

Endometrial scratch injury before intrauterine insemination: is it time to re-evaluate its value? Evidence from a systematic review and meta-analysis of randomized controlled trials.

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ABSTRACT

OBJECTIVE: To assess the impact of endometrial scratch injury (ESI) on the outcomes of intrauterine insemination (IUI) stimulated cycles.

DESIGN: Systematic review and meta-analysis.

SETTING: Not applicable.

PATIENT(S): Infertile women undergoing one or more IUI stimulated cycles.

INTERVENTION(S): Randomized controlled trials (RCTs) were identified by searching electronic databases. We included RCTs comparing ESI (i.e., intervention group) during the course of IUI stimulated cycle (C-ESI) or during the menstrual cycle preceding IUI treatment (P-ESI) with controls (no endometrial scratch). The summary measures were reported as odds ratio (OR) with 95% confidence-interval (CI).

MAIN OUTCOME MEASURE(S): Clinical pregnancy rate, ongoing pregnancy rate, multiple pregnancy rate, ectopic pregnancy rate, miscarriage rate.

RESULT(S): Eight trials were included in the meta-analysis, comprising a total of 1,871 IUI cycles. Endometrial scratch injury was associated with a higher clinical pregnancy rate (OR 2.27) and ongoing pregnancy rate (OR 2.04) in comparison with the controls. No higher risk of multiple pregnancy (OR 1.09), miscarriage (OR 0.80), or ectopic pregnancy (OR 0.82) was observed in patients receiving ESI. Subgroup analysis based on ESI timing showed higher clinical pregnancy rate (OR 2.57) and ongoing pregnancy rate (OR 2.27) in patients receiving C-ESI and no advantage in patients receiving P-ESI.

CONCLUSION(S): Available data suggest that ESI performed once, preferably during the follicular phase of the same cycle of IUI with flexible aspiration catheters, may improve clinical pregnancy and ongoing pregnancy rates in IUI cycles. Endometrial scratch injury does not appear to increase the risk of multiple pregnancy, miscarriage, or ectopic pregnancy.