

Surgical Pearl: Modified Hypodermic Needle and Its Cap for Guarded Prick Incision

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Abstract

There are many instruments to prick the comedone before its extraction and scalp during hair transplantation. These instruments are not well guarded, and it can cause deep injury and fear in the patients. Here we described how to guard these needle for safety during procedure.

Keywords: Acne, closed comedone, disposable needle, extraction, guard, hair follicle, hair transplantation, slit depth, intralesional therapy, keloid, hypertrophic scar, alopecia areata, vitiligo

CHALLENGE

Comedones are common lesions of acne on the face. To extract its content is a good option for reducing inflammation and its side effects. Disposable hypodermic needle,^[1-3] aseptic safety pins,^[3] are commonly used to prick the closed comedone before its extraction.^[1] However, these large needles without a guard may cause fear in patients and, at times, may cause deep pricking injury at the sites. The needle guard is made for extraction of comedone with the use of an aseptic pencil guard.^[4] In the same way, “slit making” prior to implantation of the hair follicles (mean length 4.16mm and its range 3 to 9 mm) is perhaps the most crucial step in the hair restoration surgery. Slit created with hypodermic needle allows the hair follicle to fit snugly into the cavity. However, there is a mismatch in the length of the hair follicle and beveled part of the needle [Figure 1A and B]. For this, a needle guard of micropore tape and of alternate angulation of needle shaft at 90° is a good option for precise incision over the scalp in hair transplantation.^[5,6] Moreover, the procurement of these needle guards is a little cumbersome.

SOLUTION

Disposable needle (18–26 G) is readily available in clinic. The needle (18–26 G) shaft is cut or trimmed obliquely with a nail cutter (approximately at 1.0–1.5mm away

from its hub to get a pointed and guarded needle. The needle hub acts as a needle guard. Now the cut needle is too small and stocky which is easy to handle like a pen with a syringe. This modified pointed needle is good for extraction procedure of comedone [Figure 2A and B]. With a cut needle 18G (4mm or more as per the length of hair follicle), after compressing the cut needle shaft with a needle holder, scalp can be pricked or punched [Figure 3A and B]. However, this modified needle is not sharp enough and may cause blunt injury. So it is not as good for split incision over scalp as for pricking of comedone. For guarded and safe slit incision on scalp, the proximal, not distal, part of the needle cap is cut for making needle guard. The cut needle cap is pierced in the rim (not in the center) with the needle being guarded. By guarding the needle with the rim part of the cap, the needle can be used for vertical, horizontal as well as for angled prick and slit incision [Figure 4A–F]. On piercing the cap, the sharpness of needle and fields of vision remain unaffected. Thus these modified needles are well guarded and safe for prick incision for extraction of comedone and hair follicle transplantation. The guarded needle with its cap can be used for intralesional injection vertically in

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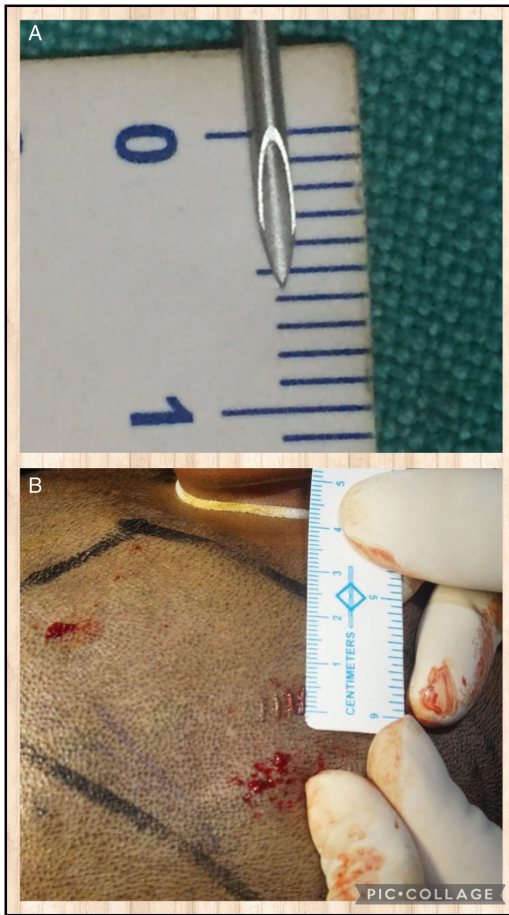


Figure 1: (A and B) Mismatch in the length of bevel portion (5.5 mm) of 18-G needle and of hair follicle (4 mm)

