Clinical Trial Protocol
Iranian Registry of Clinical Trials

04 Aug 2026

Aspirin administration from early pregnancy versus initiation after 11 week’s gestations, for prevention of pre-eclampsia in high-risk pregnant women.

Protocol summary

Study aim
prevention of occurrence of early and late preeclampsia

Design
Randomized clinical trial.Assessor-blinded. Two intervention groups and control group.

Settings and conduct
At each visit, the presence of edema or preeclampsia symptoms are noted and recorded. In addition, participants are assessed for possible aspirin side effects. Participants are randomly selected to receive low-dose aspirin, either before 11 weeks’ gestation (optimally from the detection of the fetal heart beat) in the intervention group or after 11 weeks in the control group. The cut-off gestational age to receive aspirin is 16 weeks in the control group. In both groups, the initial dose of aspirin is 80 mg per day. In both groups, aspirin will be continued until 36 weeks or in the case of premature delivery. At 11_13 weeks and 6 days, when the gestational age is confirmed by an ultrasound study of the CRL measurement through the fetal NT measurement, the UTA-PI of uterine arteries is assessed transabdominally. In addition, a combined test for aneuploidy screening is requested through measuring the maternal serum free β-hcG and PAPP-A. If there are criteria in both groups including: PAPP-A < 0.4 in the first trimester or preeclampsia risk more than or equal1 ⁄ 100 to in aneuploidy screening test or in color doppler ultrasound (the mean UTA-PI>95th percentile or bilateral notching), the initial dose of aspirin, which is 80 mg, is changed to 150 mg per day.

Participants/Inclusion and exclusion criteria
The participants are pregnant women at high-risk for preeclampsia according to the ACOG and USPSTF and SMFM guidelines. Exclusion criteria: mentioned on he previous page.

Intervention groups
intervention group: early start of aspirin Control group: routine intervention

Main outcome variables
Early and late preeclampsia

General information

Reason for update
Hello, No major change have been made in the process and metodology of the trial,except for subtleties that help the audience to better and secondly,our tudy include two main parts. The first part, which has been approed in this center,is being done and the results will be announced later. And in the from of a pilo study, as well as the feaibility of conducting the main study and solving possible problems and defects on it way, it has started with 200 participants from January 2023. The second part includes the main RCT with the same metodology. For this eason, this request was made to provide a possibility to accelerate the start of the main trial, considering the success of the pilot tudy process for feasibility in he last 6 months. Thank you very much.

Acronym

IRCT registration information
IRCT registration number: **IRCT20221126056611N1**
Registration date: **2023-01-07, 1401/10/17**
Registration timing: **prospective**

Last update: **2023-12-21, 1402/09/30**
Update count: **3**

Registration date
2023-01-07, 1401/10/17

Registrant information

Name
Arezoo Behzadian

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone

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Email address

dr.behzadian@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-01-08, 1401/10/18

Expected recruitment end date

2023-12-08, 1402/09/17

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Aspirin administration from early pregnancy versus initiation after 11 week’s gestations, for prevention of pre-eclampsia in high-risk pregnant women.

Public title

Aspirin administration from early pregnancy versus initiation after 11 week’s gestations, for prevention of pre-eclampsia in high-risk pregnant women.

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

The participants are pregnant women at high-risk for preeclampsia based on demographic characteristics and personal and obstetrics history, according to the ACOG and USPSTF and SMFM guidelines.

Exclusion criteria:

1) Hypersensitivity to nonsteroidal anti-inflammatory drug products 2) Asthma-rhinitis and nasal polyps 3) Sever renal or sever hepatic impairment. 4) History of gastrointestinal bleeding or active peptic ulcer disease 5) vaginal bleeding or significant hematoma on ultrasound. 6)gestational age > 16 week

Age

No age limit

Gender

Female

Phase

3

Groups that have been masked

- Data analyser

Sample size

Target sample size: **200**

Randomization (investigator's opinion)

Randomized

Randomization description

Block Randomization, with random blocks of 4 alleles and with a size of 8. Group A is the intervention group and B is the control group Pregnant women who go to the prenatal clinic for pregnancy care are checked for eligibility for the study based on the study criteria. People who meet the study conditions will be candidates for the study. Based on the following blocks, they will be assigned to the intervention or control group, respectively. The intervention group or A will start aspirin earlier and at the beginning of the first trimester of pregnancy, and the participants who will be assigned to the control group, or B will receive the routine protocol of aspirin at the end of the first trimester. How to randomly: will be based on random 4 allelic blocks: In the execution method for randomization we use the following site to determine the sequences : https://www.sealdenvelope.com/simple - randomiser/v1/lists

Blinding (investigator's opinion)

Single blinded

Blinding description

Due to the nature of the intervention, neither participants nor researchers can be blinded to allocation. However, assessments will be conducted by a blind analyzer for trial allocation.

