



## Case Report: Nd:YAG 1064 micro pulse on chronic ulcer.

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**This is a case report**, in white paper format, as described by angiologist and surgeon Dr. Bruno Ferraz from Balneário Camboriú, SC, Brazil. Dr. Bruno used the ETHEREA-MX<sup>®</sup> with LongPulse<sup>®</sup> 1064 nm handpiece.

### Treatment:

- ▶ **Diabetic patients** tend to present micro and macro vascular complications and these favor the development of venous disease. The evolution of this pathology (associated to diabetes or not), can cause ulcerations due to deficient local circulation, more predominant in extremities, with greater healing difficulty.
- ▶ The main methods used for the healing of ulcerations are compressive therapy, local treatment (including cleaning, desinfection and, if necessary, debridement), systemic medication and cyrgical treatment of the venous abnormality.
- ▶ The use of light to accelerate the healing process in ulcerations is described in medical literature wit the use of low power LED and LASERS. The use of 1064 nm wavelength in short pulses (in microseconds) allows for results that are closer to the photobiostimulation obtained through the above described technologies, when compared to selective photothermolysis, usually associated to the results obtained with LASER at 1064 nm.
- ▶ **Case description:** 63 year old patient, complaining of chronic ulcers on the dorsum of his left foot, with an 18 month evolution and no improvement with previous treatments. Personal background: Post-thrombotic syndrome with femoral and popilitic vein reflux, diabetes, hypertension, obesity and sedentarism.

**Non invasive treatment:** Venotonic and elastic compression. Topical, with hialuronic acid at 2%. ..

- ▶ 11 LASER Nd:Yag 1064 nm LongPulse<sup>®</sup>, sessions were performed, with variable intervals between 2 to 16 days. The total time of the treatment was 70 days, with total epidermization of the ulcer, with no venous puncture and under the following parameters:

3 mm spot, 300 micros, 10 J/cm<sup>2</sup>, 3 applications, with an average interval of 20 seconds between each one. Emphasis on the borders of the scars. The average number of shots was calculated based on the diameter of the ulcer (height x width).



Image 1: Before



Image 2: 8 session - 45 days



Image 3: Control.