# Facial restructuring: Advanced techniques with PDO threads and hyaluronic acid

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## INTRODUCTION

Facial aging is an ongoing process that is composite, interrelated and three-dimensional. This process involves changes in bones, soft tissues and skin. Each anatomical layer undergoes its own aging process. It is a complex, multi-faceted process where a change in one layer often causes a cascade of changes in adjacent federations [1,2].

Facial soft-tissue repositioning has mainly been achieved through surgical face lifting, a complex and radical procedure that is socially stigmatized, associated with surgical risks (e.g., infection, necrosis, hematomas, seromas, facial nerve injury, scarring, anesthetic reactions) and unwanted downtime [2].

Figure 1 - Superficial temporal compartment: volume and size by age group. Mean height increases from 2.9 cm to 12.2 cm with increasing age, and mean volume increases by 35.5% from the youngest to the oldest group 40. Reference 2

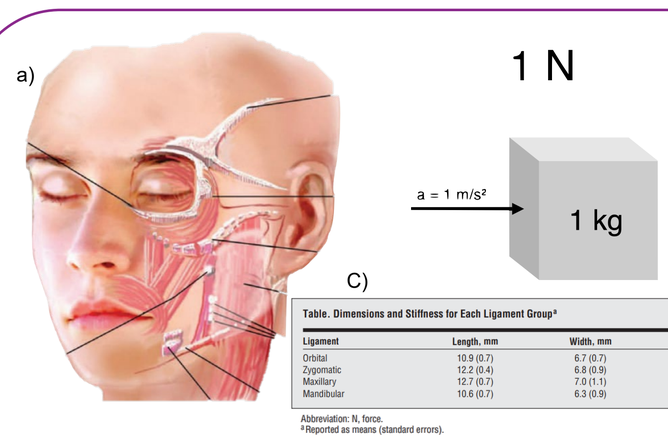


Table. Dimensions and Stiffness for Each Ligament Group[a]

| Ligament | Length, mm | Width, mm | Thickness, mm | Stiffness, N/mm |
|---|---|---|---|---|
| Orbital | 10.9 (0.7) | 6.7 (0.7) | 2.0 (0.3) | 1.58 (0.2) |
| Zygomatic | 12.2 (0.4) | 6.8 (0.9) | 3.1 (0.4) | 2.5 (0.7) |
| Maxillary | 12.7 (0.7) | 7.0 (1.1) | 2.7 (0.3) | 1.11 (0.2) |
| Mandibular | 10.6 (0.7) | 6.3 (0.9) | 2.5 (0.3) | 0.9 (0.1) |

Abbreviation: N, force.
[a] Reported as means (standard errors).

Figure 2 – How to choose the technique to be applied ? A) Schematic drawing demonstrating the positioning of the retaining ligaments. B) Image of fresh cadaver demonstrating the placement of the zygotic ligament (black arrow) C)Demonstration of newton's forces table indicating ligament strengths. Modified from references 3 and 4.

## METHODS & MATERIAL

The reverse technique involves implanting wires towards the areas with more rigid anchorage. This approach utilizes the tension from ligaments and nearby anatomical structures to achieve a repositioning that suits each individual's needs more effectively (Figure 3). The technique consists of three phases, adaptable based on each person's ptosis condition. The technique consists of three phases, adaptable based on each person's ptosis condition. The three phases can be applied selectively as per the requirements.

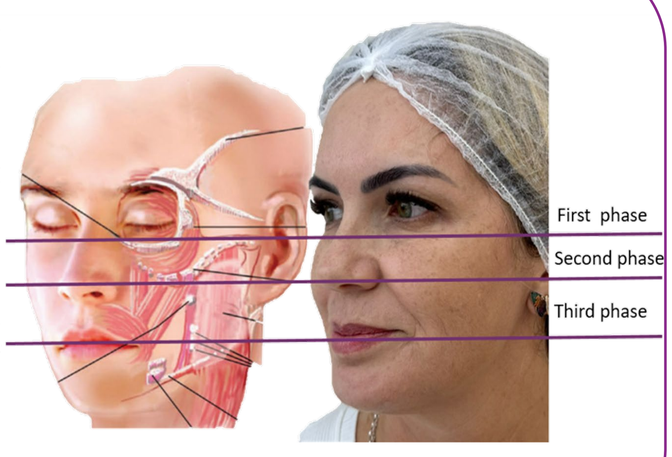


Figure 3 - Comparative image demonstrating the treatment phases in relation to the position of the retention ligaments.

**Phases the reverse technique**

**First phase** - Contemplates the anterotemporal region aiming to correct ptosis in the zygomatic region and reduce the tension of ptosis in the superficial temporolateral fat pad.

**Second phase -** Correction of ptosis in the nasolabial fat pad, middle cheek, medial cheek and the entire zygomatic region.

**Third phase -** Will reposition jowling and submandibular jow region


Figure 4 - Cadaveric of the left side of a face. The superficial (subcutaneous) fat compartments: superficial nasolabial (1, red dye), medial cheek (2, blue dye), middle cheek (3, red dye), lateral cheek (4, violet dye), superficial superior temporal (5, blue dye), superficial inferior temporal (6, red dye), and the jowl fat compartment (7, blue dye).

