

USE OF FOLLITROPIN DELTA IN CONTROLLED OVARIAN STIMULATION FOR IN VITRO FERTILIZATION IN HIGH RESPONDER PATIENTS: CASE-CONTROL STUDY



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PROBLEM STATEMENT

- We aim to explore the use of Follitropin Delta in controlled ovarian stimulation for In Vitro Fertilization (IVF) in high responder patients and compare it to Follitropin alfa, beta and biosimilar FSH preparations in terms of efficacy and security.

METHODS

- Observational case-control study including first or second IVF cycles in high responder patients.
- For each Follitropin Delta patient included in the study, a matched control by age, weight, Antral Follicle Count (AFC) and Antimüllerian Hormone (AMH) level was also included.
- We retrospectively recorded all first or second high responder patients IVF cycles stimulated with Follitropin Delta from June of 2018 until March of 2019. High response criteria included: AMH ≥ 3.5 ng/ml, AFC ≥ 20 or high response on previous cycle.
- Basal characteristics included: age, weight, Body Mass Index (BMI), Follicle Stimulating Hormone (FSH), AMH, AFC, number of previous IVF cycles, indication for IVF and previous gestations.
- All cycle, efficacy and safety variables were recorded.
- SPSS 20 was used for statistical analysis. T test for independent means was used for numeric variables and Chi Test for qualitative variables.

RESULTS

- No differences were found among basal characteristics between the two groups.
- No differences were found between both groups in terms of percentage of patients who needed GnRH agonist trigger or could not go to fresh embryo transfer.
- No significant differences were found between the two groups in terms of stimulation length, number of follicles the day of hCG, or total and MII oocytes or cleavage stage embryos.
- Mean number of good quality embryos was similar in both groups.
- Main results are summarized in TABLE-1.
- Among the 71 patients who had either fresh or frozen transfer, cumulative pregnancy rates were 52.11%. No differences were found between the two groups, obtaining 51.4% of pregnancies in Follitropin Delta group and 48.9% in the rest of follitropins group ($p=0.33$).

CONCLUSION

- Follitropin delta is an efficacious and safe option for controlled ovarian stimulation for IVF in high responder patients. The results of the study must be taken with caution due to the small sample size. Larger prospective studies in this particular subgroup of patients are needed.

TABLE-1

	Follitropin Delta	Rest of Follitropins	P value
Gonadotropin starting dosis (mean \pm standard deviation)	7,4 \pm 1,84	138,4 \pm 36,3	n.a.
Total gonadotropin dosis (mean \pm standard deviation)	68,14 \pm 23,67	1388,4 \pm 408,04	n.a.
Stimulation length (days)	9,27 \pm 2,27	9,86 \pm 1,16	0,21
Follicles day of hCG (mean \pm standard deviation)	14,95 \pm 6,49	14,45 \pm 5,38	0,26
Follicular Output RaTe (FORT) (mean \pm standard deviation)	0,77 \pm 0,34	0,74 \pm 0,3	0,29
Cycles with agonist trigger (%)	49,10%	50,90%	0,07
Total oocytes (mean \pm standard deviation)	11,3 \pm 5,9	11,24 \pm 6,08	0,74
MI I oocytes (mean \pm standard deviation)	7,61 \pm 5,05	8,02 \pm 5,76	0,21
MI I Index (mean \pm standard deviation)	0,88 \pm 0,33	0,81 \pm 0,39	0,1
Cleavage stage embryos (mean \pm standard deviation)	3,43 \pm 3,61	2,84 \pm 2,8	0,36
Good quality embryos (mean \pm standard deviation)	1,5 \pm 1,03	1,5 \pm 0,78	0,19
Frozen embryos (mean \pm standard deviation)	3,08 \pm 3,95	2,65 \pm 2,83	0,27
Fresh embryo transfer (%)	48,80%	51,20%	0,29
Cumulative pregnancy rates (%)	51,40%	48,90%	0,33