

Endometrial Scratching

Endometrial scratching in women with one failed IVF/ICSI cycle: results of a randomized controlled trial (SCRaTCH trial)

N.E. Van Hoogenhuijze 1 , H.L. Torrance 1 , SCRaTCH study group(2), M.J.C. Eijkemans 1 , F.J.M. Broekmans 1

Increased miscarriage rates following follicular-phase endometrial scratching

S. Mackens 1 , A. Racca 1 , H. Van de Velde 1 , H. Tournaye 1 , D. Stoop 1 , C. Blockeel 1 , S. Santos-Ribeiro 2

Antonio Rodrigues – Medfem Fertility Clinic



Scratch Trial

Study question: Does mid-luteal endometrial scratching prior to the stimulation cycle increase pregnancy rates in women with one failed IVF/ICSI cycle?

What is known already:

Previous trials on endometrial scratching - methodological limitations and high risk of bias.

Even the recent large, properly designed PIP trial:

- Very heterogeneous study population was included
- The timing of scratching was not standardized (scratching was permitted at any time during a ~30 day time frame before start of stimulation)

Unclear whether this procedure improves pregnancy rates.

Study design, size, duration

- A multicenter, non-blinded, randomized controlled trial - January 2016 and July 2018 in the Netherlands.
- Women were allocated 1:1 to endometrial scratching or no procedure
- Using an expected difference in live birth rate (LBR) after the IVF/ICSI cycle following randomization of 9% (39% vs. 30%, respectively), the sample size was set at 900 participants (80% power and two-sided alpha of 0.05).

Participants/materials, setting, methods:

- Participants with a failed first IVF/ICSI cycle (≥ 1 embryo transfer) were eligible.
- Endometrial scratching was performed using an endometrial biopsy catheter in the mid-luteal phase prior to ovarian stimulation.
- The primary outcome was LBR from the fresh embryo transfer post-randomization.
- Secondary outcomes included cumulative pregnancy outcomes. This abstract reports preliminary complete case results for the secondary outcomes biochemical and clinical pregnancy rate (BPR; CPR), as the 12-month follow-up period and data collection are still ongoing.

Main results and the role of chance

A total of 942 women were included in the trial (471 scratch/471 control) - The participation rate was 89% (942/1060 eligibles)

The BPR was 34.3% (137/399) in the scratch and 30.9% (119/385) in the control group (RR 1.11 [95%CI 0.91-1.36]).

The CPR was 26.9% (105/390) in the scratch and 26.1% (99/380) in the control group (RR 1.03 [95%CI 0.82-1.31]).

OPR and LBR still need to be reported

Preliminary analysis of this second largest RCT with strict inclusion criteria and standardized scratching method showed:

1. a small but non-significant difference in BPR.
2. no difference in CPR.

Follow-up will show if endometrial scratching results in a clinically important difference for LBR or cumulative pregnancy outcomes (12-month follow-up)



Increased miscarriage rates following follicular-phase endometrial scratching

S. Mackens 1 , A. Racca 1 , H. Van de Velde 1 , H. Tournaye 1 , D. Stoop 1 , C. Blockeel 1 , S. Santos-Ribeiro 2

- Study question: Does intentional endometrial injury (scratching) during the follicular phase of ovarian stimulation (OS) increase pregnancy rates in ART?
- 200 patients randomized to either undergo an endometrial biopsy between day 6 to 8 of OS or to be in the control group.
- The primary outcome CPR 7 weeks.
- Secondary outcomes included live birth, early pregnancy loss, procedure pain/bleeding and cumulative live birth following all ETs performed within 6 months of the study cycle
- Summary answer: Pregnancy rates did not vary significantly between the endometrial injury and the control group. **However, significantly higher clinical miscarriage rates were observed after endometrial injury.**