RETROSPECTIVE STUDY ON EVALUATION OF EFFICACY AND SAFETY OF A FRACTIONAL CO_2 SYSTEM, MORE-XEL, FOR SKIN RESURFACING AND REJUVENATION

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ABSTRACT

MORE-XEL fractional CO_2 laser, a Korean FDA approval fractional CO_2 laser with wavelength of 10600 nm adopted RF Driver of Synrad, USA, generating stable and powerful output is popular and able to perform laser rejuvenation and laser resurfacing treatment to address photo-damaged skin and aging process. The objective of this retrospective study is to evaluate the overall improvement of photo-damaged skin problems and to evaluate the safety profile with main focus on the tolerability of pain during and treatments. This is a retrospective study involved 12 female participants, with the age ranges from 40-70 years of age. The records of patients who received MORE-XEL Korean FDA approved laser treatment, with a wavelength of 10,600nm in the period from March 2012 to October 2012 for the purpose of skin resurfacing and rejuvenation treatments for photo-damaged skin, aging skin, acne scars and/or epidermal color lesions were included. Questionnaires regarding pain perception, facial redness score and satisfaction of treatment were evaluated immediately after treatment and follow up in month 8^{th}. Subject's fine lines/wrinkles around the eyes, facial skin tone, facial texture, skin tightness, facial scar and facial pore size were evaluated. There were a total of 12 subjects participate in this study comprising of 9 Chinese and 3 Indian. There were 6 subjects having skin type III, 3 subjects having skin type IV and 3 subjects having skin type V. Energy 5mJ was used on 3 subjects with skin type V, energy 6mJ was used on 3 subjects with skin type IV and energy 8mJ was used on 6 subjects with skin type III. Age group of this study comprises of 40-45 years old (4 subjects), 46-50 years old (1 subjects), 51-65 years old (3 subjects) and 66-70 years old (3 subjects). All the 12 subjects experienced only mild pain during treatment due to the air cooling system was used and anesthetic effect of EMLA cream was at its peak. Hundred percent of the subjects suffering from only mild facial redness after treatment which was the common appearance after fractional CO_2 laser treatment, however, no subject has severe redness with skin peeling. The inflammatory process was subsided after 7 days post-treatment and no participants have experienced severe redness with skin peeling. The inflammatory reaction constitutes the important initial sequence of skin rejuvenation which giving rise to new collagen genesis, ultimately improvement on reduction in fine lines/wrinkles, improvement in skin tone and texture, reduction in acne scars with skin tightening effect. Five of the patients showed mild improvement to the reduction of fine line/wrinkles around eyes while seven subjects showed moderate improvement of the reduction of fine line/wrinkles around eyes. Only 2 (16.7%) of the subjects showed mild improvement of face's skin tightness. Ten (83.3%) of the subjects showed moderate improvement of face's skin tightness. Six subjects showed mild improvement and moderate improvement for skin tone and texture on face. Eight (66.7%) subjects showed mild improvement in facial scar reduction while 4 (33.3%) subjects showed moderate improvement in facial scar reduction. There was no event of worsening of the scarring in any of the study participants who had undergone 3 sessions of treatments with interval of 2 months in between each treatment.