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Gonadotropin-releasing hormone agonists versus antagonists for controlled ovarian hyperstimulation in oocyte donors: a systematic review and meta-analysis.

[Bodri D](#), [Sunkara SK](#), [Coomarasamy A](#).

Clínica Eugin, Barcelona, Spain; Departament de Pediatria, Obstetrícia i Ginecologia i Medicina Preventiva, Universitat Autònoma de Barcelona, Barcelona, Spain.

Abstract

OBJECTIVE: To compare GnRH agonists and antagonists in oocyte-donation IVF treatment cycles by a systematic review and meta-analysis of trials.

DESIGN: Systematic review and meta-analysis of randomized clinical trials (RCT). Systematic literature searches were conducted, and all randomized trials that compared GnRH agonists with antagonists in oocyte-donation IVF treatment cycles were included. Study selection, quality appraisal, and data extractions were performed independently and in duplicate.

SETTING: Tertiary fertility center.

PATIENT(S): A total of 1,024 oocyte donors treated in eight RCTs.

INTERVENTION(S): Comparison of GnRH agonists versus antagonists in oocyte-donation IVF treatment.

MAIN OUTCOME MEASURE(S): Ongoing pregnancy, oocytes retrieved, duration of stimulation, gonadotropin consumption, and ovarian hyperstimulation syndrome incidence (OHSS) per randomized oocyte donor.

RESULT(S): Meta-analysis of these studies showed no significant difference in ongoing pregnancy rate between the GnRH agonists and antagonists (risk ratio [RR] 1.15, 95% confidence interval [CI] 0.97 to 1.36). The duration of stimulation was significantly lower with the GnRH antagonist protocol (weighed mean difference [WMD] -0.90 days, 95% CI -1.61 to -0.20). No significant differences were observed in the number of oocytes retrieved (WMD -0.60, 95% CI -2.26 to +1.07), gonadotropin consumption (WMD -264 IU, 95% CI -682 to +154), or OHSS incidence (RR 0.62, 95% CI 0.18 to 2.15).

CONCLUSION(S): No significant differences were observed in ongoing pregnancy rate or the number of retrieved oocytes after donor stimulation with GnRH agonist or antagonist protocols.

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