Placebo

Not used

Assignment

Parallel

Other design features

We calculated that the enrollment of 1792 patients in a 1:1 ratio of distribution (896 patients in each group) would provide the trial with a power of 90% (alpha level of 5%). If we allow for a 10% loss to follow-up, the sample size will reach 986 participants in each group. A total of 1972 eligible participants will be randomly entered into the trial arms. We proposed the sample size of 200 high-risk pregnancies for the pilot study and quality control of the center to perform the main RCT. We reached this sample size by screening 1686 pregnant women who referred to Maternal- Fetal Hospital Clinic. After taking written conscious consent, from January 2023, the trial with 100 participants in each group started with a ratio of 1:1, randomly.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committees of Imam Khomeini Hospital Complex- Tehran University of Medical Sciences

Street address

KeshavarzBlvd.

City

Tehran

Province

Tehran

Postal code

1419733141

Approval date

2022-10-18, 1401/07/26

Ethics committee reference number

IR.TUMS.IKHC.REC.1401.215

Health conditions studied

1

Description of health condition studied

High Risk Pregnancy for preeclampsia

ICD-10 code

Z35

ICD-10 code description

Supervision of high-risk pregnancy

Primary outcomes

1

Description

Pre-eclampsia: Hypertension with proteinuria occurs for the first time after the 20th week of pregnancy. According to the definition of systolic blood pressure >= 140 mm Hg and diastolic blood pressure >= 90 mm Hg recorded at least during two measurements with an interval of 4 hours, along with one or more of the following that occurred for the first time after 20 weeks. given

Timepoint

The visit intervals of the participants are montly, up to 28 weeks, every two weeks up to 32 weeks, and weekly up to 36 weeks.

Method of measurement

1- Proteinuria: Excretion >=30 mg/mol in the protein/creatinine ratio; or >=300 mg in 24-hour urine; or >=2+ in urine dipstic test.2- Evidence of dysfunction of the organs of the mother's body: including acute kidney damage (creatinine >=1 mg/dL); Liver involvement (increase of transaminases including alanine aminotransferase or aspartate aminotransferase >=40 iu/l); with or without pain in the epigastric region, neurological complications (eclampsia-altered state of consciousness-blurred vision-clonus-severe headache-persistent visual scotoma); or hematological changes (thrombocytopenia-diffuse intravascular coagulopathy-hemolysis).3- Utero-placental dysfunction: such as intrauterine growth restriction, abnormal Doppler of the umbilical artery or fetal death).

Secondary outcomes

1

Description

Incidence of Small for gestational age (<5th centile) requiring delivery at<34 weeks and <37weeks

Timepoint

by performing serial biometrics during pregnancy

Method of measurement

ulrasound

2

Description

Incidence of Stillbirth or Intrauterine Fetal Death (IUFD) at≥20 weeks.

Timepoint

by performing serial ultrasound during pregnancy

Method of measurement

ultrasound

3

Description

Incidence of Spontaneous preterm delivery at<34 weeks and <37weeks

Timepoint

routine visits

Method of measurement

history and examination

4

Description

Respiratory distress syndrome, defined as need for surfactant and ventilation as a result of prematurity.

Timepoint

after the birth

Method of measurement

examination

5

Description

Admission to Neonate Intensive Care Unit

Timepoint

After the birth

Method of measurement

examination of newborn

6

Description

Incidence of placental abruption (clinically or on placental examination)

Timepoint

at the delivery

Method of measurement

clinical examination

7

Description

Ventilation requirement is defined as the need for positive pressure

Timepoint

after the birth

Method of measurement

clinical examination

8

Description

Neonatal anomaly especially gastroschisis

Timepoint

During the fetal period and at the time of birth

Method of measurement

with ultrasound during pregnancy and postnatal examinations

Intervention groups

1

Description

Intervention group: pregnant mothers are at high risk for preeclampsia, who take a low-dose aspirin 80 or 100 mg daily at night, at bedtime, from the beginning of the first trimester. Control group: pregnant mothers are at high risk for preeclampsia, who follow the routine protocol In the second trimester, they will have a low-dose aspirin tablet of 80 or 100 mg at night at bedtime.

Category

Prevention

2

Description

Control group: routine method of prevention of preeclampsia : in this group high risk pregnant mothers for preeclampsia who were randomly placed in this group according to the routine method that exists in the whole word and currently .It means prescribing a daily low dose aspirin pill in the above method starts from the end of the first trimester(from 12 to 14_15 weeks).

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Vali-E-Asr, Imam Khomeini Complex

Full name of responsible person

Arezoo Behzadian

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

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Email

RESEARCH@TUMS.AC.IR

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Arezoo Behzadian

Position

Perinatology Fellowship resident

Latest degree

Specialist

Other areas of specialty/work

Gynecology and Obstetrics

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Person responsible for scientific inquiries

Contact

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Arezoo Behzadian

Position
perinatology fellowship assistant

Latest degree
Specialist

Other areas of specialty/work
Gynecology and Obstetrics

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Person responsible for updating data

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Position
perinatology fellowship assistant

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Yes - There is a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
Final Report & Article

When the data will become available and for how long
6 months after the end of study

To whom data/document is available
Family Health Research Institute Research deputy of University

Under which criteria data/document could be used
As final report and Manuscript

From where data/document is obtainable
Family Health Research Institute

What processes are involved for a request to access data/document
The published article is available to the public. The final report will be provided following the written request

Comments