Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

Combined pulsed Co2 laser and Q-switched Nd:YAG laser versus Q-switched Nd:YAG laser for the removal of eyebrow tattoo.

Protocol summary

Summary

The prevalence of cosmetic tattoos has grown significantly in recent years, and the demand for tattoo removal has also increased deramatically. A variety of methods have been used to removal tattoos. Q-switched lasers emitting short, high-intensity pulses are widely used for treatment of unwanted tattoos and based on the principles of selective photothermolysis. The overall treatment course is often prolonged, costly and sometimes impractical which can lead to patient dissatisfaction and abandonment of the treatment. For these reasons we hypothesized that the addition of co2 laser to Q-switched N:d YAG treatment of tattoos would enhance the rate of pigment clearance and decrease the degree of treatment-induced hypo and hyperpigmentation. The use of co2 laser, aiming to remove epidermis, followed by Q-switched laser may allow Q-switched laser to reach a deeper lesion in the dermis without serious side effect. Our study is a single blined randomized controlled trial. Inclusion criteria:female with eyebrow tattoo; brown and black tattoo and amature tattoo. Exclusion criteria: pregnancy; coagulation abnormality and viral and bactial infection. 20 patients with eyebrow tattoo that come to Dr. Radmanesh clinic in ahvaz, Iran are randomized and treated with combined co2 laser and Q-switched N:d YAG laser on one side of eyebrow and Q-switched N;d YAG alone on the other side.The outcome is evalutated after 2 months. The time of this study is 2012.3.20 until 2013.3.21 Subjects are examined and standardized digital color photographs are taken befor and 2 months after treatment. Two doctors separately evaluate tattoo lightening and adverse effects.the grading system for tattoo lightening is:1=0-%25(slight),2=%26-%50(moderate),3=%51-75(good),4=more than %75 (excellent). Efficacy of tattoo age, tattoo color and skin type on tattoo lightening also is evalutated. Advers effects are include presence of blister, scar, hyperpigmentation. Hypopigmentation and inflammation.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012121611776N1**
Registration date: **2013-01-03, 1391/10/14**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-01-03, 1391/10/14

Registrant information

Name
Shohreh Rafiee
Name of organization / entity
Jundishapour Ahvaz University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 61 1391 2301
Email address
rafiee.sh@ajums.ac.ir

Recruitment status

Recruitment complete

Funding source

Ahvaz Jundishapour University of Medical Sciences

Expected recruitment start date

2012-05-21, 1391/03/01

Expected recruitment end date

2013-03-21, 1392/01/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Combined pulsed Co2 laser and Q-switched Nd:YAG laser versus Q-switched Nd:YAG laser for the removal of eyebrow tattoo.

Public title
Efficacy of combined co2 and Q-switched lasers in eyebrow tattoo removal
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:female with eyebrow tattoo; brown and black tattoo and amature tattoo. Exclusion criteria: pregnancy; coagulation abnormality and viral and bactial infection.
Age
No age limit
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **20**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ahvaz Jundishapour University of Medical Sciences ethics Committee
Street address
Ahvaz Jundishapour University of Medical Sciences, Esfand street, Golestan blv.,
City
Ahvaz
Postal code
15794-61357
Approval date
2012-04-28, 1391/02/09
Ethics committee reference number
eth-449

Health conditions studied

1

Description of health condition studied
eyebrow tattoo removal
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
tattoo color
Timepoint
Two monthes
Method of measurement
Visual color

Secondary outcomes

1

Description
hyperpigmantation
Timepoint
Two monthes
Method of measurement
Visual color

Intervention groups

1

Description
Intervention group: Co2 and Q-switched Nd:YAG laser in right eyebrow
Category
N/A

2

Description
Control group: Q-switched Nd:YAG laser alone in left eyebrow
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Dr. Radmanesh clinic
Full name of responsible person
Dr. Shohreh Rafiee
Street address
Kiyan pars, 4 east street
City

Ahvaz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Ahvaz Jundishapour University of Medical Sciences, vice chancellor for research and technology

Full name of responsible person
Dr. Mostafa Feghhi

Street address
Ahvaz Jundishapour University of Medical Sciences, Esfand street, Golestan blv.,

City
Ahvaz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Ahvaz Jundishapour University of Medical Sciences, vice chancellor for research and technology

Proportion provided by this source
100

Public or private sector
empty

Domestic or foreign origin
empty

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
empty

Person responsible for general inquiries

Contact

Name of organization / entity
Ahvaz Jundishapour University of Medical Sciences

Full name of responsible person
Shohreh Rafiee

Position
MD, Dermatology resident

Other areas of specialty/work

Street address
Ahvaz Jundishapour University of Medical Sciences, Esfand street, Golestan blv.,

City
Ahvaz

Postal code
15794-61357

Phone
+98 61 1333 3477

Fax
+98 61 1391 2301

Email
rafiee.sh@ajums.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Ahvaz Jundishapour University of Medical Sciences

Full name of responsible person
Dr. Mohamad Radmanesh

Position
Associated proffosor of dermatology

Other areas of specialty/work

Street address
Ahvaz Jundishapour University of Medical Sciences, Esfand street, Golestan blv.,

City
Ahvaz

Postal code
15794-61357

Phone
+98 61 1392 1598

Fax

Email
radmanesh-m@yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity
Ahvaz Jundishapour University of Medical Sciences

Full name of responsible person
Shohreh Rafiee

Position
MD, Dermatology resident

Other areas of specialty/work

Street address
Ahvaz Jundishapour University of Medical Sciences, Esfand street, Golestan blv.,

City
Ahvaz

Postal code

Phone
+98 61 1391 2301

Fax

Email
rafhee.sh@ajums.ac.ir

Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty

Study Protocol
empty

Statistical Analysis Plan
empty

Informed Consent Form
empty

Clinical Study Report
empty

Analytic Code
empty

Data Dictionary	*empty*