

### The use of non-crosslinked hyaluronic acid as a complement to Polydioxanone (PDO) Thread Lifts

João Vitor M. Pithon Napoli<sup>1</sup>, Gabriela D Matos<sup>1</sup>, Gabriel M Pithon Napoli<sup>2</sup> and Lavinia Pithon Napoli<sup>3</sup>

<sup>1</sup>Universidade de Medicina Nove de Julho

<sup>2</sup>Universidade São Paulo USP

<sup>3</sup>Universidade Federal de Sergipe

#### Objective

To evaluate risk factors for the improvement of general skin aspects through the percutaneous induction procedure of collagen

#### Introduction

Percutaneous induction of collagen through needles (micro-needling) is a procedure that promotes micro-lesions or micro punctures in the skin in order to stimulate collagen production. It is also highly recommended to eliminate sagging skin as well as to combat stretch marks and acne scars. Thus, the drug delivery system is designed to facilitate entry and prolong the release time of the active in the body. This system aims to increase the plasma concentration of the active and control the temporal and spatial location of molecules in vivo, which tends to improve the overall characteristics of the skin. However, these aspects vary among patients according to their lifestyle habits.

#### Materials and Methods

40 ladies experienced a survey that looks for chance variables to evaluate a superior or more regrettable reaction to the PithonNapoli percutaneous collagen acceptance convention. This, performed month to month, may shift from 3 to 10 meetings, because of the need of the patient. Toward the finish of all treatment, we played out a measurable investigation that expects to locate the overall danger of progress or exacerbating given the hazard factors introduced. The assessment was helped out through the histological investigation of rewarded skin tests and computerized photos. Biopsies were taken before the treatment and 30 days after the last meeting. The examples were recolored with Hematoxylineosin and Picosirius for the assessment of collagen filaments. Patients were shot preceding and ensuing to the techniques, with a business advanced camera and a computerized camera furnished with the Anthera 3D<sup>®</sup> framework (Miravex, Dublin, Ireland), which gives three-dimensional examination of the skin through the picture caught from four components (shading, alleviation, melanin, and hemoglobin), permitting pre-and posttreatment

correlations. Patients were shot before and ensuing to the techniques, with a business computerized camera and an advanced camera outfitted with the Anthera 3D<sup>®</sup> framework (Miravex, Dublin, Ireland), which gives three-dimensional examination of the skin through the picture caught from four components (shading, alleviation, melanin, and hemoglobin), permitting pre-and posttreatment correlations. This framework breaks down the factors identified above at definitely a similar area, when the treatment, creating reports through charts. Thinking about melanin, for instance, it is conceivable to survey the accompanying factors, in light of the diagram After purging the face, the effective sedative Dermomax<sup>®</sup> (Laboratório Aché, São Paulo Brazil) was applied and left on the skin for an hour. A few patients required sedative blockage with lidocaine. After the evacuation of the sedative, the microneedling methodology began with a Dr. Roller<sup>®</sup> sterile gadget (MTO, Porto Alegre, RS, Brazil) containing 192 needles of 2.0 mm. The goes with the roller were coordinated on a level plane, vertically, and at a slant, as though a compass rose were being drawn, with ten reiterations toward every path. There was a base exudation of blood during the system, which vanished subsequent to purging with clean saline arrangement, leaving an erythema and edema. A veil (apportioning drug store Dermogral, Porto Alegre, RS, Brazil) containing the accompanying recipe was applied before long. In an examination that investigated 480 patients experiencing PCIT planned for improving scars and wrinkles, Aust et al. 4 recognized expanded collagen in the pathology of patients in the wake of applying the treatment, with the examples having been submitted to the collagen-explicit Van Gieson recoloring strategy. In an investigation that indicated the improvement of photodamage with the acceptance of collagen creation by PCIT, Fernandes et al. 6 recognized a nonappearance of diminishing of the epidermis after the utilization of the treatment. This seeing appears as a development in regards to different medicines, which generally advance epidermal diminishing, as they are progressively obtrusive and lead to more prominent burst of the basal layer. In an exploratory examination, Emerson Vasconcelos et al. 9 built up the relationship between's the length of the chamber's needles utilized in the microneedling method and the profundity of the injury delivered. Infinitesimal assessment following the technique uncovered vascular ectasia and extravasation of red platelets, influencing the papillary dermis with 0.5 mm long needles, and arriving at the reticular dermis with 2.5 mm long needles. Accordingly, microneedling can have a wide scope of clinical signs, contingent upon the profundity came to In the current examination, after the Picosirius recoloring (likewise a collagen-explicit recoloring technique), there was no distinction in the collagen creation subsequent to breaking down the profound dermis, the piece of the skin's geography where the treatment arrives at its greatest impact. In situations where a biopsy was completed before the treatment, it was conceivable to watch thicker collagen (Picosirius) in five of them; where patients were biopsied after the treatment, it was conceivable to distinguish thicker collagen

in six of them. It was conceivable to see that the Picrosirius additionally hued the collagen all the more strongly in cases in which more fibrosis auxiliary to skin break out scars was recognized utilizing hematoxylin and eosin recoloring (HE). In like manner, there was no distinction in the lymphocyte penetration in the edema or in the thickness of the epidermis when treatment explained by the little size of the assessed test. Additionally, it was noticed that now and again, the epidermis prove diminishing and straightening of the interpapillary cones after PCIT, a finding that counters the current writing.

### Results

We evaluated the results through the photos, and obtained 100% patient satisfaction. We observed improvement in

hydration; collagen production and reduction of blemishes see table and photos below.

### Conclusion

Next Pharma's (REVER) PithoNapoli IPC protocol with drug delivery system is efficient and safe, but has a curious fallacy of aesthetics. Although the trend for histological improvement is in the younger population (35-49 years), our statistical findings (relative risk = 3.8 and p-value = 0.001) show that large "visual improvements" are more noticeable and more significant. personal satisfaction in older patients (> 50 years). Although expected, non-smokers were 2.88 times more likely to experience marked skin improvement. As well as holding 6 or more sessions. Allergies and medications showed no statistically significant difference.