Outcome	Luteal	Follicular	Sign
Average days of stimulation	10.4	9.4	NS
Average # of ampules used	47	44	NS
Average # of oocytes retrieved	14	13	NS
Average # of mature oocytes	13	12	NS
Cancellation rate	2.4	3	NS
Fertilization rate	69	67	NS
Clinical pregnancy rate	48	49	NS
Miscarriage rate	11	9	NS
Ongoing pregnancy rate	37	40	NS

Conclusion: Our data support the use of lower doses of depot GnRH-a for down-regulation prior to ovulation induction. There was no difference in outcome between the late luteal and early follicular GnRH-a depot.

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Is the Uterine Artery Pulsatility Index Predictive of Conception in Clomiphene Citrate-Stimulated Cycles? [1]K. Lakhani, [2]E. Cortes, [2]P. Hardiman. [1]Department of Diagnostic Imaging, [2]Department of Gynaecology, North Middlesex Hospital, London, UK.

Objectives: Increased uterine artery pulsatility index (PI) is associated with lower implantation rates in women undergoing in-vitro fertilization. There are no comparable studies in women undergoing conventional ovulation induction therapy, although there is evidence that clomiphene citrate (CC) increases uterine artery PI in women with unexplained infertility. The aim of the present study is to assess uterine artery PI in clomiphene-stimulated cycles in relation to outcome.

Design: A prospective cross-sectional study of women with anovulatory infertility, treated with CC between July 1999–January 2000.

Materials and Methods: 40 subjects (mean age of the patients was 31.1 ± 4.4 years) received CC (dose 50–100 mg) from days 2–6 during 54 cycles. Transvaginal ultrasound was performed by the same operator (KL) between days 12 and 14 using a TOSHIBA 'Powervision 6000' with a 7.5 MHz transvaginal probe and color Doppler facility. The uterine artery PI were measured and the highest value (left or right artery) used for analysis.

Results: Pregnancy, confirmed by ultrasound was achieved in 7 cycles; conception failed to occur in the remaining 47 cycles. The mean uterine artery PI in the conception cycles was significantly (P=0.04) lower than in the nonconception cycles (2.38 ± 0.3 and 2.75 ± 0.85 respectively, CI for the difference 0.02–0.71).

Conclusion: This is the first demonstration that uterine artery PI is predictive of cycle outcome in women receiving CC. The mechanism responsible for the lower PI in the conception cycles is not known but is suggestive of improved uterine and/or endometrial perfusion in these women. Further studies are planned to identify an effective intervention for women receiving CC and who have an elevated uterine artery PI.

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Weight Correlates with Gonadotropin Requirements and Patient Response. K. M. Silverberg, R. A. Ormand, L. J. Hansard, T. C. Vaughn. Texas Fertility Center, Austin, TX.

Objectives: Over the past several years, there has been considerable debate regarding the effect of body weight on response to gonadotropins. This debate has intensified recently, with the advent and widespread usage of subcutaneously administered formulations. This study was designed to assess the effect of body weight on multiple stimulation parameters, including gonadotropin requirements, in patients undergoing controlled ovarian hyperstimulation (COH).

Design: Prospective, observational study.

Materials and Methods: Patients receiving gonadotropin therapy and intrauterine insemination (IUI, n=505) were included in this study. All patients were treated with either a highly purified urinary FSH (hp-FSH, Fertinex, Serono Laboratories) or recombinant FSH (r-FSH, Gonal-F, Serono Laboratories; or Follistim, Organon Pharmaceuticals) preparation. COH was monitored with serial transvaginal sonography and serum E2 determinations, and hCG was administered when at least 1 follicle exceeded 19 mm in mean diameter. IUIs were performed on the following 2 consecutive days following human chorionic gonadotropin administration. Pearson's correlation coefficients were determined for each population, as well as for subpopulations defined in 25-pound increments.

