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Indian Journal of Innovative Dermatology

SURGICAL INNOVATION

Innovative Use of Curved Artery Forceps for Cost-Effective Microblading: A Practical Approach for Resource-Limited Settings

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Received: 04 January 2025
Accepted: 10 February 2025
Published: 09 October 2025

DOI
10.25259/IJID_1_2025

Quick Response Code:

ABSTRACT

Microblading, a form of micropigmentation, deposits pigment into the papillary dermis using a manual device. Traditional microblading pens ensure precision but are costly, especially in resource-limited settings. This innovation repurposes curved artery forceps as a cost-effective blade holder. The forceps' natural 45-degree curve optimises stroke angles, while the locking mechanism secures the blade for stability. This approach lowers costs without compromising results, making microblading more accessible. By utilising readily available tools, this method reduces financial barriers, promotes sustainability, and highlights innovation in clinical dermatology. Further studies can refine the technique and explore broader applications.

Keywords: Artery forceps, Cost-Effective, Microblading, Precision, Superficial Micropigmentation

INTRODUCTION

Microblading is a specialised form of superficial micropigmentation wherein pigment is deposited into the papillary dermis using a manual device with a blade made of stacked needles.[1] Traditional microblading pens, which hold the needle and consist of an immobile handle, a rotating adjuster, and a grooved blade holder, are designed to achieve precision with ease. These pens come in various configurations to accommodate different needle types. However, these can be costly, especially in resource-limited settings.[2]

CLINICAL PEARL/INNOVATION

In contrast, a cost-effective alternative involves using curved artery forceps to hold the microblading blades. Artery forceps, typically used in surgical settings, feature a natural curve of approximately 45 degrees, which aligns well with the angle required for effective microblading strokes [Figure 1a]. The forceps provide a stable grip on the blade due to its locking mechanism, which secures the blade firmly without loosening over time, even with repeated use [Figure 1b].

Figure 1: (a) Microblading needles held at a 45-degree angle with the help of the curved artery forceps, (b) In vivo use of the innovation to create fine strokes for microblading.

DISCUSSION

The artery forceps, commonly employed in surgical procedures, possess a natural curve of approximately 45 degrees, aligning closely with the angle necessary for effective microblading strokes. This attribute addresses one of the critical requirements for successful microblading—precision and control. By repurposing readily available surgical instruments such as artery forceps, practitioners can bypass the need for specialised and expensive microblading pens without compromising the quality of outcomes [Figures 2a and b]. The use of artery forceps also offers additional advantages beyond cost savings. Their versatility in various surgical procedures makes them a practical investment for clinics operating with constrained resources.

However, it is essential to consider the potential limitations and challenges associated with this modification. Practitioners must undergo adequate training to adapt to the altered grip and handling dynamics when using artery forceps for

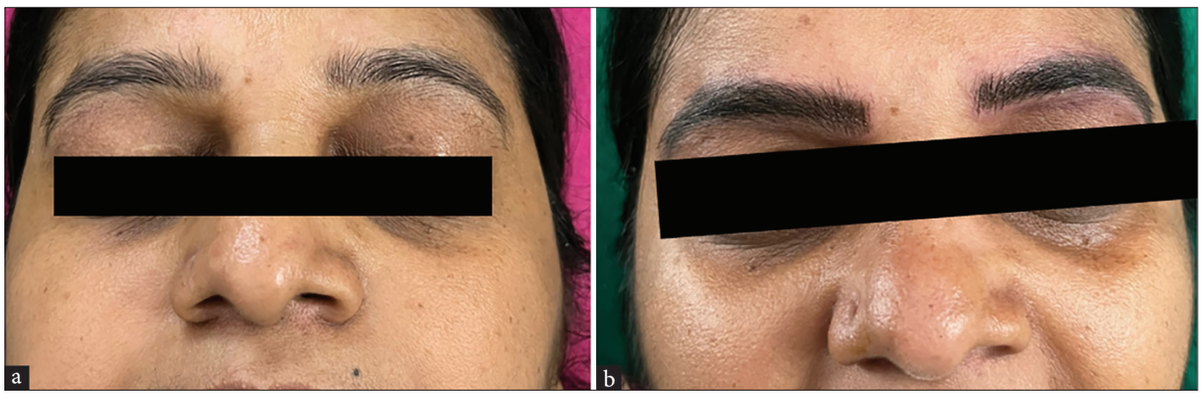

Figure 2: (a) Pre procedure photograph (b) Post procedure photograph of patient with innovation.

microblading. Additionally, sterilisation protocols must be strictly adhered to, ensuring patient safety and minimising the risk of cross-contamination.[2,3]

CONCLUSION

This innovative approach eliminates the need for specialised microblading pens, significantly reducing costs while maintaining precision and control. Additionally, artery forceps are versatile instruments that can be used in various surgical procedures beyond microblading, making them a valuable tool in a cost-effective and resource-efficient practice.

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: Narayan RV, Kanathur S. Innovative Use of Curved Artery Forceps for Cost-Effective Microblading: A Practical Approach for Resource-Limited Settings. Indian J Innov Dermatol. 2025;1:24–26. doi: 10.25259/IJID_1_2025