

Use of the Fraxis® Fractional CO2 laser ILOODA in a dermatologist and plastic surgery private practice

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Introduction

CO2 laser has a high potential in plastic surgery, dermatology and many surgical specialities. Vaporisation of tissue is very effective. Almost no bleeding makes operation field very clear. Most important is the fact that the unwanted tissue destruction depth is very well controlled and penetrates only several microns into the tissue. Healing process is than much faster and painless.

Method

Monocentric retrospective study conducted over a period of 1 year. The inclusion criteria: patients with benign cutaneous tumors, warts, benign skin marks and all patients who benefited from a treatment with CO2 laser set in „normal“ or „fractional“ mode.

Used laser: CO2 laser Fraxis – ILOODA, South Korea, emitting at 10600 nm and based on RF excited laser tube technology developed by Synrad company (USA).

Results

Over 500 patients were treated for 20 different indications:

- **most patients with seborrheic keratoses, solar lentiges, verrucous papillomas, warts, haemangiomas**
used FRAXIS settings: „normal“ (surgical), surgical handpiece 1:100, mode – pulse: up to 2 W, 10 ON, 10 OFF;
mode – ultra: up to 2 W, width 100 ms, frequency 570 – 600 Hz
end point: disappearance of the lesion

- **patients with dermal lesions – xanthelasma, syringoma, sebaceous adenoma**
used were similar FRAXIS settings as mentioned above but with little higher power up to 3 W

- **patients with resistant warts located on plantar site of feet**
used FRAXIS settings: „normal“ (surgical), surgical handpiece 1:100, mode – continuous, according to needs 3 – 6 W

- **patients with performed upper and lower eyelid surgery for esthetic reasons**
used FRAXIS settings: „normal“ (surgical), surgical handpiece 1:100, mode – ultra: up to 2 W, width 100 ms, frequency 570 – 600 Hz
end point: tissue dissection without bleeding
- **patients with active acne, acne scars, facial laxity, stretch marks, large pores, patients for photorejuvenation**
used FRAXIS settings: fractional mode, fractional handpiece, duration from 240 up to 360 ms (12,6mJ), overlap 1-3, distance 0,8 – 1,2 mm
patients with skin phototype 1, 2 need to be treated very carefully starting with lower energy as the occurrence of the unwanted pigmentation could be with higher risk – 240 ms, no overlapping, larger spacing
patients in higher age which have laxity of their skin more evident can be treated with more powerful settings

Discussion

Our results show that use of CO2 laser Fraxis is very helpful for many indication as in dermatology so in esthetic plastic surgery field. Almost all treatments were at routine request of patients and Fraxis have used more that just one doctor. It quite easy to learn how to manage the treatment with Fraxis. I find using of „ultra“ mode more helpful then „pulse“ mode for treating of epidermal and dermal leasions. After I have done many patients with both modes I found out that using of „ultra“ mode makes the opeation field more transparent and clear for doctor because the treated tissue is not „carbonising“ like when usig „pulse“ mode. Also healing process is faster. Using „pulse“ mode asks little more experience with Fraxis but then brings nice results.

I used Fraxis also for eyelid surgery – especialy using Fraxis for lower transconjunctival eyelid sugery makes the operation very confortable for clarity reasons and almost no bleeding.

Conclusion

I find Fraxis very helpful, multi usable and reliable device in my practice.

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