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Title	**Evaluating The Role Of Serum Amh In Predicting Suboptimal Or Excessive Ovarian Response To Standard Dosing Regimen Of Ovarian Stimulation In In-Vitro Fertilisation Using Gnrh Agonist Long Protocol**
Author(s)	**Li, RHW; Lee, VCY; Lau, EYL; Yeung, WSB; Ho, PC; Ng, EHY**
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EVALUATING THE ROLE OF SERUM AMH IN PREDICTING SUBOPTIMAL OR EXCESSIVE OVARIAN RESPONSE TO STANDARD DOSING REGIMEN OF OVARIAN STIMULATION IN IN-VITRO FERTILISATION USING GNRH AGONIST LONG PROTOCOL

R.H.W. Li, V.C.Y. Lee, E.Y.L. Lau, W.S.B. Yeung, P.C. Ho, E.H.Y. Ng
The University of Hong Kong, Queen Mary Hospital, Hong Kong, China

Introduction: Antral follicle count (AFC) is widely used for individualising gonadotrophin dosage in in-vitro fertilisation (IVF) treatment. This retrospective study tried to determine whether baseline serum anti-Mullerian hormone (AMH) measurement would offer any additional role in predicting suboptimal or excessive ovarian response among subjects classified to have normal ovarian reserve based on AFC.

Methods: We reviewed 338 women undergoing the first IVF cycle using GnRH agonist long protocol who had baseline AFC of 6 to 14. Ovarian stimulation was initiated with gonadotrophin 300IU daily for two days followed by 150IU daily. Archival serum samples taken on the day before starting gonadotrophin were assayed for AMH. High responders were defined by retrieval of 15 or more oocytes or peak serum oestradiol $\geq$20000 pmol/l. Low responders were defined by retrieval of 5 or less oocytes.

Results: Among the study cohort, 201 (59.5%), 77 (22.8%) and 73 (21.6%) women had optimal, low and high ovarian response respectively, and their respective median AMH concentrations differed significantly (22.5, 15.1 and 36.1 pmol/l). The area under the ROC curves for predicting high and low response were 0.740 and 0.688 respectively. At the best cut-off of 29 pmol/l, AMH has a sensitivity of 66% and specificity of 73% for predicting high response. At the best cut-off of 15 pmol/l, it has a sensitivity of 52% and specificity of 79% for predicting low response.

Conclusion: Baseline serum AMH measurement offers a modest role for individualisation of gonadotrophin dosage in women with normal ovarian reserve based on AFC.

raymondli@hku.hk