GnRHa to trigger final oocyte maturation: a time to reconsider

Sir,
We read with interest the article by Humaidan et al. (2009). In this article the authors describe the possible advantages of ovulation triggering with a GnRH agonist above the standard use of hCG.

We are in the process of finalising a Cochrane review on this issue and our interpretation of the data is completely different. Although GnRH agonist for ovulation triggering is indeed associated with a significantly lower OHSS incidence it leads to a significantly lower live birth rate (OR 0.44, 95% CI 0.29–0.68), ongoing pregnancy rate (OR 0.45, 95% CI 0.31–0.65) and a significantly higher early miscarriage rate (8 RCTs: OR 1.89, 95% CI 1.11–3.21) in comparison to hCG (Youssef et al., 2009).

Humaidan et al. are convinced that adequate LH support during the luteal phase can completely overcome this problem. However, none of the used corpus luteum rescue protocols were able to completely compensate for the associated lower pregnancy outcomes with GnRH agonist triggering. Even with the addition of small dose of HCG (1500 IU) on the OPU day (Humaidan et al., 2006, 2009) there is still a lower live birth rate (24% versus 31%) in the GnRH group, favouring HCG triggering.

In the one small randomized study that found more pregnancies in the GnRH agonist group two completely different protocols had been compared, i.e. antagonist down-regulation followed by GnRH agonist triggering versus OCP pretreatment, GnRH agonist down-regulation and hCG triggering (Engmann et al., 2008). From this study the differences between ovulation triggering with GnRHa or with hCG cannot be deduced.

That leaves us with only one advantage of GnRH agonist—that it prevents OHSS. This would be wonderful if OHSS was highly prevalent in IVF or ICSI cycles. However, OHSS occurs only in about 1–3% of cycles (Delvigne et al., 2002).

In conclusion, ovulation triggering with GnRH agonist results in significantly lower live birth and ongoing pregnancy rates than ovulation triggering with hCG. Luteal support cannot completely overcome the lower pregnancy outcomes following GnRH agonist triggering. In contrast with Humaidan et al. we therefore do not recommend to use GnRH agonist for this purpose in standard IVF/ICSI cycles.

References


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