Hormonal analysis as a predictor of outcome of ovulation induction

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Background Ovulation induction with low dose FSH has been tried in women with unexplained infertility who fail to conceive with clomiphene.

Aim To study the role of hormonal analysis, its correlation with follicular monitoring in ovulation induction and as a predictor of pregnancy outcomes.

Material and Methods Selected women were recruited and induced with low dose FSH (75IU from day3 of cycle). Alternate day transvaginal ultrasound starting from day 8 was performed till dominant follicle of 18mm diameter was attained followed by inj. hCG administration and IUI. Serum oestradiol was measured on day 10 of cycle and on day of hCG administration. Serum progesterone levels were measured on the day of hCG administration and day 21 of cycle.

Results In FSH stimulated cycles, oestradiol levels on day 10 and per follicle on the day of hCG administration were significantly lower compared to non-responders (135.2<u>+</u>25.70pg/ml versus 162.2<u>+</u>78.24pg/ml, p=0.01; 206.7<u>+</u>27.97pg/ml versus 308.2<u>+</u>103.99pg/ml, p<0.01). Follicular development correlated well with oestradiol levels. One cycle was cancelled for multifollicular development in which serum oestradiol levels were 1025pg /ml on day 10. The pregnancy rates were 23.68% (9/38) per couple and 8.65% (9/104) per cycle.

Conclusion Lower levels of oestradiol per follicle on the day of hCG administration in the physiological range (150-250pg/ml) are an important determinant of conception. Hormonal levels are not routinely needed to prevent hyperstimulation or predict OHSS with follicular monitoring and low dose FSH can be given safely without hormonal monitoring.