

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of effect of oral Ritodrine on implantation rate in the in vitro fertilization (IVF)+ embryo transfer (ET) cycles in the infertile women: a randomized controlled trial

Protocol summary

Summary

Background: Pregnancy rate with IVF cycle is almost 22%. Many investigations perform to increase the IVF result. Various factors affect on the result of IVF cycles and increasing the pregnancy rate as well. One of these factors could be uterine contractions that expel transferred embryo. Ritodrine is a Beta mimetic agent that can block and decrease uterine contractions and consequently increases implantation rate of embryo. Objective: The objective of this study was to determine effectiveness of ritodrine for increasing the implantation rate in IVF cycles and embryo transfer. Materials and methods: A total of 100 patients of IVF+ ET cycles were divided randomly in two groups in Fatemeh university hospital, Hamadan. The case group were prescribed ritodrine 10 mg / bid orally after oocyte retrieval until 10 day in addition to usual drugs: ASA, progesterone, folic acid and erythromycin according to protocol. In the control group prescribed only usual drugs including: ASA, progesterone, folic acid and erythromycin. Ovulation stimulation protocol, puncture and embryo transfer were same in both groups. Evaluation of beta hCG by radioimmunoassay and embryo implantation by sonography were done for each group 12 days after intervention. Inclusion criteria: having a morphologically normal uterus; infertility from tubal; male, endometriosis or unexplained factors; infertility over than 5 years. Excluding criteria: existing the known systemic diseases in both groups

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201105316665N1**
Registration date: **2011-07-24, 1390/05/02**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2011-07-24, 1390/05/02

Registrant information

Name

Soghra Rabiee

Name of organization / entity

Hamadan University of Medical Science

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Hamadan University of Medical Science- Vice Chancellor for Research

Expected recruitment start date

2007-04-04, 1386/01/15

Expected recruitment end date

2008-04-18, 1387/01/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of effect of oral Ritodrine on implantation rate in the in vitro fertilization (IVF)+ embryo transfer (ET) cycles in the infertile women: a randomized controlled trial

Public title

infertility treatment

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: having a morphologically normal uterus; infertility from tubal; male, endometriosis or unexplained factors; infertility over than 5 years.

Excluding criteria: existing the known systemic diseases in both groups

Age

From **25 years** old to **45 years** old

Gender

Female

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **100**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

1

Registry name

no

Secondary trial Id

no

Registration date

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Hamadan University of Medical Science

Street address

Opposite Mardum Park, Shahid Fahmideh Street, University of Medical Science

City

Hamadan

Postal code

Approval date

2010-02-09, 1388/11/20

Ethics committee reference number

165749

Health conditions studied

1

Description of health condition studied

Infertility

ICD-10 code

Z31.2

ICD-10 code description

In vitro fertilization

Primary outcomes

1

Description

beta hCG

Timepoint

two weeks

Method of measurement

radioimmunoassay

Secondary outcomes

1

Description

embryo implantation

Timepoint

immediately after beta hCG positivity (two weeks after than intervention)

Method of measurement

ultrasonography

Intervention groups

1

Description

Intervention group: were stimulated with a GnRH agonist and exogenous gonadotropins with long protocol and were prescribed ASA, progesterone, folic acid and erythromycin. On the day after oocyte retrieval, all patients in the case group received oral ritodrine 10 mg/ bid for ten days.

Category

Treatment - Drugs

2

Description

Control group: were stimulated with a GnRH agonist and exogenous gonadotropins with long protocol and were prescribed ASA, progesterone, folic acid and erythromycin

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Infertility Treatment Center, Fatemieh Hospital,
Hamadan, Iran

Full name of responsible person

Dr Soghra Rabiee

Street address

Fatemieh Hospital, Pasdaran Street, Hamadan, Iran

City

Hamadan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research, Hamadan University of
Medical Science,

Full name of responsible person

Dr Ali Ghaleiha

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Chancellor for Research, Shahid Fahmideh Street,
Opposite Park Mardum, Hamadan University of
Medical Science

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Hamadan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice Chancellor for Research, Hamadan University of
Medical Science,

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

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Full name of responsible person

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Position

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty
Informed Consent Form
empty
Clinical Study Report
empty

Analytic Code
empty
Data Dictionary
empty