

## PP-101

Severe ovarian hyperstimulation despite prophylactic albumin administration at the time of oocyte retrieval in a cycle of controlled ovarian hyperstimulation.

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**Objective:** To report the occurrence of two cases of severe ovarian hyperstimulation (OHSS) despite the administration of 50 grams intravenous albumin at the time of oocyte retrieval. Two previous reports involving 52 patients did not describe a single case of OHSS in patients receiving prophylactic intravenous albumin. We describe the experience at our institution where two patients were hospitalized with severe OHSS despite receiving prophylactic albumin therapy.

**Design:** Twelve consecutive patients undergoing a cycle of controlled ovarian hyperstimulation for IVF with peak estradiol greater than 4500 pg/ml received 50 grams intravenous albumin (200 cc of a 25% albumin solution) at the time of oocyte retrieval. Two patients developed OHSS despite prophylactic albumin administration.

**Setting:** The Division of Reproductive Endocrinology at the Mt. Sinai Medical Center, New York.

**Interventions:** 50 grams intravenous albumin was administered over 30 minutes at the time of oocyte retrieval.

**Main outcome measure:** Outcome measures included the accumulation of interstitial fluid such as ascites, pleural effusions, and generalized edema. The other outcome variables included degree of hemoconcentration, renal insufficiency, and thrombotic complications.

**Results:** Two patients developed severe OHSS, requiring hospitalization, despite administration of intravenous albumin. The peak estradiols of the two patients were 4995 and 7180 pg/ml. Both patients evidenced shortness of breath, pleural effusion, ovarian enlargement, ascites, and hemoconcentration. This is the first report to our knowledge, where administration of prophylactic albumin has failed to prevent severe OHSS. It is important to report negative as well as positive outcomes to evaluate the use of albumin as a prophylactic agent. The true efficacy of this agent needs to be evaluated in a prospective randomized fashion.

## PP-102

LOW DOSES OF HUMAN MENOPAUSAL GONADOTROPIN WITH CLOMIPHENE CITRATE IN IVF PROGRAM

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We conducted 120 cycles of the controlled superovulation (CSO) of 106 women selected for IVF program. The mean age of women was 30.6 years. The average duration of infertility, was 7.9 years, 35 % of women had a primary infertility and 45 % had a secondary infertility. The tubal factor was the main reason of IVF treatment (88.4 %). CSO was with combination of clomiphene citrate (100 mg/d from the 2-3 day of cycle during 5 days) with hMG (Pergonal, Serono) given from the 2-3 day of cycle every second day 2-3 ampules i.m. The mean number of ampules used per patient was 8.3 which is much lower than the mean dose in accordance with the majority of the European IVF groups reports. The human chorionic gonadotropin (Profasi, Serono) was usually administered according to generally accepted methods 35 hours before the ultrasonically-guided oocyte collection. The mean number of follicles was 6.87 per 1 cycle and 3.98 oocytes were retrieved. Using visual control we determined that 73 % of eggs were mature, 3.1 % - immature, 9.4 % were with the atretic signs and 16.5 % were degenerated. Fertilization rate was 64.8 %. The donor's embryo transfer was made to 9 patients and 11 patients were taken off the program because of the absence of egg's cleavage. The luteal phase was supported by the administration of low hCG doses. The pregnancy rate was 15.6 % and 4 of women gave a birth to healthy children (in one case the twins were born). In 1 case a combination of uterine and tube pregnancy took place (the tube amputation and artificial abortion was made because of uterine bleeding) and spontaneous abortion took place in 12 cases. The received results can't be considered as successive. We see the possibility of our work results heightening in the improvement of ovary stimulation protocols taking into account the uterine receptivity readiness for embryo implantation, optimization of luteal phase and early pregnancy supplement and also in more thorough selection of patients for IVF program. Nevertheless, we should acknowledge that the excessive pragmatism in this question will inevitably come into conflict with a humanity and wish to help.

## PP-103

A COMPARISON OF RECOMBINANT HUMAN FSH (PUREGON) AND HMG IN IVF CYCLES

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The effect of intramuscular (IM) recombinant human FSH (Puregon) administration on follicular development and hormonal profiles in IVF cycles was investigated in comparison with IM hMG treatment in a randomized study, using a fixed dosing scheme. Thirteen IVF patients fulfilling strict selection criteria were included. Seven patients were treated with hMG and six patients with Puregon, in both groups in combination with GnRH-agonist (buserelin) treatment. 150 IU hMG or Puregon were injected once daily. During the stimulation phase, daily blood samples were taken to determine FSH, LH, oestradiol (E<sub>2</sub>) and progesterone concentrations, and vaginal ultrasonography was performed at least every other day. When the mean diameter of the largest follicle was 20 mm and the endometrial thickness was 9 mm, hCG was administered. The luteal phase was supplemented by progesterone.

**Results:**

Median numbers of follicles, FSH and E<sub>2</sub> levels at the day of hCG administration and numbers of retrieved oocytes are listed in the table.

	hMG	Puregon
N foll > 10 mm	12	17
N foll > 15 mm	9	12
FSH (IU/L)	6.6	5.1
E <sub>2</sub> (pmol/L)	6100	7550
N oocytes	7	11

**Conclusion:** Due to the small sample size, the differences were not statistically significant. However, the results suggest that Puregon is at least as potent as hMG.

## PP-104

DOES INTENSIVE PROPHYLAXIS OF SEVERE OHSS AFFECT THE PREGNANCY RATE OF IN VITRO FERTILIZATION AND EMBRYO TRANSFER?

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Ovarian hyperstimulation syndrome (OHSS) is a severe iatrogenic complication of ovulation inductions in otherwise healthy young women. The aim of this study was to evaluate whether intensive prevention of this complication affected on the pregnancy rate of in vitro fertilization and embryo transfer (IVF-ET). In order to reduce the incidence of this complication, we introduced several prophylactic strategies since October 1992. These strategies included (a) individual adjustment of a daily dose of hMG to young patients, (b) one day earlier injection of hCG when a large number of growing follicles was observed, (c) cancellation of hCG administration in the patients with a remarkably large number of growing follicles, (d) use of pure FSH, instead of hMG, in patients with polycystic ovarian syndrome. The results of IVF-ET before and after the introduction of these strategies were compared (864 cycles during the period from October 1988 to September 1992, Phase I, versus 649 cycles from October 1992 to July 1994, Phase II). Incidence of severe OHSS was remarkably decreased from Phase I to Phase II (3.4 versus 0.6%, p<0.001). Although the number of recovered oocytes in the Phase II was significantly lower than that in the Phase I (6.7±4.6 versus 7.6±5.3, p<0.001, mean ± SD), pregnancy rates did not differ between the two Phases (23.3 versus 24.0%). We concluded that intensive prophylaxis of OHSS did not affect pregnancy rate of IVF-ET.