

LASERS

IRON-INDUCED ACCIDENTAL TATTOOS AND LASER THERAPY: EXPERIENCE AT A TERTIARY REFERRAL CENTRE

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Background: Awareness of the development of accidental tattoos after intravenous iron administration with paravenous leakage is low in the medical community. So far, no larger patient cohorts have been analyzed. The lesions are a burden to the patients and require therapy. The only known treatment is laser therapy.

Objective: To characterize the clinical appearance and development of accidental tattoos after iron extravasation and to demonstrate safe and efficient removal with quality-switched ruby, quality-switched Nd:YAG and picosecond Nd:YAG lasers.

Study Design and Patient Selection: We conducted a retrospective systematic single-center analysis on patients that presented at the Dermatology Department of the University Hospital of Zurich between year 2008 and 2017 with accidental hyperpigmentations after intravenous iron administration and paravenous leakage. Out of 29 collected patients, 13 received laser treatment and were analyzed with reference to the laser devices used including parameters and intervals between the sessions. The number of sessions performed and the overall success were registered. We defined the latter as a complete removal of the hyperpigmentation or as no wish for further laser sessions due to patients' satisfaction.

Results: We treated 13 out of 29 registered patients with QS (694nm or 1064nm) or picosecond lasers (660nm or 1064nm). In 8 patients, the treatment was finalized within an average of 5.6 sessions. On a scale ranging from 0 to 4, patients rated their satisfaction with a mean of 3.5. No complications occurred.

Conclusion and Relevance: Iron-induced accidental tattoos are characterized as mostly asymptomatic, brown macules with irregular borders. Spontaneous regression is possible within the first one to two years, but not guaranteed. Safe and efficient removal with single or combined use of QS ruby, QS Nd:YAG and picosecond Nd:YAG lasers can be achieved within a mean number of 5.6 sessions. No laser proved to be superior to another.





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