

Microneedling for Varicella Scars in a Dark-Skinned Teenager

Microneedling, also known as skin needling or percutaneous collagen induction (PCI), is considered an effective method of improving scars. Despite being initially described as a technique for “cutaneous depressions,” mainly scars and wrinkles, its use has also been expanded to stretch marks, facial rejuvenation, and transdermal drug delivery.^{1,2} It has also been deemed safe for acne scars on all skin types.³

The PCI technique involves the use of a cylindrical device composed of sterile fine needles that are rolled in different directions, making several micro-punctures through the epidermis to the dermis. In response to the multiple cutaneous injuries and breaking the old collagen strands, a cascade of growth factors (stimulating migration and proliferation of fibroblasts) leads to collagen production.^{2,4} Thus, architectural and histopathologic changes take place in the intentionally lesioned area, and scars are attenuated.

A 15-year-old girl with Fitzpatrick skin phototype V and a history of varicella at the age of 3 presented with multiple round, depressed scars up to 0.5 cm in diameter, mainly on the forehead and cheeks. She underwent three sessions of PCI with a 1-month interval in between. The device used was a disposable rolling 20-mm-wide cylinder containing 192 1.5-mm-long, 0.25-diameter needles in eight rows. Topical anesthesia (prilocaine and lidocaine cream) was applied 1 h before the procedure. Approximately 10 in horizontal, vertical, and oblique passes were performed in each scarred area. Enough pressure applied was to produce uniform superficial bleeding, as recommended in the literature.^{1,5} She had significant improvement in the varicella scars (Figures 1 and 2). Transient erythema observed during the first 7 days after the PCI session disappeared completely and spontaneously. No other complications were noted during or after the sessions (16-month follow-up).



Figure 1. Dark-skinned girl before (R) and after (L) three sessions of microneedling for varicella scars. Full-face image.



Figure 2. Dark-skinned female teenager before (R) and after (L) three sessions of microneedling for varicella scars. Lateral images of the face.

To our knowledge, this is the first report on PCI exclusively for varicella scars. Moreover, the patient was a Fitzpatrick skin phototype V girl with a high risk of postprocedure dyschromia, especially hyperpigmentation.

In addition to being a low-cost, easily administered technique, PCI should be considered as an option when treating varicella scars in young dark-skinned women, because of its short downtime and the low risk of hyperpigmentation.

References

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Dermoscopy to Identify Biopsy Sites Before Mohs Surgery

Nonmelanoma skin cancer (NMSC) has an incidence of more than 3.5 million cases per year in the United States. Basal cell carcinoma (BCC) accounts for approximately 85% of these cases and squamous cell carcinoma (SCC) 15%. Mohs micrographic surgery (MMS) offers the highest cure rate for BCC, with maximal tissue preservation and the lowest 5-year recurrence rate.

Dermoscopy is a noninvasive technique that enables the *in vivo* examination of subsurface morphologic structures. It is used for melanoma and nonmelanoma screening to guide diagnosis and biopsy, with studies showing enhanced diagnostic accuracy and fewer lesions biopsied.

Dermoscopy has been used in MMS to define the edge of lentigo maligna before resection and to