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SmartXide Punto*

A NOVEL NO DOWNTIME SKIN RESURFACING PROCEDURE: COOLPEEL

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*: The SmartXide Punto CO_2 laser is commercialized in the U.S. market with the name of SmartXide Tetra.

A Novel No Downtime Skin Resurfacing Procedure: CoolPeel

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Abstract

Objective: Although CO_2 Laser technology for skin resurfacing has been consistently developed for the last 20 years, the ability to treat different skin conditions and various skin types has always been limited to only a few parameter adjustments (power, dwell time, density). As technology improves in all other aspects of our life, patients have been requesting less invasive treatments with limited downtime and the highly sought after 'lunchtime' treatment sessions. SmartXide Punto* with CoolPeel (DEKA Florence, Italy) has been verified to be the most versatile, safest, lunchtime peel resurfacing procedure that allows customized downtime to meet patient expectations and capabilities for all skin conditions.

Materials and Methods: Twelve (12) participants (Avg. 45 y.o.) with skin types I-III underwent CoolPeel facial skin resurfacing treatment. Selected areas were randomly treated with Smartxide Punto (DEKA, Florence, Italy). mild edema, mild erythema, minimal crusting (sand paper like texture) were noticed which cleared up within 24-72 hours using a mild moisturizer. Treatment times was approximately 6-10 minutes on average for a full face.

Results: All of the participants completed the treatment cycle with remarkable results and no reported issues.

Conclusions: : The new Smartxide Punto with CoolPeel was proven to be a very fast, comfortable treatment with minimal social downtime and a high degree of satisfaction reported on all the selected skin types I-III.

Keywords: CO_2, Skin Resurfacing, CoolPeel, 10600 nm Laser.

Introduction

Sun exposure, photo and chrono ageing processes contribute to a skin deterioration that involves the skin's structure, function and appearance. CO_2 Skin Resurfacing has always been considered the first choice of treatment for fine lines, rhytids, wrinkles and photo-damaged facial skin. However, due to the lengthy recovery times and frequent Complications, most of the patients began to seek alternatives. Over the years, these types of CO_2 treatments were reserved primarily for more aggressive applications.

Side effects were often present, such as edema, burning, scabbing, PIH, and erythema, which often last for many weeks. Historically, there has been a high risk of hyper / hypo pigmentation, scarring, infection, etc. with these types of treatments leading patients to avoid this type of treatment when only looking to freshen the skins appearance.

Over recent years, the market has been trending towards less invasive and less problematic procedures and methods. This has led to a wide-scale production of a myriad of non-ablative devices for reducing wrinkles and improving photo-damaged skin. However, from a critical review of the efficacy studies and publications, none of the results obtained with these non- ablative methods can be compared to the resurfacing results achieved with CO_2 lasers. Smartxide Punto with PSD Technology has been proven to be extremely flexible and versatile in the parameter selections available in order to highly customize each patients downtime and goals related to specific skin conditions to be treated.

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Differently from the various CO_2 lasers with fractionated emission currently available on the market, SmartXide Punto provides users with extreme flexibility of pulse shape selection (to minimize downtime and side effects) output power, dwell- time, distance between the dots (pitch), scanner shapes as well as the spray mode of emission that removes the concern of demarcation lines typically found with many of the CO_2 treatments currently available.

Materials and Methods

Twelve (12) participants (Avg. 45 y.o.) with skin types I-III underwent the CoolPeel facial skin resurfacing treatment. Selected areas were treated with SmartXide Punto (DEKA, Florence, Italy) mild edema, mild erythema, minimal crusting (sandpaper like feeling skin) were noticed but quickly healed (within 48 hours) or disappeared.

Selected parameters ranged from 3 W / 600 spacing to 5W / 500 spacing depending on skin type and down time available. Treatments were done with HP (high pulse), random pattern and spray mode. Repetition speed, scan size and shape were all set to the operator's preference. This would not affect treatment results. 3 to 4 sessions were included in the study. A special scanner is positioned over the face and delivers the laser beam (HP pulse) in full respect of the Skin Thermal Relaxation Time (Hi-Scan DOT mode). Treatments were carried out on facial areas. Goggles and patient shields have been used during the entire procedure.

Some mild edema, mild erythema, minimal crusting (sandpaper like feeling skin) were noticed, but quickly disappeared. Ice pack or air cooling may have been used for proper post session skin comfort. Moisturizers with proper SPF were applied immediately after treatment. The interval between the sessions varied between 20 and 45 days.

CoolPeel Laser Treatment Procedure

CoolPeel represents the latest innovation in lunch time treatments from DEKA (Florence, Italy) utilizing a specific pulse mode (High Pulse – HP) available only from the SmartXide Punto CO_2 laser system. It has a controlled penetration (20 µm to 70 µm) depth which helps avoid substantial downtime (from 0 to 2 days of social downtime, if any), but preserves the coagulative and resurfacing properties to provide patients with remarkable cosmetic results. Minimal downtime procedures are in high demand from today's patients. The lunch time peels have been gaining popularity for the last decade. CoolPeel understands these patient demands of providing no downtime, in a safe and efficient treatment, with a short operating time. Implementing the new SPRAY mode, CoolPeel results in a homogeneous treatment over each and every area.

CoolPeel is carried out over the face, neck and décolleté by the application of the contact scanner terminals. Each part has to be treated in its entirety avoiding overlap. Downtime can be adjusted by choosing either the appropriate Protocol and size of the scanning area. In our practice we did select power level 3 W, 4 W and 5 W with 600 µm Spacing according to the area to be treated. Moist saline-soaked gauzes are gently used to remove debris during the procedure and provide better aesthetic outcomes once the skin heals. Protocol includes just one pass and there is no need for additional passes or stacking. The interval in between the sessions is 30-45 days so the treated area has fully healed and regenerated. The endpoint of treatment is usually a mild redness that tends to disappear within a few mins to a few hours.

Results

After 3-4 treatments patients are very satisfied with the treatment experience. Some of my patients who had previous treatments with CO_2 lasers found

Figure 1. Before (A) and after 1 treatment (B) pictures of a patient treated with 4 W Power, 600 µm Spacing (pitch) and HP Pulse Mode.

CoolPeel extremely safe, fast and highly comfortable. No particular side effects were recorded except some immediate redness that disappeared within a few hours.

Conclusions

From our experience, SmartXide Punto with CoolPeel is a highly valuable tool in physician's hands to serve most skin types. Patients love the speed of the treatment and having fresh, glowing skin immediately after treatment with little to no downtime. The improvement in pore size, skin texture and fine lines becomes visible as the tissue heals. It is great to have a device that works with no anesthesia and reduces the treatment time to minutes for an entire face. All patients were extremely pleased with the procedures expectations, process, and results.

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