



OVO  
CLINIQUE

# IN VITRO FERTILIZATION IN POOR RESPONDERS: COMPARISON OF DAILY 450IU AND 600IU OF GONADOTROPINS IN A RANDOMIZED CONTROLLED TRIAL

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## INTRODUCTION

The administration of very high doses of gonadotropins in IVF has never been proven more efficacious in the poor responder population. This non-inferiority trial was designed to evaluate the efficacy of 450IU of gonadotropins compared to 600IU in women at risk of poor ovarian response undergoing IVF assuming that higher dosage would not provide any added benefit.

## METHODS

We designed a prospective randomized controlled trial in a university-affiliated private IVF clinic. Women less than 41 years old were recruited from October 2009 to February 2012. One hundred and seventy nine patients at risk of poor ovarian response were divided into two groups: N1=93 received 450IU of daily gonadotropins (225IU HMG and 225IU uFSH) and N2=86 received 600IU of daily gonadotropins (300IU HMG and 300IU uFSH). Doses were unchanged during the stimulation.

## STATISTICS

Intention to treat analysis was undertaken. Chi-square test, Fisher exact test, student t-test, and Kruskal Wallis test were used where appropriate.

The two groups were similar in terms of age, BMI and ovarian reserve. There were statistically more conversions in IUI in the 450IU group than the 600IU group (12.9% vs. 3.5% respectively, p=0.03).

Biochemical pregnancy rate per cycle and per transfer was significantly increased in the 600IU group (24.4% vs. 9.7%; p=0.01) and (38.9% vs. 18.8%; p=0.03) respectively.

Clinical pregnancy rate per cycle and per transfer was also significantly higher in the 600IU group (23.3% vs. 9.7%; p=0.01) and (37% vs. 18.8%; p=0.04).

Implantation rate was significantly improved in the 600IU group (32.4% vs. 15.6%, p=0.03). There was no difference in the side effects between the two groups.

Fig. 1 - Patient's demographics

	450 group N1=93	600 group N2=86	Valeur p
Age	37.08	37.1	NS
AMH	0.46	0.49	NS
FSH	8.69	7.99	NS
AFC	7.96	8.64	NS

## RESULTS

Fig. 2 - Biochemical and clinical pregnancy rates

	450 group N1=93	600 group N2=86	Valeur p
Biochemical pregnancy rate per transfer (%)	18.8%	38.9%	0.03
Clinical pregnancy rate per transfer (%)	18.8%	37%	0.04
Biochemical pregnancy rate per cycle (%)	9.7%	24.4%	0.01
Clinical pregnancy rate per cycle (%)	9.7%	23.3%	0.01

Fig. 3 - IVF cycles outcomes

	450 group N1=93	600 group N2=86	Valeur p
Implantation rate (%)	15.6%	32.4%	0.03
Transfer rate (%)	52%	63%	NS
No transfer (%)	17%	14%	NS
Cycle cancellation rate (%)	18%	20%	NS
IUI conversion rate (%)	12.9%	3.5%	0.03

## CONCLUSIONS

600IU of gonadotropins daily in poor responders undergoing stimulated IVF when compared to 450IU increases significantly the implantation rate and clinical pregnancy rate in this preliminary analysis of our results. This study is ongoing.

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