

Innovations

A simple treatment of a large acute post-lacerated hyperpigmented atrophic scar on face

Sofia Mukhtar¹, Muhammed Mukhtar²

¹Department of Preventive and Pediatric Dental Surgery, Career Post Graduate Institute of Dental Sciences, Lucknow, Uttar Pradesh, ²Dermatology, Mukhtar Skin Centre, Katihar, Bihar, India.



*Corresponding author:

Muhammed Mukhtar,
 Dermatology, Mukhtar Skin
 Centre, Katihar, Bihar, India.
 drmmukhtar20@gmail.com

Received: 10 December 2025

Accepted: 04 January 2026

Published: 13 February 2026

DOI

10.25259/CSDM_227_2025

Quick Response Code:



PROBLEM

Acne and atrophic scars are frequently caused by delayed treatment, poor wound healing, collagen loss, associated with post-inflammatory hyperpigmentation.^[1] Microneedling, chemical peeling, laser resurfacing, dermabrasion, and fillers that promote collagen production are frequently used to treat this kind of atrophic scar.^[2] In addition, acute acne scars are commonly treated with topical medications such retinoic acid, tranexamic acid, silicone gels, Vitamin C serum, hyaluronic acid, and mucopolysaccharide.^[3] However, age and comorbidities have a major impact on scar management. They affect cellular turnover, collagen synthesis, wound flexibility, healing, and ultimately therapy efficacy.^[4,5] We used topical medications to treat a large post-traumatic atrophic and hyper pigmented scar on the face based on these findings.

SOLUTION

A 19-year-old healthy girl patient had a large, atrophic scar on her face from a laceration injury that occurred 2–3 weeks ago [Figure 1a]. We tried cream retinoic acid (0.05%) topically once a day at night, gel mucopolysaccharide polysulphate (250 IU/g) topically 3 times a day, gel Tranexamic acid (10%) topically 3 times a day, and tab Vitamin C (500 mg) orally 3 times a day for 3 months to treat this condition [Figure 1b]. In addition, the patient was advised to keep their face protected from heat, sunlight, and itching. Photographs were taken at 15-day intervals throughout the follow-up, and the scar and pigmentation had improved [Figure 1c]. Retinoic acid is a peeling agent that improves the texture of scars by promoting the generation of new collagen, skin cell turnover, and dermal matrix remodeling. As a hydrating agent, mucopolysaccharide aids by hydrating the scar, increasing barrier function, stabilizing micro-vessels, lowering inflammation, strengthening the epidermal barrier, promoting healing, and minimizing scarring. Tranexamic acid is an antifibrotic drug that can prevent or lessen the development of melanin, plasmin, micro angiogenesis, and ultraviolet-induced inflammation. Therefore, a non-invasive, less expensive topical therapy for acute, hyperpigmented, and big atrophic scars on the face of an adolescent patient could include the combination of retinoic acid, mucopolysaccharide polysulphate, and tranexamic acid with Vitamin C (antioxidant, collagen booster). To determine the efficacy of these medications in a greater number of patients across all age groups, with or without comorbidities should be tested.

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2026 Published by Scientific Scholar on behalf of CosmoDerma

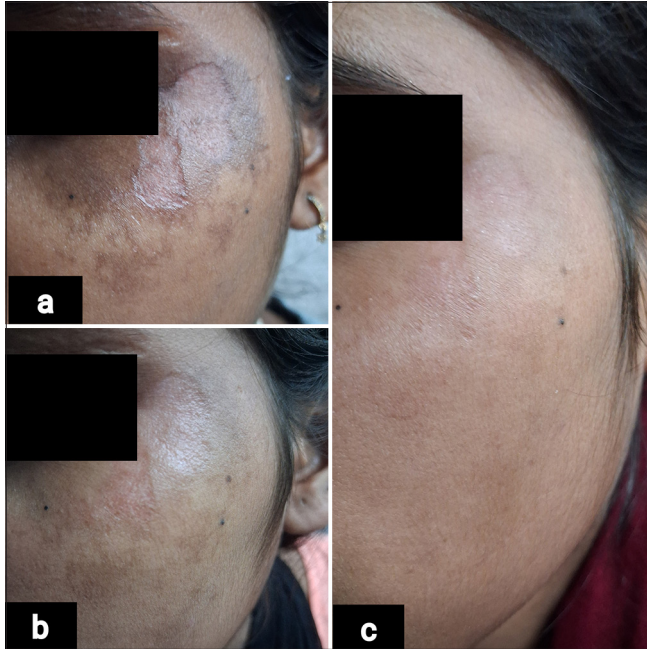


Figure 1: (a) A large atrophic scar on the face, (b) the scar after 1.5 month, and (c) the scar after 3 month of the treatment.

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 forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand

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

Financial support and sponsorship: 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.

REFERENCES

1. Chilicka K, Rusztowicz M, Szygula R, Nowicka D. Methods for the improvement of acne scars used in dermatology and cosmetology: A review. *J Clin Med* 2022;11:2744.
2. Sitohang IB, Sirait SA, Suryanegara J. Microneedling in the treatment of atrophic scars: A systematic review of randomised controlled trials. *Int Wound J* 2021;18:577-85.
3. Kircik L, Tan J, Lain ET, Belezny K, Chavda R, Lachmann N, *et al.* One acne™: A holistic management approach to improve overall skin quality and treatment outcomes in acne with or without sensitive skin. *Int J Dermatol* 2025;64:637-46.
4. Beyene RT, Derryberry SL Jr., Barbul A. The effect of comorbidities on wound healing. *Surg Clin North Am* 2020;100:695-705.
5. Kremer M, Burkemper N. Aging skin and wound healing. *Clin Geriatr Med* 2024;40:1-10.

How to cite this article: Mukhtar S, Mukhtar M. A simple treatment of a large acute post-lacerated hyperpigmented atrophic scar on face. *CosmoDerma*. 2026;6:16. doi: 10.25259/CSDM_227_2025