

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

30 May 2026

### Comparison of the therapeutic effects of 5% Minoxidil solution alone with 5% Minoxidil solution and 0.005% Latanoprost in men with androgenetic alopecia

#### Protocol summary

##### Study aim

Determining and comparing the therapeutic effects of minoxidil solution alone with the combined solution of minoxidil and latanoprost in patients with androgenetic alopecia

##### Design

Clinical trial, with parallel, double-blind, randomized groups

##### Settings and conduct

50 patients referred to the dermatology clinic of Al-Zahra Hospital in Isfahan, after confirming the conditions for admission to the study and fully explaining the process and purpose of the study, and completing informed moral consent, are individually and randomly divided into two groups. This is a double-blinded study and the participants and the evaluator are unaware of the type of drug used for each person. Subjects are randomly divided into two treatment groups: Minoxidil 5%, Latanoprost 0.005% and Minoxidil 5%.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: The diagnosis of androgenic alopecia based on Hamilton diagnostic criteria, the severity of hair loss 2 to 5 according to Hamilton criteria and stages 1 and 2 according to Ludwig scale and patient satisfaction to participate in the study. Exclusion criteria: having a history or observation of allergies to any of the Minoxidil and Latanoprost drugs, having a history of heart disease and taking blood pressure medications, other types of alopecia such as alopecia areata, any systemic skin disease

##### Intervention groups

In this study, patients in one group consumed 1.5 cc of minoxidil solution, each solution equivalent to 20 drops twice a day, and in the other group, consumed a combination of latanoprost 0.005% and minoxidil 5% in the same way for 6 months.

##### Main outcome variables

Hair density; Severity of hair loss

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20211228053553N1**

Registration date: **2022-01-09, 1400/10/19**

Registration timing: **registered\_while\_recruiting**

Last update: **2022-01-09, 1400/10/19**

Update count: **0**

##### Registration date

2022-01-09, 1400/10/19

##### Registrant information

##### Name

Amirhossein Bagherkamareh

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2613 8376

##### Email address

abagherkamareh@ymail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-12-30, 1400/10/09

##### Expected recruitment end date

2022-02-09, 1400/11/20

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

Comparison of the therapeutic effects of 5% Minoxidil solution alone with 5% Minoxidil solution and 0.005% Latanoprost in men with androgenetic alopecia

**Public title**

Evaluation of the effect of Latanoprost in the treatment of androgenetic alopecia

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Satisfaction of the patient and his family to participate in the study Confirmation of androgenetic alopecia by two experienced dermatologists based on Hamilton diagnostic criteria Age 18 to 45 years 2 to 5 hair loss severity according to Hamilton criteria The duration of hair loss is less than 10 years

**Exclusion criteria:**

History or observation of allergies to any of the drugs Minoxidil and Latanoprost, history of heart disease and use of antihypertensive drugs Receiving systemic treatment for androgenic alopecia during the 6 months before the study of other types of alopecia such as alopecia areata, telogen effluvium, anagen effluvium scarring alopecia, any systemic skin disease

**Age**

From **18 years** old to **45 years** old

**Gender**

Male

**Phase**

3

**Groups that have been masked**

- Participant
- Outcome assessor

**Sample size**

Target sample size: **50**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

50 eligible patients were selected and after studying the informed consent form; in a simple and individual random method with the help of random allocation software, each patient was assigned a number and divided into two groups by random allocation.

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

The two solutions of minoxidil and the combined solution of latanoprost and minoxidil are already prepared by the pharmacist in the same volume and with the same color and shape, and are marked with codes A and B and will be given to the patients. Therefore, the patient and the researcher will not have any information about the two prescription solutions.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics Committee of Isfahan University of Medical Sciences

**Street address**

Azadi Square, Hezar Jerib Street

**City**

isfahan

**Province**

Isfahan

**Postal code**

8174673461

**Approval date**

2021-02-24, 1399/12/06

**Ethics committee reference number**

IR.MUI.MED.REC.1399.1078

**Health conditions studied****1****Description of health condition studied**

Androgenic alopecia

**ICD-10 code**

L64.9

**ICD-10 code description**

Androgenic alopecia, unspecified

**Primary outcomes****1****Description**

Severity of hair loss

**Timepoint**

Before and after the intervention

**Method of measurement**

By a skilled physician based on Hamilton-Norwood for male pattern hair loss

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Intervention group: Patients in the first intervention group consume 1.5 cc of minoxidil solution, each solution

equivalent to 20 drops twice a day for 6 months.

**Category**

Treatment - Drugs

**2****Description**

Intervention group: Patients in the second intervention group consume a combination of latanoprost 0.005% and minoxidil 5% for 6 months.

**Category**

Treatment - Drugs

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Alzahra hospital

**Full name of responsible person**

Nazila poostiyan

**Street address**

Soffe Boulevard, Isfahan

**City**

isfahan

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8174675731

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N.poostiyan@med.mui.ac.ir

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Esfahan University of Medical Sciences

**Full name of responsible person**

Shaghayegh Hagh Jooi Javanmard

**Street address**

Isfahan, Hezar Jerib St., School of Medicine, Vice  
Chancellor for Research

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dean@med.mui.ac.ir

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

**Title of funding source**

Isfahan 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**

Nazila poostiyan

**Position**

Associate Professor

**Latest degree**

Specialist

**Other areas of specialty/work**

Dermatology

**Street address**

Hezar Jerib St., Al-Zahra Hospital, Dermatology  
Department

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**Email**

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**Person responsible for scientific inquiries****Contact****Name of organization / entity**

Esfahan University of Medical Sciences

**Full name of responsible person**

Nazila poostiyan

**Position**

Associate Professor

**Latest degree**

Specialist

**Other areas of specialty/work**

Dermatology

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**Person responsible for updating data****Contact****Name of organization / entity**

Esfahan University of Medical Sciences

**Full name of responsible person**

Amirhossein Bagherkamareh

**Position**

Student

**Latest degree**

A Level or less

**Other areas of specialty/work**

General Practitioner

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Bahonar street, Omodvar Ave

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Tehran

**Province**

Tehran

**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

**Justification/reason for indecision/not sharing IPD**

There is no more information

**Study Protocol**

No - There is not a plan to make this available

**Statistical Analysis Plan**

No - There is not a plan to make this available

**Informed Consent Form**

No - There is not a plan to make this available

**Clinical Study Report**

No - There is not a plan to make this available

**Analytic Code**

No - There is not a plan to make this available

**Data Dictionary**

No - There is not a plan to make this available