Highly purified FSH and oocyte and embryo quality

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Introduction:
This parallel randomised open-label clinical study was carried out on infertile patients undergoing conventional in-vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) treatment in three Assisted Reproductive Centers. The mean objective of this study was to compare the effects of highly purified urofollitrophin and follitropin alpha , used for ovarian stimulation, on oocyte and embryo quality, as well as pregnancy and implantation rates.

Methods:
A total of 267 infertile couples undergoing an IVF/ICSI treatment. A standard down-regulation protocol with GnRH analogue was applied to all studied couples. Highly purified urinary FSH (Fostimon , IBSA- Switzerland) was administered to 133 patients, while the remaining 134 patients, enrolled as a control group, were treated with recombinant FSH (Gonal-F , Serono-Italy). The primary endpoints studied were: number of morphologically mature oocytes retrieved, embryo quality, pregnancy and implantation rates. The secondary endpoints included were: total number of days of FSH stimulation, total dose of gonadotrophin administered, fertilization rate per retrieved oocytes, embryo cleavage rate, live birth and miscarriage rates, endometrial thickness and estradiol level on the day of hCG administration, cancellation rate, and incidence of moderate or severe OHSS.

Results:
Higher, though not statistically significant, pregnancy and implantation rates in the uFSH group versus the rFSH group were observed (46.5%-36.8% and 22.1%-15.8% respectively). There was evidence of a significantly higher Grade 1 embryo score (p£0.05) in the uFSH group compared to the rFSH (42.1% versus 33.5%). Live birth rate was higher, though not statistically significant, in the uFSH group compared to the rFSH group.

Conclusion:
Highly purified uFSH (Fostimon) is as effective as recombinant FSH (Gonal-F) for ovarian stimulation in terms of oocyte and embryo quality, pregnancy and implantation rates.

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