**How to choose yarn technology and quantity?**

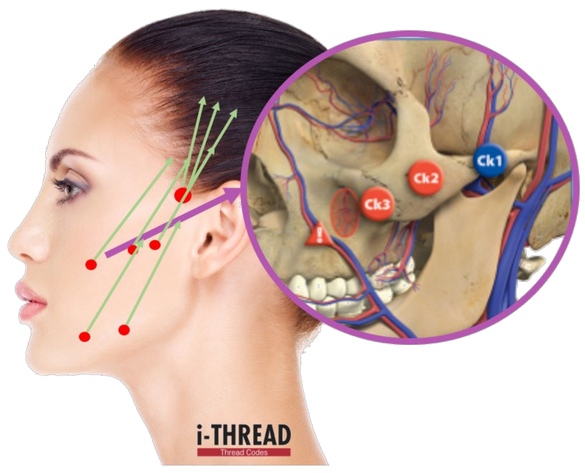


Figure 5 – Schematic drawing demonstrating the application points of the reverse THREADS code technique.

Understanding the weight and strength of the retention ligaments, we can predict the amount of wires and the technology to be used. For traction, there are two types of spike technologies on the market, molded and cut, which will differentiate the traction force. Molded wires have more strength and resistance (Newton) than cut wires. For the refinement of the lifting areas, we used the MDcodes technique with hyaluronic acid with high G-prime in supra periostial regions.

In this Study, we used threads manufactured by Hyundae Meditech Co., Ltd, I-THREAD (distributed by MedBeauty) along with hyaluronic acid E.P.T.Q 500 manufactured by Jetema Co., LTD (South Korea) (distributed by MedBeauty).
The technique was executed in a sterile environment. The initial step involved implanting PDO threads. Subsequently, hyaluronic acid was administered to the CK1, CK2, and CK3 areas (MDcod points), following a sequential order. Notably, manual traction was unnecessary, with a 15 seconds aspiration. The subsequent table provides details regarding the quantity and application areas of each product employed.

| Material | | | |
|---|---|---|---|
| Product | Area | Conductor | Amount |
| Speculated cut PDO, 19G/100mm/160mm/USP0-0 | First Phase | cannula 19G | 06 |
| Speculated cut PDO, 19G/100mm/160mm/USP0-0 | Second Phase | cannula 19G | 06 |
| Speculated cut PDO, 19G/100mm/160mm/USP0-0 | Third Phase | cannula 19G | 04 |
| E.P.T.Q 500 | CK1 | Needle 27G | 0,5 ml |
| E.P.T.Q 500 | CK2 | Needle 27G | 0,5 ml |
| E.P.T.Q 500 | CK3 | Needle 27G | 0,5 ml |
| E.P.T.Q 300 | Lips | Needle 30G | 1ml |

## RESULTS

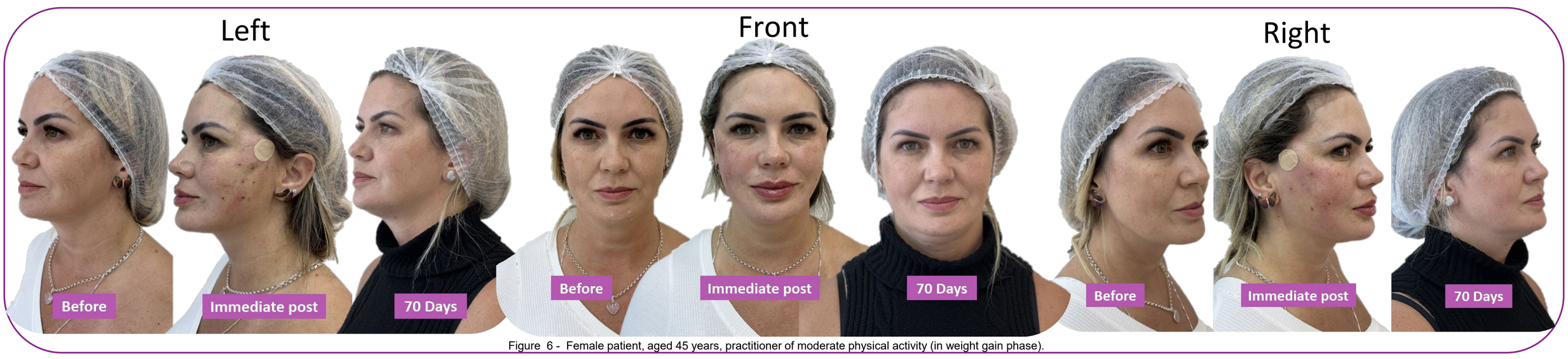


Figure 6 - Female patient, aged 45 years, practitioner of moderate physical activity (in weight gain phase).

## CONCLUSION

The application of hyaluronic acid at strategic points using the reverse anchoring technique identifies a better result, with less wrinkles in the region and greater patient satisfaction in the short and long term. Even with the patient's expressive weight gain we can still see positive results.

## Acknowledgment

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