Objective: The aim of this study was assessment of currently used ovarian reserve tests: age, anti-Mullerian hormone (AMH), follicle stimulating hormone (FSH) and antral follicle count (AFC) for prediction of oocyte yield after ovulation induction.

Materials and Methods: This prospective study included 111 infertile women who underwent IVF±ICSI. According to the Bologna criteria patients were stratified as poor-Group I (<=3 oocyte) and normal responders-Group II (>3 oocyte). AMH, FSH and AFC were determined on days 2-3 of menstrual cycle.

Results: There were statistically significant differences between two groups in all parameters, but not in the cause of infertility. Patients in the Group I were older, having lower levels of AMH, higher FSH concentrations and lower AFC values compared with those in the Group II. Patients in the group II had significantly higher number of retrieved oocytes and embryos compared with the Group I (p<0.05).

Women with ongoing pregnancy were younger, they had statistically higher values of AMH, AFC, oocytes and embryos number compare with non pregnant one (p<0.05). No significant differences were observed in concentrations of FSH.

The correlations were performed in whole study group which shows, that there were statistically significant correlations between different variables (age, AMH, AFC and FSH) and number of oocytes as well as number of embryos. The correlation between AMH and number of oocytes was the strongest (rs = 0.6) as well as between AFC and number of oocytes (rs = 0.6).

Conclusion: Using of AMH measurement in combination with AFC may improve the evaluation of ovarian reserve and predicts ovarian response after ovulation induction. Therefore among currently used ovarian reserve assessment tests AMH and AFC should be considered to be more reliable.