

NEW AUTOMATED AMH ASSAY PERFORMANCE IN IN VITRO CLINIC SCENARIO.

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Abstract Body

A prospective study was conducted at the Invicta Fertility and Reproductive Centre in order to compare performance of the new automated anti-müllerian hormone (AMH) assay - VIDAS AMH (bioMérieux) by ELFA (Enzyme Linked Fluorescent Assay) to the existing automated Elecsys AMH (Roche) by ECLIA (Electrochemiluminescence Assay). 133 serum samples of patients beginning their in vitro fertilization treatment between April and September 2016 were analyzed to determine AMH level by both VIDAS AMH and Elecsys AMH assay. Obtained results were compared regarding their correlation with embryological results and usefulness for pregnancy prediction. We obtained very similar results for both methods with Spearman's correlation of 0.977. The results did not differ significantly by Wilcoxon test for paired samples with $p=0.1098$. The correlation between assay specific AMH level and AFC was 0.612 and 0.570, number of cumulus complexes 0.674 and 0.617 and number of M II 0.605 and 0.530, by bioMérieux and Roche, respectively. Area under curve (AUC) for prediction of biochemical pregnancy was 0.719 for bioMérieux and 0.718 for Roche ($p=0.9445$), while for prediction of clinical pregnancy was 0.618 and 0.625 (0.6608), respectively. Results obtained with bioMérieux AMH assay correlate very well with Roche. It is an alternative to an expensive Cobas analyzer designed for medium laboratories and large number of analysis. VIDAS enables individual laboratories to adjust the size of analyzer to their specific needs. Additionally, bioMérieux offers complete immunological, infectious kits that can be used for comprehensive diagnosis at in vitro fertilization clinics. Introduction of this new fast automated VIDAS assays has the potential to provide smaller IVF clinics with cost effective means of performing infertility diagnosis.