Results:

	n	Stim (days)	Dose (IU)	Amps (#)	Peak E2 (pg/mL)
hp-FSH					
<200 lb.	122	8.7 (2.0)	1695 (753)	22.6 (10.0)	1071.9 (764.2)
>200 lb.	32	10.5 (3.5)	2777 (1162)	37.0 (15.5)	1106.8 (727.0)
r-FSH					
<200 lb.	325	8.8 (2.0)	1641 (698)	21.9 (9.3)	976.1 (584.0)
>200 lb.	36	10.1 (2.5)	2228 (833)	29.9 (10.8)	1065.0 (734.0)

Results are listed as means (± SEM).

Statistically significant correlations exist between patient weight and length of stimulation ($p<0.05$), and patient weight and gonadotropin requirements ($p<0.05$) across all weight groups for both highly purified urinary and recombinant FSH preparations. In addition, a significant break-point exists for all 3 gonadotropin formulations at 200 pounds ($p<0.0001$), such that patients who weigh in excess of 200 pounds require significantly more gonadotropin than do patients who weigh 199 pounds or less.

Conclusion: Body weight significantly correlates with gonadotropin requirements and patient response. Patients who weigh more than 200 pounds still respond well to subcutaneously administered gonadotropins, however, they require higher doses of medication.

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Plasma Estradiol, Inhibin B and Inhibin A in Patients Stimulated by GnRH Agonist and REC-FSH. [1]F. Millot, [2]J. M. Antoine, [2]B. Bouguerra, [1]K. Bakkouch, [2]S. Uzan, [1]J. Capeau. Departments of [1]Biochemistry, [2]Obstetrics-Gynaecology, TENON Hospital, Paris, France.

Objectives: Plasma inhibin A and B profiles in spontaneous cycle suggest that these parameters could be used for the monitoring of ovarian hyperstimulation in ART cycles. The objectives of this study were: 1/ to determine the mean plasma inhibin A and B kinetics in normoovulatory patients treated by GnRH agonist and rec-FSH. 2 and 3/ to compare their predictive value with that of estradiol on retrieved oocytes number and pregnancy.

Design: The study was carried out retrospectively in 36 normoovulatory patients stimulated for FIV by GnRH agonist (Decapeptyl®—Ipsen-Biotech) 0.1 mg SC/day starting from D21 and rec-FSH (Gonal-F®—Serono or Puregon®—Organon) 75 at 300 UI/day: two groups of 18 patients (having obtained or not a pregnancy) were paired for age and cause of infertility. The numbers of retrieved and fertilized oocytes were not different in both groups.

Materials and Methods: E2 was measured by direct immunoassay (Estradiol-6-II, ACS: 180®, Bayer Diagnostics, East Walpole USA). Inhibin A and B were measured by ELISA (Serotec Limited, Oxford UK). Statistical analysis was carried out using the Statview® software (Abacus concept, Berkeley USA). All the results were expressed according to the day of stimulation (S0=day of hCG administration) or according to the day of rec-FSH administration (D1=1st day of rec-FSH administration).

Results: 1/ Inhibin A is correlated with E2 at S-6 (n=11), S-4 (n=19), S-3 (n=16), S-2 (n=23) and S0 (n=30) (r=0.862, 0.679, 0.750, 0.631, 0.520—p<0,005). Inhibin B rises earlier: its concentration reaches its maximum at S-3, then remains unchanged. 2/ E2 is correlated with the number of retrieved oocytes at S0 (r=0.562—p<0.05) and D10 (r=0.667—p<0.005). Inhibin A is correlated at S-2 (r=0.548—p<0.005), S0 (r=0.507—p<0.005), D9 (r=0.582—p<0.005) and D10 (r=0.617—p<0.005). Inhibin B is correlated at S-6 (r=0.792—p<0.005) and D7 (r=0.587—p<0.005). 3/ Plasma E2 and inhibin A are not different among pregnant and nonpregnant women. There is a trend for a broader plasma inhibin B surface under the curve in pregnant than in nonpregnant women (NS).

Conclusions: In this preliminary series of normoovulatory women treated by GnRH agonist and rec-FSH, plasma inhibin A is closely correlated with E2 and does not have a better predictive value on the number of oocytes nor on the chance of pregnancy. On the other hand, plasma inhibin B seems to be an earlier marker of the oocytes number and perhaps quality. It could be useful for early decisions of cycle cancellation or stimulation adjustment. A