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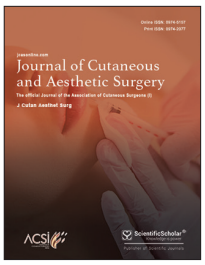
Journal of Cutaneous and Aesthetic Surgery



Innovations

Custom-made dental prosthetic clip for postoperative management of earlobe keloids

Vikas Pathania[1], Rahul Udayasankar[2]

[1]Department of Dermatology, 180 Military Hospital, Missamari, [2]Department of Dental Surgery, 371 Field Hospital, C/o 99 APO, Assam, India.

***Corresponding author:**
Vikas Pathania,
180 Military Hospital,
Missamari, Sonitpur, Assam
784506, India.

vikascongo@gmail.com

Received: 22 January 2023
Accepted: 29 August 2023
EPub Ahead of Print: 30 November 2023
Published: 27 March 2025

DOI
10.4103/JCAS.JCAS_16_23

Quick Response Code:

ABSTRACT

Earlobe keloids are a common condition with varied and cross-specialty presentation. The condition is often recalcitrant and difficult to treat on account of its location. Frequent recurrences following excision is often frustrating for the patient and the surgeon. Application of pressure along with intra operative and postoperative intralesional steroids is a popular choice and is in vogue by surgeons and dermatologists. However, considering the uniqueness of the structure for every individual, it is often difficult to ensure one size fits all when using pressure therapy as an adjunct. We designed a simple polymethyl methacrylate (PMMA) dental prosthesis to ensure comfortable yet effective constant pressure over the lesion to ensure complete aesthetic outcome without recurrence in an operated earlobe keloid.

Keywords: Dental prosthesis, Earlobe keloid, Polymethyl methacrylate (PMMA)

PROBLEM STATEMENT

The use of spring based pressure clips as an effective way of delivering constant pressure post-earlobe excision was first described by Brent in 1978.[1] Since then a number of innovations such as 3D printing, different contraptions and dental prosthetic material have been tried with variable results.[2-4] Polymethyl methacrylate (PMMA) gained popularity for various dental applications due to its unique properties, including its low density, aesthetics, cost-effectiveness, ease of manipulation, and tailorable physical and mechanical properties. Due to its properties of ease of processing, acceptable mechanical properties, aesthetics, cost-effectiveness, and relatively lower toxicity, PMMA has replaced previously used denture base materials. Typifying the problem statement, a 36-year-old female patient presented with a progressively increasing unsightly earlobe keloid following ear piercing a year back to our dermatology outpatient department [Figure 1].

RECOMMENDED SOLUTION

The keloid was excised under local anesthesia using radiofrequency cautery and the wound was sutured with 3/0 prolene with plan for postoperative multiple sessions of intralesional steroids monthly for 3 months [Figures 2 and 3].

The patient was referred to a prosthodontist where a cast impression was taken, and a spring-based PMMA pressure clip was designed for use daily overnight by the patient. The patient was followed up monthly for adjusting the pressure [Figure 4]. The aesthetic outcome after

Figure 1: Earlobe keloid.

Figure 2: Excised keloid tissue.

3 months was remarkable with complete resolution of the lesion without recurrence, which was maintained even after discontinuation of the pressure clip after 6 months [Figure 5]. The advantage of custom built prosthetic clips include ensuring constant yet variable pressure, custom fitting and aesthetic advantage over commercially available options.[5]

Figure 3: Sutured earlobe defect.

Figure 4: Polymethyl methacrylate (PMMA) prosthetic clip in place.

Figure 5: Complete resolution without recurrence of earlobe keloid after 6 months.

Limitation

The device being custom-made requires multiple sessions for fabrication and adjustment of pressure as also the facility for designing dental prosthesis.

Conclusion

The innovation highlights the use of a common dental prosthesis as pressure therapy for management of postoperative earlobe keloid.

Authors' contributions: Vikas Pathania: Concepts, design, definition of intellectual content, literature search, clinical studies, data acquisition, manuscript preparation, manuscript editing, manuscript review, guarantor. Rahul Udayasankar: Concepts, design, literature search, data acquisition, manuscript preparation, manuscript editing, manuscript review.

Ethical approval: Institutional Review Board approval is not required.
Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent.
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.

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How to cite this article: Pathania V, Udayasankar R. Custom-made dental prosthetic clip for postoperative management of earlobe keloids. J Cutan Aesthet Surg. 2025;18:133-5. doi: 10.4103/JCAS.JCAS_16_23