

Fractional ultrapulse CO2 in severe burn scars and acne scars

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Fractional ultrapulse CO2 has been described as extremely useful on treating both acne scars and severe burn scars inside the related international consensus recommendations. On acne scars a multi-layer technique (4 steps) can be applied: during the first step only the base of each scar is treated to achieve new collagen formation exactly where it is needed; during the second step the shoulders of each scar is sculpted to reduce the shadow that usually can be observed with a 45° angles incident light; the third pass treat the full area affected by the scars and has the aim to reduce the diameter of the scars while the fourth pass is performed on all the face with the CPG superficial handpiece to make the skin brighter.

Affecting a scar at the 50%-75% of its depth with a fractional CO2 able to determine a controlled thermal damage induces multiple biochemical/metabolic and histological changes inside the scar. We can observe an inversion of the collagen I/collagen III ratio and a huge histological remodelling of the scar that are at the base of the observed good clinical outcomes. If to these outcomes we add the possibility to use the device as a drug delivery system we can understand how a fractional ultrapulse CO2 must be defined as “a device to have” to treat multiple types of scars