

## Fractional CO2 laser is as effective as Q-switched ruby laser for the initial treatment of a traumatic tattoo.

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### Abstract

#### BACKGROUND AND OBJECTIVE:

Q-switched laser treatments are considered the standard method for removing both regular and traumatic tattoos. Recently, the removal of tattoo ink using ablative fractional lasers has been reported. Ablative fractional CO2 laser and q-switched ruby laser treatments were used in a split-face mode to compare the safety and efficacy of the two types of laser in removing a traumatic tattoo caused by the explosion of a firework.

#### STUDY DESIGN/PATIENTS AND METHODS:

A male patient suffering from a traumatic tattoo due to explosive deposits in his entire face was subjected to therapy. A series of eleven treatments were performed. The right side of the face was always treated using an ablative fractional CO2 laser, whereas the left side was treated only using a q-switched ruby laser.

#### RESULTS:

After a series of eleven treatments, the patient demonstrated a significant lightening on both sides of his traumatic tattoo, with no clinical difference. After the first six treatments, the patient displayed greater lightening on the right side of his face, whereas after another five treatments, the left side of the patient's face appeared lighter. No side effects were reported.

#### CONCLUSIONS:

In the initial stage of removing the traumatic tattoo, the ablative fractional laser treatment appeared to be as effective as the standard ruby laser therapy. However, from the 6th treatment onward, the ruby laser therapy was more effective. Although ablative fractional CO2 lasers have the potential to remove traumatic tattoos, they remain a second-line treatment option.

#### KEYWORDS

ablative fractional laser therapy; fireworks; q-switched ruby laser; traumatic tattoo

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