Not in Cycles With Hormone Replacement. C. Dieterich, J. H. Check, D. Lurie, J. Choe. UMDNJ, Robert Wood Johnson Med. School at Camden, Cooper Hosp./ Univ. Med. Cntr., Dept. OB/GYN, Div. Repro Endo. & Infertility, Camden, NJ.

Objectives: To determine if uterine blood flow impedance, measured by Doppler imaging 4–5 days before ET, correlates with outcome of frozen ET for patients who have an adequate endometrial lining.

Design: Prospective observational study.

Materials and Methods: Cycles of frozen ET between 9/1/95 and 12/31/96 were included in the study if the women were 42 years old or younger, had at least 2 embryos transferred, had adequate endometrial development (i.e., thickness ≥ 8mm in conjunction with a trilaminar echo pattern), and followed either a hormone replacement, down regulation with hormone replacement or natural protocol. No concomitant medications that could effect blood flow such as aspirin or heparin were taken. Transvaginal Doppler ultrasonography with color flow imaging was used 4–5 days pre-transfer to measure uterine blood flow impedance expressed as pulsatility index (PI) and resistance index (RI). The average of the indices for the left and right arteries were used in the statistical analysis. Endometrial thickness was measured in millimeters by placing calipers on the outer wall of the endometrium as seen in the longitudinal axis of the uterine body. Three types of echo patters were distinguished: triple line (TL), isoechogenic (IE), and homogeneous hyperechogenic (HH). Conception was defined as a clinical pregnancy with sonographic evidence of a gestational sac. Independent t-tests were used to test for differences in the mean indices by conception. A p value of .05 was used.

Results: In all three stimulation groups, there was no difference found between conception and non-conception cycles in age, serum hormone levels or number of embryos transferred. The comparison of mean PI and RI by conception outcome in 74 hormone replacement cycles (52 did not conceive, 22 had clinical pregnancies) showed no significant differences in mean PI (2.76 ± .55 vs 2.73 ± .54) or RI (.89 ± .04 vs .90 ± .03). Similarly in down regulated hormone replacement cycles, there was no differences in mean PI or RI by conception (non-conceivers: n = 31, PI = 2.62 ± .54, RI = .89 ± .14; conceivers: n = 9, PI = 2.54 ± .47, RI = .88 ± .04). However, in natural cycles, there was a significantly higher mean PI and RI in non-conceivers (n = 63) than in conceivers (n = 20) (PI: 2.85 ± .66 vs 2.50 ± .53, RI: .90 ± .05 vs .87 ± .05, $p < .05$). In natural cycles, there were no pregnancies achieved when PI > 3.37, RI > .945. 14 (22.2%) non-conceivers exceeded this PI level and 16 (25.4%) exceeded this RI level.

Conclusions: Uterine blood impedance was not found to be correlated with conception outcome in hormone replacement cycles. In natural cycles, however, women who failed to conceive had a higher PI. Monitoring of women undergoing natural cycles either for ET or intrauterine insemination could lead to the identification of women with uterine blood flow problems that could benefit from alternate therapies.

P-140

Low Dose Growth Hormone (GH) Cotreatment in Poor Responder (PR) Patients: A Prospective and Randomized Assay. A. Marazzi, M. Rubinstein, E. Polak de Fried. CER Instituto Medico, Buenos Aires, Argentina.

Objective: The incidence of PR in the IVF population has lately been increasing. In everyday practice, these patients represent a great challenge inducing us to deepen our knowledge in order to provide them with the best possible treatment. It is clear that oocyte donation is the most effective alternative for this group of patients but it is not the most accepted one among patients undergoing IVF procedures. The purpose of this presentation is to analyse the effect of a GH dose lower than usual in the cotreatment of PR undergoing IVF.

Design: Prospective and randomized assay

Materials and Methods: Our study population was 22 PR patients who underwent IVF in the same period, their mean age was 39.2 ± 4.7 years, basal serum FSH levels 8.27 ± 4.27 IU/ml (normal values: 2.5–7.0 IU/ml), basal serum estradiol levels 111.1 ± 29.7 pg/ml (normal values: 30–50 pg/ml). The patients were divided at random for cotreatment with GH. All the patients received GnRh analogue (Lupron 2.8 ml, Abbott Laboratories) in association with gonadotrophin therapy (Metrodine and Pergonal, Serono Laboratories and Humegon, Organon). Eleven out of 22 patients received 4 IU GH subcutaneously daily (Saizen, Serono Laboratories) starting on the day of gonadotrophin therapy. Data were analysed by Wilcoxon matched pair test.

Results:

	Without GH	With GH	*p*
$\bar{x}$ of patients	11	11	
$\bar{x}$ of follicles	4.45	5.95	0.009*
$\bar{x}$ of oocytes	2.41	3.55	0.063**
$\bar{x}$ of MII oocytes	1.77	2.45	0.244**
$\bar{x}$ of fertilized oocytes	0.86	1.41	0.350**
$\bar{x}$ of embryos transferred	0.86	1.09	0.550**

*Significant **not significant

Conclusion: Only the mean number of ultrasound follicles was statistically significantly higher in the PR group with GH cotreatment. But the treated group showed a trend towards a higher number of oocytes retrieved, MII oocytes, fertilized embryos and embryos transferred. This clear trend would indicate that the type II error may disappear on increasing the number of patients. We see that, according to this, some PR women could benefit from GH cotreatment during their ovarian stimulation.

P-141

Assessment of Uterine Blood Flow by Single Power Doppler Sonographic (PDS) Study at the Preovulatory Time Replaces Conventional Color Doppler Im-