Introduction
There has been a growing demand for tattoo removal. Although Q-switch laser treatments are considered the standard procedure, the results vary, depending on the color of ink. The number of treatments also varies and may reach up to 12 sessions per tattoo.

3VO™ System Using the Trigation™ Technology
A new innovative technology, Trigation™, was developed for various aesthetic applications. The first application, was developed to remove tattoos of various colors. The 3VO system uses Trigation technology to reach high efficacy in up to six sessions. This new technology combines three actions in parallel:

1. Dermal perforation by microneedling causes homogeneously stimulation
2. Transdermal vehiculation of specific active ingredients
3. Simultaneous suction of extracted contents and residuals

The 3VO system has been used to treat more than 100 tattoos to evaluate the safety and efficacy of the Trigation technology. Treatment sessions were performed in one- to two-month intervals. This clinical bulletin presents one of these cases.

Materials and Methods
When performing a treatment with the 3VO system, mechanical and chemical reactions are executed.

Mechanical parameters are set up by choosing a specific array of needles and the depth of needle penetration. For this case, a 14-needle array was chosen to achieve maximum removal effect. The depth of penetration was decided on during treatment and based on the skin’s reaction to treatment.

Undoit’s proprietary solution was used during each treatment. The solution contains some agents that bind to the tattoo pigments and some agents that induce a keratolytic effect. This allows the vehiculation of pigments into the system’s waste tank.
Successful Tattoo Removal

A 49-year-old male presented for removal of an unwanted tattoo on the lower abdomen. The tattoo had black, yellow, and green pigments and was done in a professional manner. The patient had skin type III (Fitzpatrick scale).

The patient was counseled as to the risks and benefits of Trigation treatments and an informed consent was signed. For control purposes, only the upper part of the tattoo was treated. The lower part remained intact.

Prior to the start of the treatments, the skin was cleaned and disinfected and 1% lidocaine injections were given to anesthetize the area and prevent unnecessary pain (Fig. 1).

Three treatment sessions were performed one to two months apart due to patient’s skin healing process.

At all treatment sessions, a 14-needle array head was applied with a depth of penetration between 1.5 mm and 2 mm, which was chosen based on the patient’s skin reaction. The proprietary Undoit solution was applied. A corticosteroid was added to the solution to prevent future inflammation.

During treatment, the tip of the needle head fluttered on the skin and slight pressure was applied to create a firm adherence between the needle heads and the skin. All of the selected tattoo area was covered in circular manner.

Immediately after each treatment, the area was covered with a salt solution to initiate an osmotic phenomenon with consequent tissue bulging. After 10 minutes, the salt solution was removed and the treated area was covered with an antibiotic and cortisone cream. The patient was instructed to continue to apply the antibiotic and cortisone cream for two weeks to prevent infection and reduce inflammation.

Results

From the first treatment to the second, and from the second to the third, significant clearance of the tattoo was observed (Figs. 2 and 3). Two months post second treatment, the tattoo was almost completely cleared. The patient was very satisfied with the results.
Conclusion

The multicolor tattoo, which included yellow, and green pigments, made it especially resistant to treatments with laser devices. In this study, the 3VO system and Trigation technology successfully cleared tattooed areas of black, yellow, and green pigments in only three treatments.

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References


