



## PDO Threads: treatment option for abdominal laxity and umbilical repositioning

*Fios de PDO: uma opção de tratamento para flacidez abdominal e reposicionamento da cicatriz umbilical*

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### ABSTRACT

The first publications regarding aesthetic treatments with polydioxanone threads (PDO) date to 2015 and were preceded by the establishment of this polymer use for surgical sutures as a safe, less inflammatory option that brings superior final aesthetic-functional results. The present article describes a series of five patients that received PDO thread lifting for abdominal periumbilical laxity.

**Keywords:** Body contouring; Polydioxanone; Sutures; Esthetics; Cosmetic techniques; Dermatologic surgical procedures

### RESUMO

O tratamento estético com fios de polidioxanona (PDO) tem suas primeiras publicações no ano de 2015, tendo sido precedido pela consolidação do uso deste polímero para fios de sutura cirúrgica como opção segura, menos inflamatória e que traz resultados estético-funcionais finais superiores. No presente artigo, relata-se uma série de cinco casos de tratamento estético corporal com fios de PDO de sustentação para tratamento da flacidez abdominal periumbilical.

**Palavras-chave:** Contorno corporal; Polidioxanona; Sutures; Estética; Técnicas cosméticas; Procedimentos cirúrgicos dermatológicos

## How do I do it?

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### Conflict of interest: Authors

Carolina Malavassi Murari, Matheus Theodoro and João Henrique Barros are speakers at Medbeauty Brasil, importer of "i-Thread" polydioxanone threads.

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## INTRODUCTION

PDO thread is a well-established treatment modality for addressing sagging skin. However, we currently have few publications on its use in body treatments, such as the abdomen, and its benefit in the tissue repositioning of the area.

Polydioxanone is an absorbable polymer already used for surgical sutures. In the last decade, it proved to be helpful in aesthetic treatments due to its ability to stimulate collagen synthesis.<sup>1,2</sup>

Abdominal skin laxity essentially results from dermal density loss and adipose layer reduction. Its primary causes are aging, surgical procedures, and local skin distention (e.g., pregnancy).<sup>3</sup> Umbilical scar ptosis is one of the main complaints arising from the abdominal skin flaccidity process. Its treatment may use technologies such as radiofrequency,<sup>4</sup> macro and microfocused ultrasound,<sup>5</sup> and injectable collagen stimulators.<sup>6</sup>

## METHODS

We selected five patients, following the inclusion criteria: women; 20–40 years; BMI of 18.5–24.9; fat percentage of 14%–24% (measured by bioimpedance); with no previous surgical or cosmetic local treatment in the last two years; and no formal contraindications for PDO thread treatments. Patients received a single session of PDO implants. The application of the threads followed the marking showed in Figures 1, using eight cannulated spiculated threads, 19 G 100x160mm, with 0.40 mm thickness. For every two threads applied, a knot was tied and introduced subcutaneously to prevent the lines from migrating.

Thus, we applied two threads in a single passage from TEP 1 (thread entry point) to TDP 1 (thread distal point); two

threads in TEP 2, one thread directed to TDP 2, and one thread directed to TDP 3. We assessed the patients 90 days after implantation of the threads and accompanied the evolution with photos. The Global Aesthetic Improvement (GAIS) scale was applied (Figures 2 and 3).

