A randomised study using Pergoveris in combination with Cetrorelix from day 2 versus day 7 of menses in women undergoing IVF/ICSI.

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Abstract

Objective: Randomised treatment using Pergoveris (150IU rFSH/75IU rLH) with Cetrorelix administration from day 2 versus day 7 of menses and investigate which regimen results in more top quality embryos (TQE).

Methods: Randomised study.

Patients: 80 women undergoing IVF/ICSI up to 38 years; BMI 18-28 kg/m2; <3 previous treatment cycles and AMH >6pmol/l.

Interventions: Patients were randomised to receive Cetrorelix 0.25mg on day 2 (early administration, EA) or day 7 of menses (late administration, LA). Pergoveris 150IU was started on cycle day 2, serum oestradiol (E2) and LH were measured from stimulation day 6. Women with premature LH surge (>10iu/l) were given a further dose of Cetrorelix on day of detection of premature LH surge. Ovulation was triggered with Ovitrelle (rhCG, 6500IU) when 3 follicles were >17mm.

Main Outcome Measures: No. of top quality embryos.

Results: The median (range) age in the EA and LA groups were 33 (23-37) and 33 (25-38) [not significant, NS]. The mean (SD) BMI in the EA 23.6 (3.3) and the LA group 24.2 (3.3) was not significant (p=0.4). The mean (SD) of AMH was significantly higher in the EA vs. LA group 27.1[11.5] vs. 21.5 [9.7]pmol/l; p=0.02. The mean (SD) of TQE was 4.2 (2.3) in the EA vs. 3.5 (2.1) in the LA group [p=0.2]. There was no significant difference in women who had elective single (76% vs. 69%) or double embryo transfer in the EA and LA groups respectively. There was no significant difference in the median LH, the mean (SD) serum E2/ progesterone on the day of Ovitrelle administration in both groups. A sharp decline in LH was observed in the EA group with 21/40 women having LH <1 IU/L on cycle day 7. Nine women (23%) had premature LH surge (LH>10U/l) in the LA with none in the EA group (p=0.002). The on-going pregnancy rate/cycle was 45% (18/33; 55% per ET) in the EA and 42.5% (17/39; 43.5% per ET) in the LA group respectively. Seven women in EA group (1 with E2 >18000pmol/l, 2 failed fertilisations, 4 elective embryo freezing for OHSS) and 1 in LA group did not have embryo transfer.

Conclusions: This randomised study suggested that Pergoveris in combination with both regimens of Cetrorelix administration is safe, convenient and has a high pregnancy rate. There was no significant difference in TQE or ongoing pregnancy rates between both groups. Women in the LA group had a significantly higher incidence of premature LH surge. Further studies are required to optimise the treatment regimens.