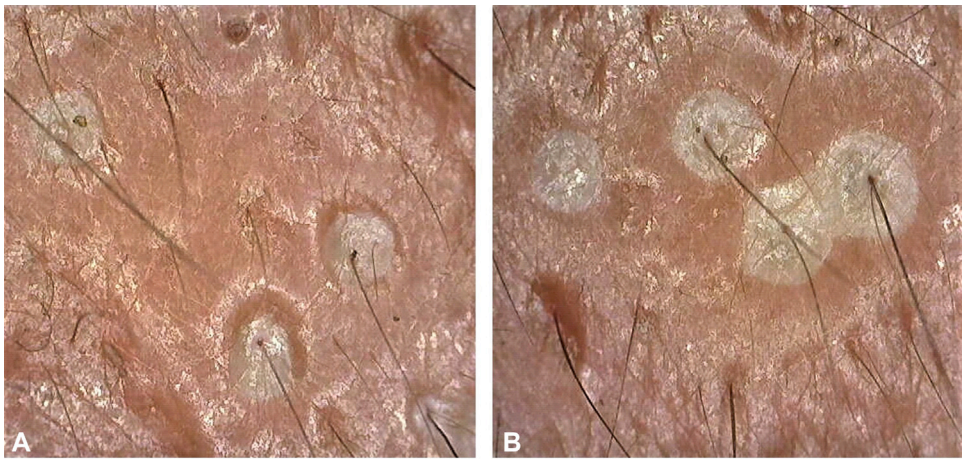

Fig 2. A, Trichloroacetic acid (TCA) delivery to ice pick acne scars using a blunted insulin needle. Note frosting exclusively of ice pick scars. Surrounding skin is untouched by TCA on nonpolarized dermatoscopy (Dino-Lite; AnMo Electronics Corp, New Taipei City, Taiwan). **B**, TCA delivery to ice pick acne scars using a toothpick. Surrounding skin is also frosted. This leads to dyspigmentation and reduced patient satisfaction.

REFERENCE

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