

Precision Dermabrasion of Small Areas of Vitiliginous Skin Using Dental Diamond Burs

Sanjeev Gupta, Ravi S. Jangra¹, Somesh Gupta²

Department of Dermatology and Venereology, Maharishi Markandeshwar Institute of Medical Sciences and Research, MMDU, Mullana, Ambala, ¹Sun Skin Clinic, Ambala City, Haryana, ²All India Institute of Medical Sciences, New Delhi, India

Abstract

Dermabrasion is important step in any vitiligo surgery. Unfortunately, it is not possible to derma abrade very small area with conventional burs available. The present paper highlights the use of dental burrs in such situations.

Keywords: Dental burs, dermabrasion, precise, vitiligo

SURGICAL CHALLENGE

It is not often possible to achieve complete and uniform repigmentation after vitiligo surgery after one session, and some islands of depigmentation persist. In subsequent transplantation, done with a purpose to achieve complete repigmentation of residual vitiligo, precise dermabrasion of depigmented areas without disturbing the pigmented area is not possible with manual or conventional dermatology diamond burs because of their large size and poor availability and high cost. Needle dermabrasion^[1] and CO₂ laser dermabrasion^[2] have been suggested to overcome this problem, but the former is a crude method and the latter causes coagulation of capillaries and adds to the overall cost.

SOLUTION

We propose the use of dental burs, which are freely available in a wide variety of shapes and sizes. There are two types of dental burs—carbide and diamond. Carbide burs are used for cutting, whereas diamond burs are used for fine dental abrasion. The shape and size of the bur can be chosen according to the shape and size of the depigmented area

[Figure 1A and B]. These burs are available for both straight and contra-angle handpiece of micromotor [Figure 1C and D]. Fine dermabrasion is done with these diamond burs attached to micromotor at a speed of 2000–3000 rotations per minute (RPM) until the pinpoint bleeding is achieved [Figures 2A, B and C]. After dermabrasion, suction blister epidermal graft or melanocyte suspension is applied [Figure 2D]. We have used these burs in many patients with good pigmentation, and none of them had any untoward event.

An average conventional dermatology bur is not available at less than Rs 500, whereas a dental burr is freely available at Rs 40–50 at dental shops. So, to conclude, these dental burs are very precise, freely available, economical, and can be sterilized by autoclaving, and are ideal for special situations where conventional dermatology burs can not be used.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Address for correspondence: Dr. Sanjeev Gupta,

#B2, Maharishi Markandeshwar Medical College Residential Campus,
Mullana, Ambala, Haryana, 133207, India.
E-mail: sanjeevguptadr@gmail.com

Access this article online

Quick Response Code:



Website:
www.jcasonline.com

DOI:
10.4103/JCAS.JCAS_1_20

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Gupta S, Jangra RS, Gupta S. Precision dermabrasion of small areas of vitiliginous skin using dental diamond burs. *J Cutan Aesthet Surg* 2021;14:220-1.

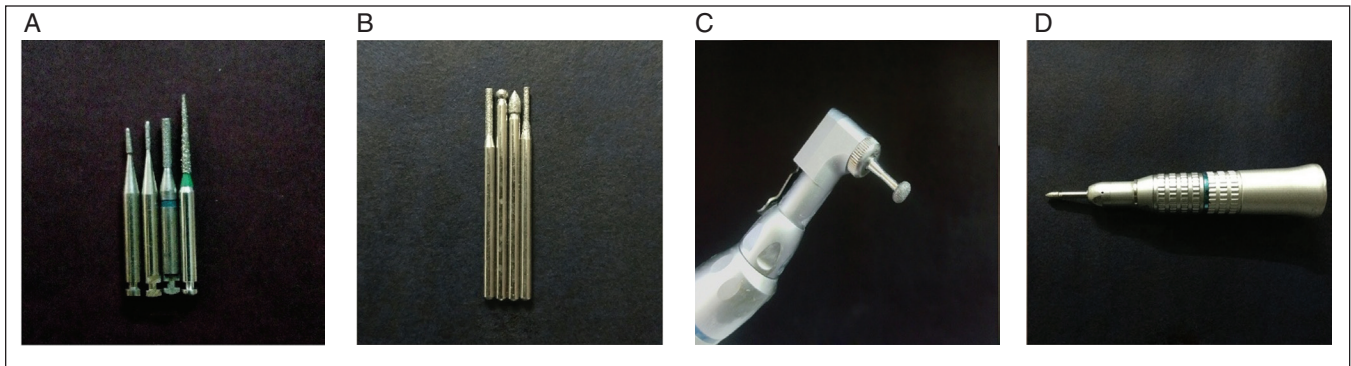


Figure 1: (A) Different shapes and sizes of diamond dental burs for contra-angle handpiece of micromotor. (B) Different shapes and sizes of diamond dental burs for straight handpiece. (C) Diamond bur attached to contra-angle handpiece. (D) Diamond bur attached to straight handpiece

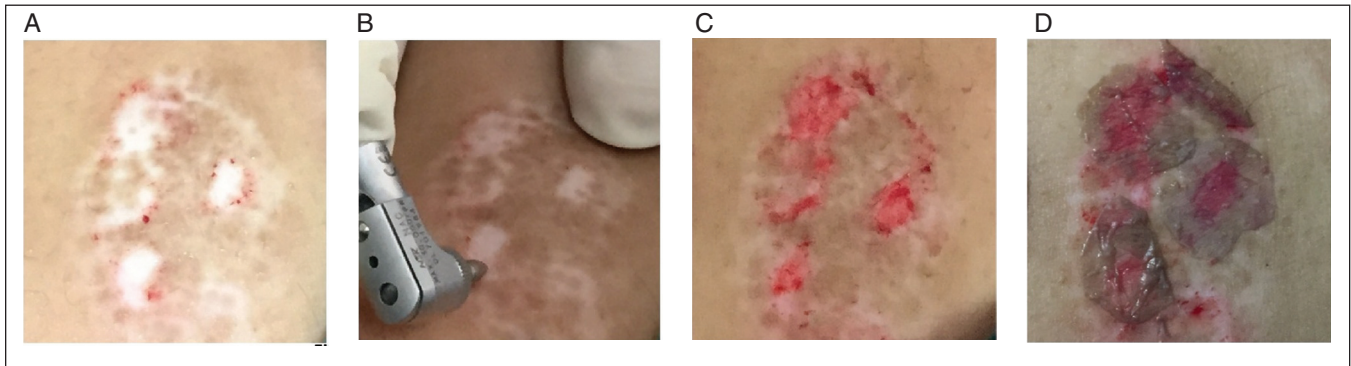


Figure 2: (A) Vitiligo lesion over abdomen. (B) Vitiligo lesion being dermabraded with diamond bur. (C) Vitiligo lesion after dermabrasion. (D) Suction blister graft applied after dermabrasion

REFERENCES

1. Gupta S, Gupta S, Kumar A. The hypodermic needle as a dermabrading device for recipient area preparation for skin grafting in vitiligo. *J Am Acad Dermatol* 2015;72:e105-6.
2. Kahn AM, Cohen MJ. Vitiligo: treatment by dermabrasion and epithelial sheet grafting. *J Am Acad Dermatol* 1995;33:646-8.