Abstract

Decreased ovarian reserve (DOR) is one of the main reasons for subfertility patients. Correct evaluation of ovarian reserve can improve the ovarian response and final clinical pregnancy of COH in in vitro fertilization (IVF) treatment. Anti-Mullerian hormone (AMH) and inhibin B (INHB) are the biomarkers have been used to estimate the ovarian reserve. In this study, we hope to investigate and compare the dynamic changes in AMH and INHB levels during controlled ovarian hyperstimulation (COH) in the women with diminished ovarian reserve (DOR) who undergoing in vitro fertilization (IVF), and to evaluate the value of basal serum AMH and INHB in predicting clinical outcome. 124 women undergoing IVF cycles were divided into 2 groups according to the ovarian reserve, including normal ovarian reserve (NOR) and DOR. AMH, INHB level were measured in serum on menstrual cycle day 2 or 3 (D2/3), day 5 of stimulation (D5), hCG day (D hCG) and follicular fluid (FF) on oocyte retrieval day during IVF treatment. In this study, we found serum AMH level was decreased while serum INHB level was increased during the COH procedure in both two groups. Serum AMH and INHB level on D2/3, D5, D hCG showed significantly lower in DOR group (P<0.001). Basal serum and FF AMH, INHB levels were correlated with AFC and oocytes retrieval (p<0.05, p<0.05). The multivariate logistic regression analysis was shown that clinical pregnancy had no correlation with basal serum and FF AMH and INHB level. In conclusions, basal serum AMH and INHB levels were positively correlated with ovarian reserve, decreased serum AMH and increased INHB were found during COH, which were independence of ovarian reserve. AMH and INHB level was no directly related with clinical pregnancy.