

studies from Valencian Infertility Institute motivated us to use cabergoline in prevention of developing of severe OHSS.

**Materials and Methods:** Starting from November 2006 cabergoline has been used in the treatment of 17 women identified as high-risk patients for developing severe OHSS. All patients received cabergoline starting from hCG administration, except for one patient to whom cabergoline was given on the 3rd day after hCG administration. The dose of cabergoline was 0.5 mg per day and duration of treatment was 8 days. All patients have been carefully monitored every day of hospitalization.

**Results:** During medication with cabergoline all of patients were in very good clinical condition, with symptoms and clinical, ultrasound and biochemical signs of OHSS in regression. All of patients had the successful embryotransfer and consecutive clinical pregnancies were detected in 8 patients.

**Conclusions:** Our first clinical experiences in using cabergoline to treat patients under the risk of severe OHSS show that cabergoline improves clinical conditions of these patients without influencing the success of embryotransfer.

#### P789

##### The protocols of stimulation in the programme of IVF/ICSI/ET in patients with PCOS

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**Aim of investigation:** To analyze the effect of long and short protocol of stimulation on the outcome of IVF and ICSI procedure in the patients with PCOS.

**Material and Methods:** Clinical investigation was performed as a prospective study at The Frauenklinik der Justus-Liebig-Universität in Gießen (Germany). The study comprised 103 (122 cycles) patients with PCOS included in the programme of in vitro fertilization (IVF and ICSI).

**Results of investigation:** Following the aspiration, the mean number of obtained follicles in the group of patients with a long stimulation protocol ( $X=9.3$ ) was significantly higher ( $p<0.05$ ) than in the group with a short stimulation protocol ( $X=6.8$ ). The number of biochemical, clinical and realized pregnancies in relation to the total number of cycles in both investigated groups was not statistically significant. The incidence of abortions in the patients with a long protocol  $N=3$  (5%), did not significantly differ from the patients with a short protocol  $N=3$  (11.5%).

**Conclusions:** The administration of a long stimulation protocol in the patients with PCOS included in the programme of IVF And ICSI/ET, showed a tendency of better success in realization of conception and decrease of the abortion rate relative to the short protocol. The short protocol of stimulation was useful in the PCOS patients with weaker response to the stimulation in previous cycles.

#### P790

##### Correlation between infertility and rapid sperm head decondensation after lysis challenge

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**Introduction:** Apoptotic human sperm cells are not distinguishable from healthy sperm by conventional microscopy leading to incorrect diagnoses. Dying sperm exhibit subtle disrupted membranes with phosphotyrosine translocating from the inner to outer membranes. Assessment of rapid head decondensation after lysis reagents would help identify males with predominance of apoptotic sperm. The hypothesis was that rapid sperm head decondensation was associated with infertility. The objective was to analyze the different levels of sperm head decondensation after lysis reagent exposure.

**Materials and Methods:** Frozen-thawed sperm from fertile ( $n=5$ , gravida  $>0$ , female age  $<35$  yrs, sperm count  $>20$  mill./mL) and infertile ( $n=5$ ) cases were centrifuged-washed and 0.1 mL aliquots added with 0.1 mL (mercaptoethanol-based) lysis reagent. After 5 mins ( $21^{\circ}\text{C}$ ), the sperm were categorized by phase contrast microscopy into: (A) complete decondensation (B) balloon-shaped (C) dumbbell (D) granular or (E) compacted shapes. The data were analyzed by Student t-test statistics.

**Results:** The infertile group had more ( $P<0.05$ ) type A completely decondensed heads ( $67.8\pm 19.5\%$  versus  $25.0\pm 15.5\%$  fertile; mean  $\pm$  SEM). Furthermore, there was less granular heads in the infertile group ( $4.8\pm 2.5\%$  versus  $24.8\pm 10.0\%$ ). There were no differences in the remaining categories (B, C, E) of decondensation.

