Prediction of ovarian response to gonadotrophin stimulation in in-vitro fertilization

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Recruitment and development of multiple follicles in response to gonadotrophin stimulation are the key factors leading to successful treatment by IVF and ET or other assisted reproductive methods (Ng, 2000).Production of ovarian responses prior to stimulation is useful in counseling patients and may be helpful in tailoring the dosage of gonadotrophin to individual patients (Frattareli et al., 2003).But, how could we implement the knowledge we have on predictive factors in clinical practice?The problem is that standard patients treated with standard doses frequently do not exhibit standard response.The variability in the responses may be due to inherent biological mechanisms in relation to difference in the number of recruitable follicles, follicle sensitivity and pharmacodynamics on the other hand they may be due to factor or factors that may be predicted and treated or controlled. (Hendriks et al., 2005).This study compared the predictive value of age of women, bodymass index, infertility years, basal serum FSH concentration, basal serum LH concentration , basal FSH/LH ratio, basal serum E2 concentration, basal serum sept in hormone concentration, total ovarian volume and antral follicle count in relation to the number of oocytes obtained (as a 1ry outcome) and in relation to pregnancy rate (a secondy centcome) in 50 infertile women undergoing IVF treatment.Smokers and those with only one ovary or having previous operation on ovaries are known to impair ovarian on ovaries are known to impair ovarian response and were excluded, also patients with PCo and ovarian cysts that interfere with ovarian volume were excluded from the study.In order to avoid other confounding variables, the study group consisted of women undergoing their first IVF cycle and receiving the same standard long protocol.As regarding the number of oocytes retrieved:This study confirms and extends earlier studies by showing that the following single factors could predict the number of retrieved oocytes: Age, BMI, FSH, Leptin hormone, ovarian volume and antral follicle count with a strong 250000 at menarche to only a few humreds or thovsands at the end correlation (p of the reproductive life.Chuang et al., (2003) concluded that both age and FSH contributed to the prediction of the quantitative ovarian reserve as reflected by the number of oocytes collected.Creus et al., (2000), Onagawa et al., (2004) and Iwase et al., (2005) found a negative correlation between serum basal FSH and oocytes number and concluded that FSH is better than age in predicting the quantity (but not the quality of oocytes) Van Rooij et al (2003) illustrated the important biological distinction between ovarian reserve that is a better predictor of egg production

capacity and the egg quality and concluded that age = quality & FSH = quantity.In the present study oocyte quality was significantly correlated only with age & leptin hormone (-ve correlation) p value (