INPLASY PROTOCOL

To cite: Liu et al. Endometrial scratch in women undergoing one or two previous failed in vitro fertilization: a protocol for systematic review and meta analysis. Inplasy protocol 2020110051. doi: 10.37766/inplasy2020.11.0051

Received: 12 November 2020

Published: 12 November 2020

Corresponding author:
Rui Liu

lr@stu.cdutcm.edu.cn

Author Affiliation:
Hospital of Chengdu University of Traditional Chinese Medicine

Support: **None.**

Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
All authors involved in this work have no conflicts of interest.

Endometrial scratch in women undergoing one or two previous failed in vitro fertilization: a protocol for systematic review and meta analysis

Liu, R[1]; Zhou, Y[2]; Hu, H[3]; Xie, P[4]; Bao, S[5]; Chao, Y[6].

Review question / Objective: **The endometrial scratch in women undergoing one or two previous failed in vitro fertilization is beneficial or harmful?**
Condition being studied: **In last two decades, a large number of studies have shown that endometrial scratching can increase the implantation rate and pregnancy rate. But a latest multicenter randomized controlled trial found that this behavior is not conducive to pregnancy.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 November 2020 and was last updated on 30 November 2020 (registration number INPLASY2020110051).

INTRODUCTION

Review question / Objective: **The endometrial scratch in women undergoing one or two previous failed in vitro fertilization is beneficial or harmful?**

Condition being studied: **In last two decades, a large number of studies have shown that endometrial scratching can increase the implantation rate and pregnancy rate. But a latest multicenter randomized controlled trial found that this behavior is not conducive to pregnancy.**

METHODS

Search strategy: **An experienced research librarian will search the following database: MEDLINE, Embase, the Cochrane Library, PubMed, Web of Science, Scopus and its Secondary Documents. The time is until**

October 31, 2020. The search will employ the following key words: MeSH terms (endometrial injury OR endometrial scratch OR endometrial biopsy OR endometrial sampling OR Pipelle biopsy OR Pipelle) AND All fields (IVF failure OR In vitro fertilization failure OR implantation failure OR implantation defect OR ICSI OR Intracytoplasmic sperm injection). And we use a study filter for randomized controlled trials and limited to "human studies".

Participant or population: Inclusions: infertile women indicated for IVF-ET treatment after one or two previous ET failure.

Intervention: Endometrial scratching achieved by pipelle or other devices.

Comparator: Infertile women indicated for IVF-ET treatment after one or two previous ET failure without endometrial scratching.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: Only married women meet the inclusion criteria. The patient needs to be over 18 years old.

Information sources: Electronic databases.

Main outcome(s): Clinical pregnancy rate (per women): defined as the presence of a gestational sac on transvaginal ultrasound or other definitive clinical signs.

Additional outcome(s): Live birth rates (per woman): defined as the delivery of one or more living infants. Ongoing pregnancy rate (per women): defined as the presence of a living intrauterine fetus on transvaginal ultrasound at the 12th week of gestation. Ectopic pregnancy rate (per clinical pregnancy): defined as a pregnancy that implants outside of the uterus. Multiple pregnancies (per women): defined as the presence of more than one gestational sac on transvaginal ultrasound. Miscarriage rate (per clinical pregnancy): defined as fetal loss prior to the 20th week of gestation.

Quality assessment / Risk of bias analysis: Risk of bias will be assessed by two independent reviewers using the Cochrane Collaboration tool to assess risk of bias for randomized controlled trials.

Strategy of data synthesis: We will use the statistical program Review Manager (RevMan) to calculate the effect sizes as the Cochrane Collaboration has endorsed this program. The effect size will be stated along with a 95% confidence interval and presented as well in a graphical representation (i.e., forest plots). The pool estimates of effect will be calculated using random-effects model with Mantel-Haenszel statistics. Heterogeneity will be calculated using the statistical program (p value for χ^2 for heterogeneity) and will also be informed using the I^2 statistic, following the recommendations of The Cochrane Collaboration, where a result between 0 to 40% indicates not important heterogeneity, 30 to 60% moderate, 50 to 90% substantial and 75 to 100% high heterogeneity.

Subgroup analysis: 1. Type of treatment: fresh IVF or fresh ICSI or cryo transfer 2. Endometrial scratching timing: Luteal phase or Follicular phase or other 3. Type of devices: pipelle or other devices.

Sensibility analysis: We will perform sensitivity analysis based on the sample size, methodological quality, and the impact of missing information when the heterogeneity is high.

Language: English.

Country(ies) involved: China.

Keywords: endometrial scratch, IVF/ICSI, endometrial receptivity, Female infertility.

Contributions of each author:
Author 1 - Rui Liu.
Author 2 - Yunxia Zhou.
Author 3 - Huangyu Hu.
Author 4 - Ping Xie.
Author 5 - Shuting Bao.
Author 6 - Yuxuan Chao.