

Fourth Generation Definissee® Threads for Facial Reshaping in Indian Subjects: Case Series

Agarwal M¹

Patil CY^{2*}

Kaushik I²

Dadhich S

¹Department of Dermatology, Yavana Aesthetics Clinic, India

²A. Menarini India Pvt Ltd, One International Center, India

Received Date: October 04, 2023; Accepted Date: October 19, 2023; Published Date: December 23, 2023

***Corresponding author:** Chetan Y Patil, A. Menarini India Pvt Ltd, One International Center, Elphinstone Road, 2101, Tower 3, Mumbai, India

Citation: Agarwal M, Patil CY, Kaushik I and Dadhich S. Fourth Generation Definissee® Threads for Facial Reshaping in Indian Subjects: Case Series. ICARE. 2023;2(4):1049.

Copyright © 2023 Chetan Y Patil. This is an open access article published under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Definissee® double-needle threads are the latest fourth-generation poly (L-Lactide-co-ε-Caprolactone) (p(LA-CL)) threads. They are absorbable, monofilament, suspension barbed threads of synthetic origin with convergent bidirectional barbs. They exert mechanical action along with bio-stimulatory action inducing fibrosis giving a lifting effect that supports and repositions sagging facial tissue. Definissee® thread once inserted sub-dermally can last from 12 months to 15 months, with a lifting duration estimated to last between 30 months and 36 months. The current case series describes three cases treated with Definissee® threads. Procedures were performed under complete aseptic precautions. All three patients reported improvement on both the Physician's and Subject's Global Aesthetic Improvement Scale (PGAIS and SGAIS respectively) and clinical photographs. Adverse reactions reported in our

study were mild and resolved spontaneously within a few days without any active intervention. This study provides early insights into the beneficial effects of Definissee® threads in Indian patients.

Keywords: Facial reshaping; Definissee® threads; P(LA-CL) threads; Facelift; Ageing

Introduction

Aging in the face is a natural process that affects everyone. It is a dynamic process that involves all facial tissues like skin, bone, ligaments, muscles, and fatty tissue [1-3]. In recent years, significant advancement has been seen in the field of facial rejuvenation with a shift from more invasive surgery to minimally invasive modalities. Minimally invasive procedures are more often opted for by patients because of their short recovery time, lesser risk, and modest aesthetic improvements. Minimally invasive aesthetic procedures commonly done are injectable dermal fillers,

energy-based devices, Platelet-Rich Plasma (PRP), neurotoxins, and thread lifting. Thread lifting is considered a good option for lifting sagging tissues. It is known to reposition the existing fat pads taking support of reticular cutis structures. The downtime is less with the procedure, with increased patient comfort. The latest and advanced hydrolyzable poly(L-Lactide-co-ε-Caprolactone) (p(LA-CL)) are gaining popularity in India due to their ability to reposition soft tissue laxity, their long-lasting results and at the same time ensure shorter downtime, lesser complications, and overall lower costs [2,4].

Definisse® double-needle threads are the latest fourth-generation p(LA-CL) threads. They are absorbable, monofilament, suspension barbed threads of synthetic origin with convergent bidirectional barbs. These are implanted sub-dermally and produce mechanical action along with bio-stimulatory action inducing fibrosis giving a lifting effect that supports and repositions sagging facial tissue. Over a period, its histological revitalizing action stimulates fibroblasts and the synthesis of collagen, hyaluronic acid, and elastin around the thread, which remains stable even after resorption of the thread beyond 12 months. Further, upon resorption, the fully biodegradable and soluble thread polymers hydrolyzable into low-molecular-weight molecules, which further induce collagen and hyaluronic acid production. Overall, it is estimated that Definisse® thread inserted in the tissue can last from 12 months to 15 months, with a lifting duration estimated to last between 30 months and 36 months. The current case study aims to provide insights into the evaluation and management of facial aging with Definisse® double needle threads [3-6].

