



LASERS

## COMBINATION OF FRACTIONAL LASER CO<sub>2</sub> AND PLATELET-RICH-PLASMA AS A METHOD FOR SKIN REJUVENATION

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**INTRODUCTION:** Fractional CO<sub>2</sub> laser, through the induction of thermal damage, leads to neocollagenesis. Autologous mesotherapy (Platelet Rich Plasma) promotes the activation of stem cells, targeting cell rejuvenation and tissue healing. We examined the effectiveness of the combination of these two therapies.

**MATERIALS AND METHODS:** The therapeutic protocol included 6 combined sessions of fractional co<sub>2</sub> laser and PRP every 4 weeks on the face, neck, chest and dorsal surface of the hands. Digital photographs were taken in the beginning, at the end and 2 months after the last session. Fractional co<sub>2</sub> laser was regulated as follows: Pulse energy 12-25 mJ, Power 8-10 W, density 81-100 dots/cm<sup>2</sup>. For PRP, 5ml of blood were taken, followed by double centrifugation, collection of plasma and addition of 0,05 ml calcium chloride/ml. The solution was applied by injections (30G needle) and by micro needling.

**RESULTS:** We evaluated the results 2 months after the last session. A significant reduction of static and expression wrinkles of up to 80% was noticed. Photoaging skin lesions were improved up to 56%, while atrophic acne scars were reduced by 30%. Nearly all patients mentioned better appearance, skin quality and elasticity. None of them complained about any severe side effects, except for flushing and light roughness of the skin directly after the treatment.

**CONCLUSION:** The combination of Fractional laser co<sub>2</sub> and PRP is a safe, minimally invasive treatment for acne scars, photoaging signs, and expression wrinkles at the face, neck, chest and dorsal surface of the hands. PRP promotes a faster healing and rejuvenation of the skin.

