

# The effectiveness of platelet-rich plasma injection in the treatment of forehead wrinkles

<b>Submission date</b> 03/10/2024	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 04/10/2024	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 04/10/2024	<b>Condition category</b> Skin and Connective Tissue Diseases	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Wrinkles are considered one of the most common signs of ageing and interventions aimed at treating them are among the most common interventions in cosmetic clinics that pose a challenge to the doctor. A number of materials have been used in treating wrinkles, each of which has advantages and disadvantages. Microneedling has been used in treating wrinkles and skin problems such as pigmentation and scars because it stimulates the formation of collagen. Therefore, this study aimed to increase the effectiveness of microneedling by combining it with platelet-rich plasma injections.

### Who can participate?

Women aged 30 - 50 years with forehead wrinkles

### What does the study involve?

Participants were randomly divided into two groups. The first group underwent three sessions of microneedling using the Dermapen device with 21-day time intervals between sessions. The second group underwent three sessions of microneedling using the Dermapen device followed by platelet-rich plasma injections with 21-day time intervals between sessions. The results were then compared by a committee of specialists at 6 months after the last intervention.

### What are the possible benefits and risks of participating?

The possible benefits are the improvement of wrinkles. There are no expected risks but some pain and edema (swelling) could happen in some cases.

### Where is the study run from?

Damascus University (Syria)

### When is the study starting and how long is it expected to run for?

May 2023 to December 2024

### Who is funding the study?

Damascus University (Syria)

Who is the main contact?  
Dr Ahmad Aleed, ahmadaleed004@gmail.com

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Dr Ahmad Aleed

### Contact details

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## Additional identifiers

### Protocol serial number

DN-02092024-307

## Study information

### Scientific Title

Evaluation of the effectiveness of platelet-rich plasma injection after microneedling by Dermapen device in the treatment of forehead wrinkles

### Acronym

EPMW

### Study objectives

Dermopen is effective at treating wrinkles

### Ethics approval required

Ethics approval required

### Ethics approval(s)

approved 19/05/2023, Damascus University Biomedical Research Ethics Committee (Damascus, Damascus, 12110, Syria; +963 (0)1133923482; ap.srd@damascusuniversity.edu.sy), ref: DN-02092024-307

### Study design

Double-blind randomized controlled trial

### Primary study design

Interventional

**Study type(s)**

Quality of life, Treatment, Safety, Efficacy

**Health condition(s) or problem(s) studied**

Forehead wrinkles

**Interventions**

The research sample was divided into two groups using a coin method. The first group underwent three sessions of microneedling using the Dermapen device with 21-day time intervals between sessions, which is the control group. The second group underwent three sessions of microneedling using the Dermapen device, followed by platelet-rich plasma injections with 21-day time intervals between sessions, which is the study group. The results were then compared by a committee of five specialists at 6 months after the last intervention.

**Intervention Type**

Mixed

**Primary outcome(s)**

Wrinkle grade is measured using the Allergan Forehead Line scale at baseline and 6 months after the last intervention

**Key secondary outcome(s)**

Improvement measured using the Subject Global Aesthetic Improvement Scale (SGAIS) at baseline and 6 months after the last intervention

**Completion date**

30/12/2024

**Eligibility****Key inclusion criteria**

1. Female
2. 30 - 50 years

**Participant type(s)**

Patient, Other

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

30 years

**Upper age limit**

50 years

**Sex**

Female

**Total final enrolment**

20

**Key exclusion criteria**

Does not meet the inclusion criteria

**Date of first enrolment**

25/09/2023

**Date of final enrolment**

22/06/2024

## Locations

**Countries of recruitment**

Syria

**Study participating centre**

**Damascus University**

Damascus

Damascus

Syria

12110

## Sponsor information

**Organisation**

Damascus University

**ROR**

<https://ror.org/03m098d13>

## Funder(s)

**Funder type**

University/education

**Funder Name**

Damascus University

**Alternative Name(s)**

University of Damascus, , DU

**Funding Body Type**

Government organisation

**Funding Body Subtype**

Universities (academic only)

**Location**

Syria

## **Results and Publications**

**Individual participant data (IPD) sharing plan**

The datasets generated and/or analysed during the current study will be published as a supplement to the results publication

**IPD sharing plan summary**

Published as a supplement to the results publication