Depot versus daily administration of GnRH agonist protocols for pituitary desensitization in assisted reproduction cycles: a Cochrane Review

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Background: GnRH agonists have been widely used in cycles of IVF. There are two types of GnRH agonist administration that can be used to lead to hypophysis desensitization in IVF cycles in the long protocol: one consisting of daily low doses of GnRH agonist and the other the administration of analogues in higher, long-acting doses (depot). The objective of this study is to compare the use of a single long-acting depot dose with that of daily GnRH agonist doses in IVF cycles. METHODS: Relevant randomized controlled trials were identified by electronic search of the following databases: MEDLINE, EMBASE, LILACS (Latin American and Caribbean Center on Health Sciences Information) and the Cochrane Controlled Trials Register. Six studies, with a total of 552 women, were included and analysed. RESULTS: The studies do not indicate that there is a statistically significant difference between the use of depot GnRH agonist and of daily GnRH agonist in the primary outcome, clinical pregnancy rates per woman [odds ratio (OR) 0.94, 95% confidence interval (CI) 0.65–1.37]. However, there was sufficient evidence showing that the use of depot GnRH agonist for pituitary desensitization in IVF cycles increased the number of gonadotrophin ampoules [weighted mean difference (WMD) 3.30, 95% CI 1.27–5.34] and the duration of the ovarian stimulation (WMD 0.56, 95% CI 0.31–0.81), as compared with the use of daily GnRH agonist. CONCLUSIONS: Although we recognize that the clinical pregnancy rates per woman are not the ideal primary outcome, we found no evidence of differences between the long protocols using depot or daily GnRH agonist for IVF cycles. However, the use of depot GnRH agonist is associated with increased requirements for gonadotrophins and a longer time needed for ovarian stimulation. If these differences could be shown to translate into economic benefit, depot GnRH agonist would increase the overall costs of IVF treatment.

Key words: GnRH agonist daily injections/GnRH agonist depot/pituitary desensitization/randomized controlled trials