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 Fatemieh 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, progestrone, folic acid and erythromycin according to protocol. In the control group prescribed only usual drugs including: ASA, progestrone, 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

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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 Scinece
Street address
Opposite Mardum Park, Shahid Fahmideh Street, University of Medical Science
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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, progestrone, 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, progestrone, 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

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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