

023. PICOSECOND PULSES - MY EXPERIENCE

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Background & Objectives: Tattoos have played an important role in human culture for thousands of years, and they remain popular today. The development of quality-switched (QS) lasers in the nanosecond (10⁻⁹) domain has revolutionized the removal of unwanted tattoos for over 20 years. However, restrictions known with this nanosecond technology, such as resistant colours (blue, green yellow) and multiple sessions (sometimes up to 25) is over. Since 2012 we have a new generation of lasers called picosecond, as their pulse duration ranges between 350 and 500 picosecond (10⁻¹²).

Study Design / Material & Methods: To update the audience with the 3-year personal experience we have in tattoo removal, with the 3 main available wavelengths (532, 755 & 1064nm). During this presentation personal examples with this technology will be presented in various tattoo conditions. This ultra-short pulse duration breaks the tattoo pigment in much smaller particles, thus eliminating it more easily and quickly. Although it is not colour blinded, picosecond technology is able to remove pigment, like yellow, which was totally resistant to nanosecond technology.

Results: The use of picosecond laser results in a) less sessions needed, so less time required to clear tattoos (1). b) better clearance of residual pigment c) possibility of removing previous resistant colours (2), as well as paradoxical darkening (3).

Conclusion: With this new picosecond technology, a new era is opened in the field of laser tattoo removal, allowing better and faster pigment removal.

Litterature:

- 1) The picosecond laser for tattoo removal. Hsu VM, Aldahan AS, Mlacker S, Shah VV, Nouri K. *Lasers Med Sci.* 2016 Nov;31(8):1733-1737.
- 2) Clearance of yellow tattoo ink with a novel 532-nm picosecond laser. Alabdulrazzaq H, Brauer JA, Bae YS, Geronemus RG. *Lasers Surg Med.* 2015 Apr;47(4):285-8.
- 3) Successful treatment of paradoxical darkening. Bae YS, Alabdulrazzaq H, Brauer J, Geronemus R. *Lasers Surg Med.* 2016 Jul;48(5):471-3.

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