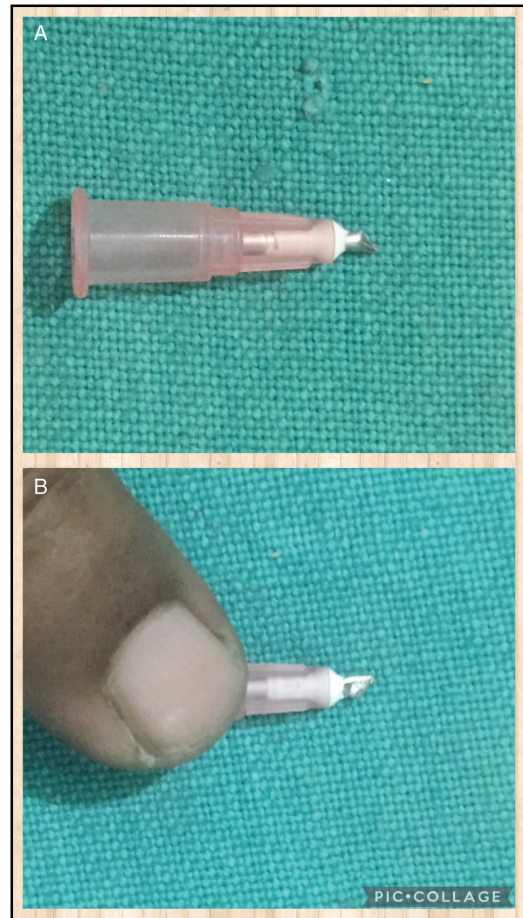


Figure 2: (A and B) Modified needle (18 G) with its hub for guarded comedone prick

hypertrophic scar, keloids (18–23G) and tangentially in alopecia areata (24–26G).

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Conflict of interest

There are no conflicts of interest.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and

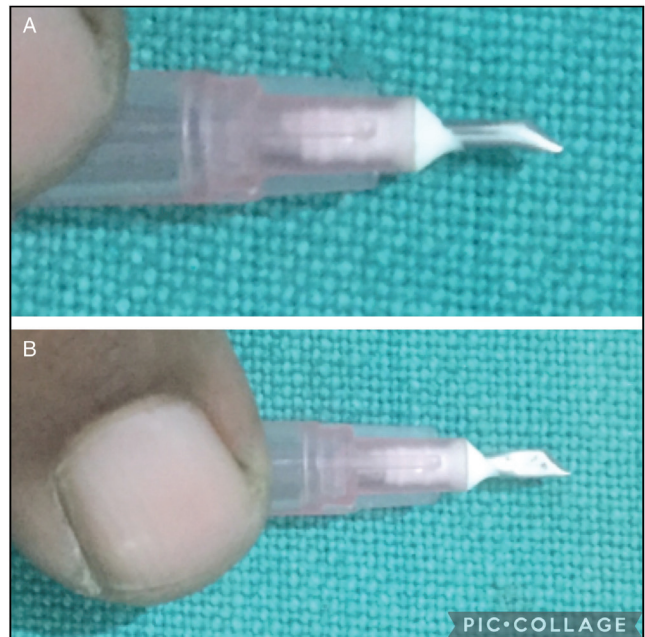


Figure 3: (A and B) Modified needle 18 G with its hub (1.5 mm) for guarded slit incision on scalp

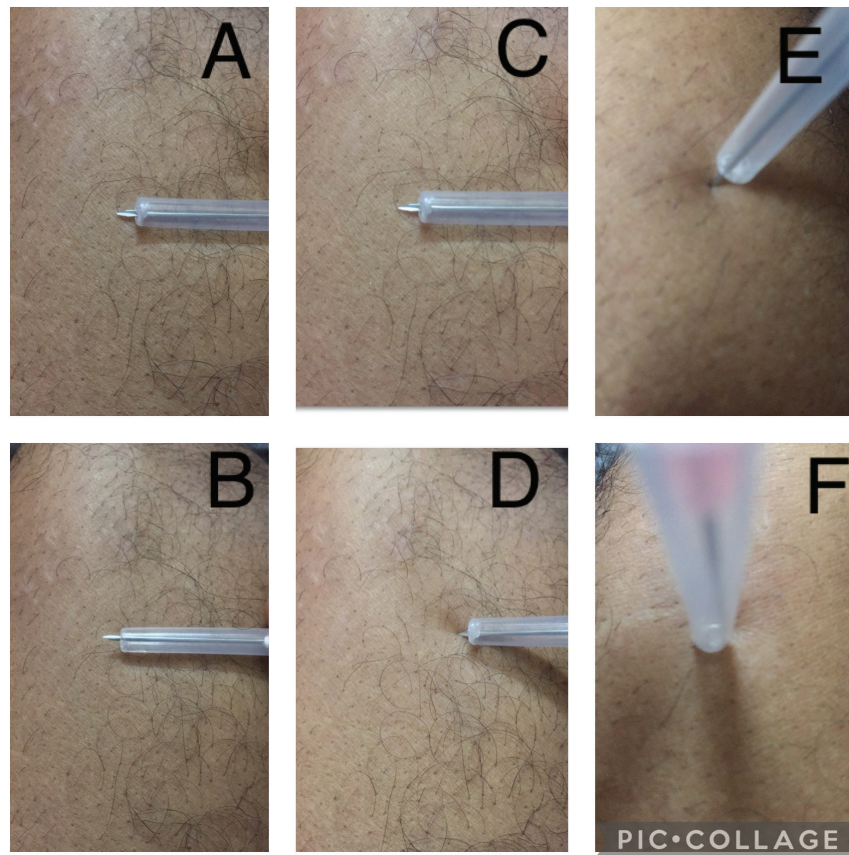


Figure 4: (A-F) 18-G needle is guarded with modified needle cap (4 mm) for horizontal, and angulated and vertical slit incision over scalp for hair transplantation

initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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