

Letter

Response: The applicable scope of dual trigger



To the Editor

We thank Dr Xiao for his correspondence regarding our recently published article 'Dual trigger of final oocyte maturation in poor ovarian responders undergoing IVF/ICSI cycles' [Zhang et al., 2017]. In his letter, Dr Xiao raised a number of important questions, which we are very pleased to address.

Firstly, Dr Xiao pointed out that the absence of a GnRHa-only control group may make the conclusion of little clinical value. We totally agree that it is preferable to compare the dual trigger protocol with use of HCG and GnRHa alone. However, in our previous study [Lu et al., 2016], approximately 2.71% of patients exhibited a suboptimal response to GnRHa trigger. The suboptimal responders had a significantly lower oocyte retrieval rate (48.16% versus 68.26%), fewer mature oocytes (4.10 versus 8.29), and fewer frozen embryos (2.32 versus 3.54) than the appropriate responders [Lu et al., 2016]. Thus, in our clinic, in patients who are not at high risk of ovarian hyperstimulation syndrome (OHSS), oocyte maturation with GnRHa alone has been replaced by GnRHa plus standard dosage of HCG. Furthermore, a more recent study based on a freeze-all policy reported that a single dose of GnRHa for final oocyte maturation can have negative effects on embryo and oocyte competence in hyper-responder women aged 35–40 years, as demonstrated by lower implantation rate and increased time needed to achieve live birth [Tannus et al., 2017]. The authors of that study supported the concept that ovulation induction by GnRHa alone is too premature.

Dr Xiao further emphasized that dual trigger regimen was mainly used to overcome the adverse effect of GnRHa on corpus luteum function and the occasional suboptimal response to trigger, both of which we had mentioned and discussed in the article.

Finally, Dr Xiao suggested that the study group could hardly reduce the OHSS incidence due to the high dose of HCG employed. In fact, in the current study, we focus solely on poor ovarian responders, a group of patients at lower risk of OHSS. In most clinics, 5000 IU or 10,000 IU HCG is the standard dosage for oocyte maturation in poor responders [Mak et al., 2017; Polyzos et al., 2013].

In conclusion, we thank Dr Xiao for the very important issues raised in his letter, which greatly contribute to the discussion on the effect of dual trigger on poor ovarian responders. We also thank the Editors of RBMOnline for allowing us to make this important clarification.

REFERENCES

- Lu, X., Hong, Q., Sun, L., Chen, Q., Fu, Y., Ai, A., Lyu, Q., Kuang, Y., 2016. Dual trigger for final oocyte maturation improves the oocyte retrieval rate of suboptimal responders to gonadotropin-releasing hormone agonist. *Fertil. Steril.* 106, 1356–1362.
- Mak, S.M., Wong, W.Y., Chung, H.S., Chung, P.W., Kong, G.W., Li, T.C., Cheung, L.P., 2017. Effect of mid-follicular phase recombinant LH versus urinary HCG supplementation in poor ovarian responders undergoing IVF - a prospective double-blinded randomized study. *Reprod. Biomed. Online* 34, 258–266.
- Polyzos, N.P., Devos, M., Humaidan, P., Stoop, D., Ortega-Hrepich, C., Devroey, P., Tournaye, H., 2013. Corifollitropin alfa followed by rFSH in a GnRH antagonist protocol for poor ovarian responder patients: an observational pilot study. *Fertil. Steril.* 99, 422–426.
- Tannus, S., Turki, R., Cohen, Y., Son, W.Y., Shavit, T., Dahan, M.H., 2017. Reproductive outcomes after a single dose of gonadotropin-releasing hormone agonist compared with human chorionic gonadotropin for the induction of final oocyte maturation in hyper-responder women aged 35–40 years. *Fertil. Steril.* 107, 1323–1328, e1322.
- Zhang, J., Wang, Y., Mao, X., Chen, Q., Hong, Q., Cai, R., Zhang, S., Kuang, Y., 2017. Dual trigger of final oocyte maturation in poor ovarian responders undergoing IVF/ICSI cycles. *Reprod. Biomed. Online* 35, 701–707.

Jie Zhang PhD, Yanping Kuang MD
Department of Assisted Reproduction, Shanghai Ninth People's
Hospital, Shanghai Jiao Tong University School of Medicine,
Shanghai, China
E-mail address: kuangyanp@126.com