Case Presentation

Three cases were treated with p(LA-CL) Definisse® threads [Table 1-3]. The procedures were performed under complete aseptic precautions. Post the thread procedure, to avoid complications like thread displacement, all patients are advised to refrain from vigorous exercises, rubbing on the treated areas, dental procedures, and excessive face and neck movements for the first three weeks. In case of severe pain, they are advised to take oral paracetamol twice daily as well as a prophylactic antibiotic as prescribed. Digital

photographs with a front view and side profile view were taken before and after the procedure as well as at the follow-up visit [Figure 1-3]. Physician's and subject's Global Aesthetic Improvement Scale (GAIS) was used to assess aesthetic improvement (1- very much improved, 2- much improved, 3-improved, 4- no change, 5-worsened).

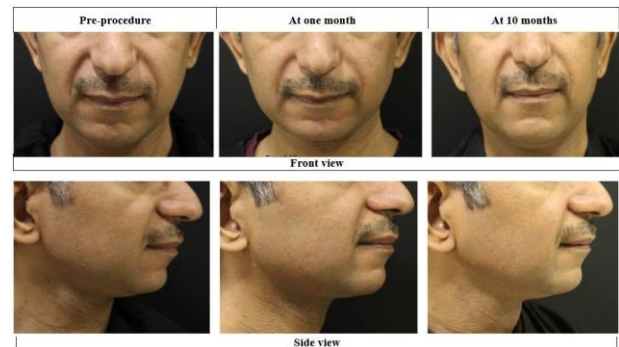


Figure 1: Digital photographs at pre-procedure and at follow-up visits in front and side profiles.



Figure 2: Digital photographs at pre-procedure and at follow-up visits in front and side profiles.



Figure 3: Digital photographs pre-procedure, immediately after the procedure, and at the follow-up visit in front and side profiles.

Table 1: Case Presentation 1.

Particulars	Description
Case Presentation	A 45 years 45-year-old male Indian patient presented with facial sagginess in the mid and lower face, particularly the nasolabial fold. He wanted to have a more contoured, slimmer face with a less tired look. Past medical history was not significant. He had undergone Botulinum toxin treatment for upper face expression lines and dermal fillers in the temple's region 3 years ago.
Treatment Plan	The Oval Reshaping Vertical (OR-V) technique was performed using two Definisse® double needle threads 12 cm as described in Fundaro SP [5].
GAIS	Physician's GAIS- 1 and subject's GAIS- 1.
Adverse Events	There were no major adverse events and most adverse responses after the procedures resolved spontaneously. Erythema resolved spontaneously within 48 hours while swelling resolved spontaneously within 3 weeks. The entry points completely healed within 3 weeks.

GAIS: Global Aesthetic Improvement Scale.

Table 2: Case Presentation 2.

Particulars	Description
Case Presentation	A 33 years 33-year-old female Indian patient presented with facial sagginess in the mid and lower face. She desired a more contoured, slimmer face to manage her saggy look. She sought improvement in submental fat too. The patient had a history of dermal fillers in the nasolabial fold 4 years ago and PRP three years ago.
Treatment Plan	Oval Reshaping Vertical (OR-V) technique and Oval Reshaping Horizontal (OR-H) were performed using four

	Definisse® double needle threads 12 cm as described in Fundaro SP [5].
Results	Physician's GAIS- 3 and subject's GAIS- 2.
Adverse Events	There were no major adverse events. Erythema resolved spontaneously within 48 hours while swelling resolved spontaneously within 2 weeks. Entry points completely healed within 1 week.

Table 3: Case Presentation 3.

Particulars	Description
Case Presentation	A 43-year-old female Indian patient presented with facial sagginess in the lower face. She wanted to have her jowls and nasolabial improve and wanted a more defined face.
Treatment Plan	Malar Reshaping (MR) and Jawline Reshaping (JR) techniques were performed using four Definisse® double needle threads 12 cm as described in Fundaro SP [5].
Results	Physician's GAIS- 1 and subject's GAIS- 1.
Adverse events	There were no major adverse events and most adverse responses after the procedures resolved spontaneously. Uneventful transient swelling was seen for 3 weeks. The Entry points completely healed in a week.