**Conclusions:** The results suggested that sperm from the infertile group had weak membranes that rapidly dissolved to decondense sperm DNA content. Fertile sperm heads showed more granularity suggesting the presence of non-condensed nucleosomes. Interestingly, fertile sperm exhibited higher percentages of compacted heads when challenged by lysis reagents but significance was not reached. Clinical significance in this study included demonstrating a link between rapid sperm decondensation and infertility. Upcoming research will involve testing other lysis reagents in support of the development of a rapid and reliable male fertility test.

#### P791

##### Ozone therapy as a component in the treatment of tubal factor female infertility

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**Aim:** To increase efficiency of treatment of tubal factor female infertility by including ozone therapy as a component.

**Materials and Methods:** We investigated 120 women with tubal factor infertility. All of them underwent laparoscopic corrective surgery to reinstate the tubal patency. They were divided into 2 groups each consisting of 60 patients. The First group was administered ozone therapy as part of the pre-operative and post-operative care. The Second group, however did not receive ozone therapy.

The degree of endogenous intoxication was ascertained by the content of medium mass molecules (MMM), fibrinogen and C-reactive protein (CRP). The intensity of lipid peroxidation (LP) was determined by the levels of molecular products: primary – diene (DC) and triene conjugates (TC) and final – Schiff bases (SB). The total antioxidant activity (TAOA) of the serum was determined by the change in the fluorescence of induced chemi-luminescence in 30 seconds.

**Results:** Although patients in both the groups had an uncomplicated post-operative period, yet laboratory analysis of POL parameters revealed presence of endogenous intoxication. Obviously, the increased post-operative levels in comparison to the pre-operative levels of MMM, DC, TC and SB was caused by surgical stress.

As a result of ozone therapy the raised levels of the parameters of endogenous intoxication and molecular products of POL decreased accompanied by an increase in TAOA. In the Second group, the parameters did normalize but much later.

Observation of patients of both the groups for a year revealed that after administering rehabilitation measures including ozone therapy (rectal insufflations), the incidence of uterine pregnancy was increased by 1.5 times.

**Conclusion:** The usage of ozone therapy (rectal insufflations) as part of post-operative treatment of patients who had undergone reconstructive surgery on the fallopian tubes better the results of treatment. This effect is apparently due to the systemic

normalization effect of ozone therapy for that matter on the levels of endogenous intoxication and the state of LP.

### P792

#### Correlation of fatty acid composition with motility in fresh and capacitated human spermatozoa

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**Introduction:** The lipid composition of spermatozoa plays an important role for the viability, maturity and functions of those cells. Has been suggested that the proportion of unsaturated fatty acids (UFA) may have an influence over the membrane fluidity and flexibility.

The aim of the study was to evaluate the relationship between motility and fatty acid composition of human spermatozoa before and after in vitro capacitation.

**Materials and Methods:** The population under study consisted of 50 consecutive males from infertile couples subjected to FIV/ICSI program in our Human Reproduction Unit from Cruces Hospital (Vizcaya, Spain), between June and September 2007. Patients were divided in two groups according to their sperm motility: group I (n=25) corresponded to  $\geq 40\%$  of progressively motile sperm and group II (n=25)  $< 40\%$ .

All semen samples were collected by masturbation following 3 days of abstinence and analyzed according to WHO criteria. Capacitation was performed by swim up method. Total sperm lipids were subjected to acid-catalysed transesterification and fatty acid methyl esters analyzed by capillary gas-liquid chromatography. Results were expressed as nmole percentages of total fatty acids.

**Results:** In fresh samples, spermatozoa from group II patients showed significantly higher levels of total saturated fatty acids (SFA), and lower contribution of total monounsaturated fatty acids (MUFA) than sperm from group I. Total polyunsaturated fatty acids (PUFA) content was similar in both groups. However, in capacitated samples, the levels of docosapentaenoic n-3 acid, docosahexaenoic acid (DHA), PUFA n-3 and the double bond index (DBI) were significantly lower in group II compared with group I. Furthermore, the ratio of n-6 to n-3 fatty acids was increased in group II.

In correlation analysis, there were significant positive correlations between sperm with progressive and linear motility (a %) with DHA (r=0.318), PUFA n-3 (r=0.318) and DBI (r=0.297) levels in capacitated samples.

