

15: COMPARISON OF NEW AUTOMATED ANTI-MULLERIAN HORMONE ASSAYS AND ANTRAL FOLLICLE COUNT IN PREDICTING OVARIAN RESPONSE DURING OVARIAN STIMULATION

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Objective

Various parameters had been used to predict ovarian response. Among them, AMH and AFC demonstrate the most favourable analytical and performance characteristics. In this pilot study, we aimed to determine the cut off levels of AMH using automated AMH assays and AFC in the prediction of poor and high responders.

Design

Prospective study of 43 women between 21-45 scheduled for Assisted Reproduction.

Material and Methods

Blood samples were collected and AMH levels were analysed on two automated analysers (Roche AMH Cobas E and Beckman Coulter DXI 800). AFC was assessed on day 3 of menses. Patients underwent IVF subsequently and the number of oocytes obtained were compared with the basal values of AFC and AMH using Statistical Program for Social Sciences (SPSS).

Results

AMH (Access and Elecsys) highly correlated with AFC and the number of oocytes retrieved after ovarian stimulation. Access AMH was the best predictor for poor ovarian response with ROC AUC of 0.83. For the prediction of a high response, AFC had a higher ROC AUC of 0.95. Through ROC, the AMH level cut off for poor ovarian response are 2.23 ng/ml in Access and 2.02 ng/ml in Elecsys, while the cut off AMH level for a high ovarian response was 5.19 ng/ml in Access and 4.60 ng/ml in Elecsys. For antral follicle count, the cut off for a poor ovarian response was 18 and for a high response was 34. AFC values are higher than previous publications as current ultrasound machines have a better resolution.

Conclusions

AMH and AFC are reliable predictors of ovarian response. Establishment of specific levels may improvise individualised controlled ovarian stimulation and the obtainment of an optimal oocyte number. Larger studies are required to establish these findings.

Support

Roche and Beckman provided sample kits for the study