GAIS: Global Aesthetic Improvement Scale.

Discussion

The introduction of Definisse® double needle threads has gained popularity due to its minimally invasive nature, faster recovery process, and long-lasting visible results to address the sagging tissues. Also, a detailed understating of anatomical structures and the effect of aging on each layer proves instrumental in planning a procedure that is effective and safe. Definisse® threads are fourth-generation threads available in India that can be suitable for Indian faces for

various tissue lifting indications [4,5]. A study conducted by Savoia A [7] assessed outcomes of thread lift performed using re-absorbable barbed p(LA-CL) threads. Thirty-seven female patients (37 and 65 years) participated in the study. Most patients (89%) considered thread lift procedures satisfactory, of which 65% considered the results “excellent” and 24% “good.” Further, the optimal cosmetic effect was maintained after 6 months of treatment. Moreover, histopathological analysis of selected patients demonstrated that there is a definitive tissue lifting effect accompanied by cutaneous reaction along the length of the thread. Patients experienced minor adverse events like small ecchymosis (62%), mild erythema (40%), small haemorrhage (25%), mild transitory esthesia (6%), and mild post-operation tumefaction (40%). Overall, the study demonstrated the effectiveness of Definissee® threads for tissue lifting and showed the synthesis of collagen. Additionally, there was no acute inflammatory responses were elicited by the procedure [7].

Similarly, all three patients in the current study reported improvement in both PGAIS and SGAIS. Adverse reactions reported in our study were mild and resolved spontaneously within a few days without any active intervention. p(LA-CL) Definissee® threads are bioabsorbable threads that provide a lifting effect for up to 36 months. Due to the composition, it has an added effect of revitalization along with mechanical lifting. Moreover, these threads can also be combined with various modalities like energy-based devices, dermal fillers, and skin resurfacing treatments [2-4].

Conclusion

The current case series provides early insights into the effects of Definissee® double needle threads in Indian patients. It shows improvement in facial reshaping in India with favourable tolerability. Non-surgical facelift with Definissee® double needle threads can be a good option for patients looking for a more contoured and structured face frame without having to go under the invasive surgical

procedure. However, further long-term studies are required to confirm the findings of the current study.

Conflicts of Interest

M.A. has no conflicts of interest to declare. C.P., I.K., and S.D. are employees of A. Menarini India Pvt. Ltd.

References

1. Mendelson BC, Wong CH. Changes in the facial skeleton with aging: implications and clinical applications in facial rejuvenation. *Aesthetic Plast Surg*. 2012;36(4):753-60.
2. Santorelli A, Cerullo F, Cirillo P, Cavallini M, Avvedimento S. Mid-face reshaping using threads with bidirectional convergent barbs: a retrospective study. *J Cosmet Dermatol*. 2021;20(6):1591-7.
3. Wanitphakdeedecha R, Yan C, Ng JNC, Fundaro S. Absorbable barbed threads for lower facial soft-tissue repositioning in asians. *Dermatol Ther (Heidelb)*. 2021;11(4):1395-408.
4. Singh S, Ballani I, Patil CY, Kaushik I. Retrospective real-world study of definisse threads for jaw line reshaping in Indian patients (REDEFINE JAW study). *J Cosmet Dermatol*. 2023;22(10):2785-90.
5. Fundaro SP, Goh C, Hau K, Moon H, Lao PP, Salti G. Expert consensus on soft-tissue repositioning using absorbable barbed suspension double-needle threads in Asian and Caucasian patients. *J Cutan Aesthet Surg*. 2021; 14(1):1-3.
6. Wong V. The science of absorbable poly (L-lactide-Co- ε- caprolactone) threads for soft tissue repositioning of the face: an evidence-based evaluation of their physical properties and clinical application. *Clin Cosmet Investig Dermatol*. 2021;14:45-54.
7. Savoia A, Accardo C, Vannini F, Di Pasquale B, Baldi A. Outcomes in thread lift for facial rejuvenation: a study performed with happy lift™ revitalizing. *Dermatol Ther (Heidelb)*. 2014;4(1):103-14.