**Comments and Conclusions:** Increased PUFA content preservation, especially PUFA n-3, is associated with optimal sperm motility required for proper fertilization in capacitated sperm.

### P793

#### Evaluation of role of sildenafil in improving IUI success rates

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**Objectives:** To evaluate the role of sildenafil in improving IUI success rates.

**Material and Methods:** A randomised control trial was conducted in Deptt of Obs & Gyn, CSM Medical University (former KGMC), Lucknow, India. 50 infertile couples failing to conceive after 2 cycles of intrauterine insemination were registered after taking consent. They were randomised to receive either 25 mg vaginal suppositories of sildenafil four times a day, or no treatment, from day 5 of cycle for 10 days. They were subjected to 2 cycle of IUI (ovulation induction in all cases with clomiphene citrate from Day 2 to day 6) and uterine artery doppler parameters & endometrial thickness on day of HCG trigger, and conception rates in the two groups were compared.

**Results:** There was a statistically significant decrease in uterine artery pulsatility index (p<0.001) and increase in endometrial

thickness (p<0.001) in cases as compared to controls conception rates were 20% in cases & 0% in controls (p=0.018).

**Conclusion:** Sildenafil being a vasodilator, increases uterine blood flow, decreases pulsatility index of uterine artery and increases endometrial thickness which in turn enhances the endometrial receptivity giving a better success in IUI cycles.

### P794

#### Androgenic activity of Allium cepa on spermatogenesis and serum testosterone in rat

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**Objectives:** Approximately 30% of couples infertility are due to male factors. Many factors such as drug treatment, chemotherapy, toxins, air pollution and vitamins insufficient intake may have harmful effects on spermatogenesis and sperm normal production. Allium cepa (onion) have good effect in diseases treatment.

**Material and Methods:** The 30 adult Wistar albino male rats were 8 weeks old and weighing 250±10g. Male rats were housed in temperature controlled rooms (25°C) with constant humidity (40–70%) and 12h/12h light/dark cycle prior to experimental protocols. Wistar male rat (n=30) were allocated into three groups, control (n=10) and test groups (n=20). Animals in tests groups were subdivided into groups of 2 that received onion (0.5 & 1 g/kg-per day). Drug add ministered with gavages for 20 consequence day. In twentieth day the testis tissue of Rat in whole groups were removed and sperm was collected from epididymis then prepared for analysis. Serum concentration of total testosterone was measured by using a double antibody RIA.

**Results:** Serum total testosterone significantly increased in whole test groups (P<0.05). The percentage of sperm viability and motility in whole test groups significantly increased (P<0.05) but the sperm concentration significantly increased only in a group that received the high dose of freshly onion juice, (P<0.05) but had no difference on sperm morphology and testis weights in whole groups in compared to the control group. The statically analysis was ANOVA.

**Conclusion:** It seems that using of 1 gr/kg freshly onion juice can be effective for sperm healthy parameters. These alterations could be due to vitamins and quercetin contents of onion.

### P795

#### Evaluation of endometrial receptivity by sonographic markers and hormonal profile in patients of unexplained infertility

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**Objective:** Unexplained infertility is failure of conception without any demonstrable cause. Its incidence ranges from 10% to 30% depending upon the diagnostic criteria employed. Unexplained infertility may be due to subtle abnormalities at cellular/ molecular levels in the endometrium affecting endometrial receptivity which is the window of time when the uterine environment is most conducive to embryonic implantation. Its assessment is crucial to the optimum management of these patients.

Endometrial receptivity can be assessed by various biochemical markers, sonographic markers and hormonal profile. The objective of the present study was to evaluate endometrial receptivity in women of unexplained infertility with sonographic markers and Doppler blood flow status of the endometrium and the hormonal profile.

**Materials and Methods:** This was a prospective study conducted in the Department of Obstetrics and Gynaecology, Lady Hardinge Medical College & Smt. Sucheta Kriplani Hospital, New Delhi from October 2006 to March 2008. 250 patients of infertility of atleast one year duration were screened by detailed history, examination and relevant investigations of both the male and female partners to determine the cause of infertility. A total of 46 patients of unexplained infertility were enrolled in the study and