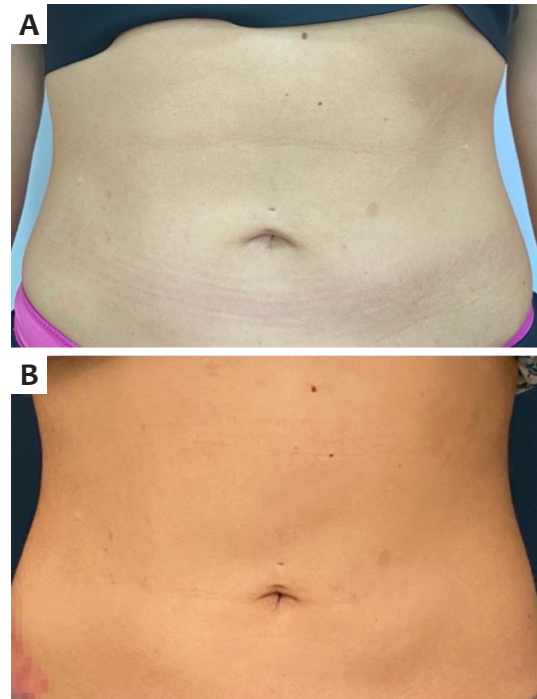


FIGURE 2: A - abdomen, pretreatment; B - after 90 days of treatment

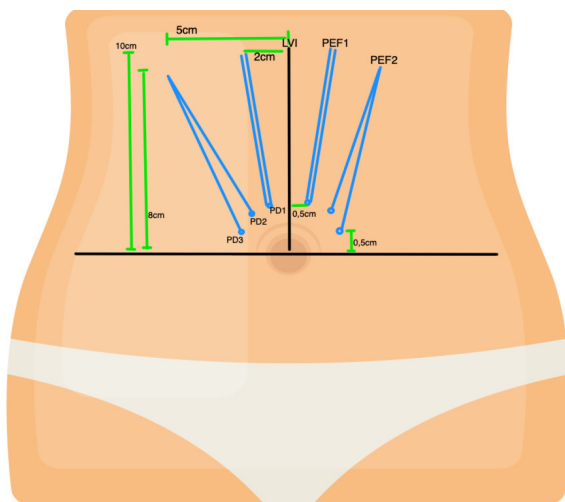


FIGURE 1: Marking for the threads application in the upper abdomen. IVL: imaginary vertical line; IHL: imaginary horizontal line; TEP: thread entry point; DP: distal point of the thread

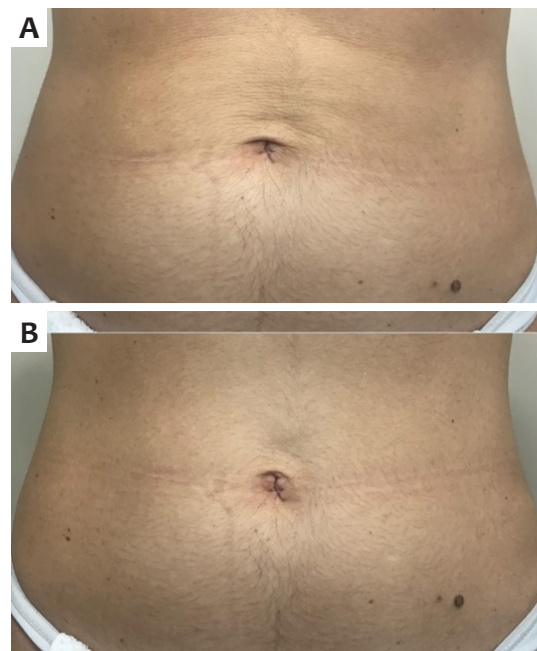


FIGURE 3: C - pre-treatment abdomen; D - after 90 days of treatment

**Table 1: GAIS scale results for each patient treated**

Patient	Age	PO time (days)	GAIS scale
1	27	89	3
2	35	90	3
3	39	88	2
4	42	95	1
5	24	92	2
<b>Average</b>	33,4	90,8	-

## RESULTS

The five treated patients, with an average age of 33.4 years, showed some degree of aesthetic improvement perceived after the treatment. After an average period of 90.8 days, all patients responded to the GAIS scale. Table 1 lists their responses.

No patient presented adverse events early or late (90 days) to treatment.

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## DISCUSSION

The demand for body treatments grows progressively,<sup>7,8</sup> and polydioxanone threads therapy increases our arsenal, enabling more impactful results.

The mechanical effect provided by the spicules of the support thread, linked to the collagen stimulus potential, creates a new modality in body therapies, in this case, abdominal flaccidity and the repositioning of the umbilical scar.

The literature already establishes the PDO thread as an effective option to treat sagging skin on the face and neck. However, few publications addressed body treatments with PDO threads so far. Studies with a larger number of patients and addressing associations with other collagen stimulation treatments are necessary.

## CONCLUSION

The PDO thread is an option to treat abdominal flaccidity repositioning the umbilical scar in properly selected cases. ●

## AUTHORS' CONTRIBUTION:

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Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; critical revision of the manuscript.

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Critical literature review.