



OP-3-3

SUCCESS RATE OF GONADOTROPIN-RELEASING HORMONE AGONIST VERSUS GONADOTROPIN-RELEASING HORMONE ANTAGONIST IN POOR RESPONDERS UNDERGOING IN VITRO FERTILIZATION: A SYSTEMATIC REVIEW

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OBJECTIVES

To determine the optimal protocol for poor IVF responders, this systematic review aimed to evaluate their outcomes when subjected to protocols using gonadotropin-releasing hormone (GnRH) agonist compared to protocols using antagonist.

METHODOLOGY

Studies were searched using keywords: [(gonadotropin-releasing hormone agonist) or (gonadotropin-releasing hormone antagonist) or (GnRH)] and [(in vitro fertilization) or (IVF)] in Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, and ScienceDirect published between the years 2012-2022. All references were reviewed using critical appraisal centre for evidence-based medicine checklist. The descriptions of the extracted data are guided by preferred reporting items for systematic reviews (PRISMA) statement. Six studies pooled and entered review synthesis.

RESULTS

Five RCTs were identified enrolling 1279 participants with ages between 35 to 42 years old with 2 to 10 weeks of follow up. Two studies revealed that GnRH agonist showed significantly higher pregnancy rates and implantation rates compared to GnRH antagonist (29.3% vs 14.1% respectively, $p=0.0291$ and 19.40% vs. 10.30%, respectively $p=0.022$). None of the studies showed that GnRH antagonist resulted to significantly higher pregnancy rates compared to GnRH agonist. Furthermore, one study showed that GnRH antagonist resulted in significantly higher cancellation rates compared to GnRH agonist.

CONCLUSION

Protocols using GnRH agonist result in better outcomes with higher pregnancy and implantation rates, and lower cancellation rates compared to those using GnRH antagonist in patients with poor IVF response.