Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of the effectiveness of combined treatment of topical minoxidil and PRP(platelet rich plasma) with topical minoxidil alone in patients with moderate to severe female androgenetic alopecia referred to educational clinics Isfahan University of Medical Sciences

Protocol summary

Study aim
Investigating the effect of platelet-rich plasma in the treatment of female androgenetic alopecia

Design
Clinical trial with control group, with parallel groups, randomized, phase 3 on 60 patients. Block randomization is used for randomization.

Settings and conduct
The study is conducted on patients with moderate to severe androgenetic alopecia who refer to the medical centers of Isfahan University of Medical Sciences. After examination, obtaining history and consent, patients who meet the inclusion criteria are randomly divided into two groups. The control group receives 5% topical minoxidil daily, and the intervention group, in addition to the mentioned treatment, is treated with platelet-rich plasma for 3 sessions with one-month intervals. After 6 months from the start of the treatment, the patients are compared and evaluated by means of standard photography and trichogram done at the beginning and end of the treatment.

Participants/Inclusion and exclusion criteria
Inclusion criteria: 1. Patients who are willing to participate in the study. 2. Confirmatory diagnosis of androgenetic alopecia disease by two experts with skin and hair experience. 3. Women aged 18 to 60 years.4. Moderate to severe hair loss. Criteria for not entering the study: 1. Patients suffering from other types of alopecia (such as alopecia areata, telogen effluvium, anagen effluvium and scarring alopecias). 2. Patients with active psoriasis or active lichen planus due to the positive Köbner phenomenon in these diseases. 3. Any serious systemic disease

Intervention groups
The control group receives topical minoxidil, and in the intervention group, in addition to the mentioned case, they are also treated with platelet-rich plasma.

Main outcome variables
Hair thickness, hair density, change of photography score, patient satisfaction

General information

Reason for update

Acronym
(PRP(platelet-rich plasma

IRCT registration information
IRCT registration number: **IRCT20221230056991N1**
Registration date: **2023-01-11, 1401/10/21**
Registration timing: **registered_while_recruiting**

Last update: **2023-01-11, 1401/10/21**
Update count: **0**

Registration date
2023-01-11, 1401/10/21

Registrant information

Name
Arezoo Refaghat

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 31 4266 1508

Email address
arezoorefaghat@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-12-26, 1401/10/05

Expected recruitment end date
2023-09-22, 1402/06/31
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of the effectiveness of combined treatment of topical minoxidil and PRP(platelet rich plasma) with topical minoxidil alone in patients with moderate to severe female androgenetic alopecia referred to educational clinics Isfahan University of Medical Sciences

Public title
Investigating the effect of platelet-rich plasma in androgenetic alopecia
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Patients willing to participate in the study Confirmatory diagnosis of androgenetic alopecia disease by two experts with skin and hair experience Women aged 18 to 60 years Moderate to severe hair loss
Exclusion criteria:
Patients suffering from other types of alopecia (such as alopecia areata, telogen effluvium, anagen effluvium and scarring alopecias) Patients with active psoriasis or active lichen planus due to the positive Köbner phenomenon in these diseases Any serious systemic disease
Age
From **18 years** old to **60 years** old
Gender
Female

Phase
3
Groups that have been masked
No information
Sample size
Target sample size: **60**
Randomization (investigator's opinion)
Randomized
Randomization description
First, the patients will be included in the study by convenience sampling method. Then the patients are randomly divided into 2 main groups. In each group, we use the limited randomization method of the block randomization type, in such a way that the groups consist of 15 blocks of 4, including 2 A and 2 B.
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethical Committee of Isfahan University of Medical Sciences
Street address
Hazarjarib Street, Isfahan University of Medical Sciences
City
Isfahan
Province
Isfehan
Postal code
8174673461
Approval date
2022-12-25, 1401/10/04
Ethics committee reference number
IR.MUI.MED.REC.1401.337

Health conditions studied

1

Description of health condition studied
Androgenetic alopecia
ICD-10 code
L64
ICD-10 code description
Androgenic alopecia

Primary outcomes

1

Description
Increase density and thickness of hair
Timepoint
The beginning of the study and 6 months after the start of the study
Method of measurement
Trichogram, standard photography

Secondary outcomes

1

Description
Patient satisfaction score, doctor satisfaction score
Timepoint
The beginning of the study and 6 months after the start of the study
Method of measurement
A 10-point questionnaire is assigned for the patient's satisfaction, as well as a 10-point questionnaire that is completed by the doctor based on the comparison of the

standard photography score and the comparison of the trichogram (checking the thickness and density of the hair).

Intervention groups

1

Description
Control group: Receive topical minoxidil foam 5% once a day
Category
Treatment - Drugs

2

Description
Intervention group: Receiving topical minoxidil foam 5% once a day and injecting platelet-rich plasma 3 sessions at one-month intervals
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Al-Zahra Hospital
Full name of responsible person
Arezoo refaghat
Street address
Sefe Boulevard
City
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8169663363
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arezoorefaghat@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Esfahan University of Medical Sciences
Full name of responsible person
Vice President of Technology and Research of Isfahan University of Medical Sciences
Street address
Hazarjarib St., Isfahan University of Medical Sciences, Building No. 4, Research and Technology Vice-Chancellor of the University
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research@mui.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Esfahan University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Esfahan University of Medical Sciences
Full name of responsible person
Arezoo Refaghat
Position
Resident
Latest degree
Medical doctor
Other areas of specialty/work
Dermatology
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available