Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Efficacy of intense pulsed light combined with topical erythromycin solution 2% versus topical erythromycin solution 2% alone in the treatment of persistent facial erythematous acne macules

Protocol summary

Summary

Background: There is a necessity for newer acne treatments. Intense pulsed light (IPL) technology has been used for this purpose but there are limited studies in this field. We wanted to examine the efficacy of IPL for the treatment of persistent erythematous macules that remain after inflammatory lesions of facial acne. Methods: We employed 35 patients between January 2010 and June 2011, and our study was terminated in October 2011. The right side of their face was treated by IPL combined with topical erythromycin lotion 2% but topical erythromycin lotion 2% alone was applied on the left side. A non-treating dermatologist counted the number of erythematous macules before every IPL session, and one and three months after the last session

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201201178656N1**
Registration date: **2012-01-21, 1390/11/01**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2012-01-21, 1390/11/01

Registrant information

Name

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Name of organization / entity

Isfahan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2010-01-01, 1388/10/11

Expected recruitment end date

2011-06-30, 1390/04/09

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy of intense pulsed light combined with topical erythromycin solution 2% versus topical erythromycin solution 2% alone in the treatment of persistent facial erythematous acne macules

Public title

Efficacy of IPL in acne

Purpose

Treatment

Inclusion/Exclusion criteria

In our study inclusion criterions were the presence of at least 5 persistent erythematous macules on every side of the patients' face and these macules should be complication of inflammatory acne lesions and these macules should be persistent even with receiving at least two months of standard treatments. Exclusion criterions were oral retinoid use from 6 months before the study, necessity of systemic treatments (i.e. nodulocystic or scarring acne), history of keloid, vitiligo, drugs that

exacerbate or remit acne lesions, history of skin cancer, photosensitivity disorders and history of poor wound healing such as diabetes mellitus

Age
No age limit

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **35**

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
Isfahan University of Medical Sciences Ethics Committee

Street address
Isfahan University of Medical Sciences

City
Isfahan

Postal code

Approval date
2010-03-14, 1388/12/23

Ethics committee reference number
389255

Health conditions studied

1

Description of health condition studied
Acne vulgaris

ICD-10 code
L70.0

ICD-10 code description
Acne vulgaris

Primary outcomes

1

Description
Persistent erythematous macules of facial acne

Timepoint
Before the study, before every IPL session, 1 and 3 months after last IPL session

Method of measurement
Counting and photography

Secondary outcomes

1

Description
Erythema

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

2

Description
Pain

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

3

Description
Photosensitivity

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

4

Description
Swelling

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

5

Description
Blister

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

6

Description
Crusting

Timepoint
One week after every IPL session

Method of measurement
Questionnaire

Intervention groups

1

Description
Intetrvention group is right side of face. we done 3 IPL sessions with 2 weeks interval and also advised the patients to apply topical erythromycin lotion 2% twice daily from start of the study until 3 months after the third IPL session. the setting of IPL was: 530-1100nm wavelength, one pass, fluence of 14-16 J/cm2, and program of 14-18.
Category
Treatment - Devices

2

Description
Control group was left side of face that was only treated by topical erythromycin lotion2% twice daily.
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Hospitals of Isfahan University of Medical Sciences
Full name of responsible person
Street address
City
Isfahan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Isfahan University of Medical Sciences
Full name of responsible person
Dr Peyman Adibi
Street address
Isfahan University of Medical Sciences, al-zahra hospital
City
Isfahan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Isfahan University of Medical Sciences
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
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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