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A study comparing laser hair removal with and without a facial cream in women with excess facial hair

Submission date
08/07/2025

Recruitment status
No longer recruiting

Registration date
22/07/2025

Overall study status
Completed

Last Edited
05/08/2026

Condition category
Skin and Connective Tissue Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Facial hair growth in women, known as hirsutism, can be distressing and affect self-confidence. Intense pulse light (IPL) therapy is commonly used to reduce unwanted hair, but some hair often returns. A cream called eflornithine may help improve results when used with IPL. This study aims to find out whether combining the cream with IPL is more effective than using IPL alone.

Who can participate?
Women aged 18–70 years with moderate to severe unwanted facial hair and otherwise normal hormone levels

What does the study involve?
Participants were randomly assigned to receive either IPL treatment alone or IPL combined with eflornithine cream. IPL was given once every 4 weeks for 6 sessions. Those in the combination group also applied the cream twice daily. All participants were followed for 6 months, and hair reduction and satisfaction were assessed.

What are the possible benefits and risks of participating?
Participants may benefit from reduced facial hair growth and increased confidence. Risks are minor and may include temporary skin redness or dryness. No serious side effects were observed in the study.

Where is the study run from?
Sandeman Provincial Hospital (Pakistan)

When is the study starting and how long is it expected to run for?
August 2023 to February 2024

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
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Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Protocol serial number
CPSP Registration Number: CPSP/REU/DER-2021-001-1429

Study information

Scientific Title
Combination of intense pulse light and topical eflornithine therapy versus intense pulse light alone in the treatment of idiopathic facial hirsutism: a randomised controlled trial

Acronym
IPL-EFL

Study objectives
To assess whether adding topical eflornithine cream to intense pulse light (IPL) sessions provides better hair reduction outcomes than IPL alone in women with idiopathic facial hirsutism.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 01/08/2023, Sandeman Provincial Hospital (Sandeman Provincial Hospital, Quetta, 87300, Pakistan; +92 (0)2138140600; sandeman.hospital@gmail.com), ref: CPSP/REU/DER-2021-001-1429

Primary study design
Interventional

Study design
Open-label two-arm parallel-group randomized controlled trial

Study type(s)
Efficacy

Health condition(s) or problem(s) studied
Idiopathic facial hirsutism

Interventions
Participants were randomised using computer-generated block randomisation with a block size of 8 and a 1:1 allocation ratio. Allocation concealment was achieved using sequentially numbered opaque sealed envelopes.

Intervention Arm (Group A):
Participants receive six sessions of intense pulse light (IPL) therapy at 4-week intervals using a quartz-filtered xenon lamp platform (640 nm cut-off filter). In addition, they apply topical eflornithine hydrochloride 13.9% cream (Vaniqa™) to the affected facial area twice daily for 24 weeks.

Control Arm (Group B):
Participants receive the same six-session IPL therapy protocol at 4-week intervals, but do not use any additional topical treatment.

Intervention Type
Mixed

Primary outcome(s)
Proportion of participants achieving a ≥1-grade reduction on the modified Ferriman–Gallwey (mFG) scale, measured using the validated photographic mFG scale at week 24

Key secondary outcome(s)
1. Mean percentage reduction in terminal hair count, measured using dermoscopic digital photography analysed by Image-J software at baseline and week 24
2. Patient satisfaction scores, measured using a validated 5-point Likert scale at week 24
3. Incidence and severity of treatment-related adverse events, measured using the Common Terminology Criteria for Adverse Events (CTCAE v5.0) at each treatment session and final follow-up (week 24)

Completion date
05/02/2024

Eligibility

Key inclusion criteria
1. Women aged 18–70 years
2. Visible terminal facial hair graded moderate or severe on a validated mFG scale
3. Willing to use broad-spectrum sunscreen

Participant type(s)

Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
70 Years

Sex
Female

Total final enrolment
152

Key exclusion criteria
1. Pregnancy or lactation
2. Endocrine disorders (e.g., polycystic ovary syndrome [PCOS], thyroid disease)
3. Use of hormonal or anti-androgen therapy within 6 months
4. History of light-triggered seizures, keloids, or active facial dermatoses
5. Fitzpatrick skin type VI
6. Prior adverse reaction to eflornithine or IPL

Date of first enrolment
05/08/2023

Date of final enrolment
01/12/2023

Locations

Countries of recruitment
Pakistan

Study participating centre
Sandeman Provincial Hospital
Quetta
Pakistan
87300

Sponsor information

Organisation
Sandeman Provincial Hospital

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		18/08/2025	05/08/2026	Yes	No