DIFFERENT PRETREATMENT SCHEDULING OPTIONS IN ANTAGONIST PROTOCOL AND THEIR EFFECT ON INTRACYTOPLASMIC SPERM INJECTION OUTCOME

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Introduction

Inability of programming the start of gonadotrophin stimulation in GnRH antagonist cycles and of minimizing weekend retrieval of oocytes is a major impediment to the widespread implementation of GnRH antagonist protocol in infertility clinics.

Several attempts have been made to bring the schedule of egg retrievals in a GnRH antagonist protocol under improved control. Scheduling of cycles is common practice in order to avoid weekend retrievals and equally distribute the workload throughout the week. A planned distribution of the workload avoids excessive incubator door openings and their negative impact on embryo development. It also helps with better work schedules for embryology and nursing staff and avoids unplanned work that may result in loss of concentration and reduced efficiency.

Two different pre-treatment regimens in GnRH-antagonist to be compared, Combined oral contraceptive pill versus oral estradiol Valerate.

Aim of the Work

The aim of work of the current study was to study different pre-treatment scheduling options in antagonist protocol and their impact on outcomes of IVF/ICSI.

Subjects and Methods

This was prospective cohort study that was performed on a registry of 100 women attending private IVF-ICSI unit of Alexandria centers and went through controlled ovarian stimulation protocol**.**

Two different pre-treatment regimens in GnRH-antagonist to be compared. The first regimen was given OCP (contraception regimen) on day 1 or 2 of menses of the cycle prior to the scheduled IVF/ICSI procedure, and they took it for 5-10 days, while the second regimen was given the participants the daily oral Estradiol Valerate (E_2 regimen) preceding the IVF cycle from day 21 for 5-12 days interval until the menses.

Results

Table 1: Comparison between the two studied groups according to pregnancy rate

Primary outcome	Group A (n = 51)		Group B (n = 51)		c^2	^{MC}p
	No.	%	No.	%		
Pregnancy rate						
No pulse	2	3.9	1	2.0	0.927	0.637
Negative	6	11.8	4	7.8		
Positive	43	84.3	46	90.2		

χ^2: Chi square test **MC: Monte Carlo test**
p: p value for comparing between **Group A** and **Group B**

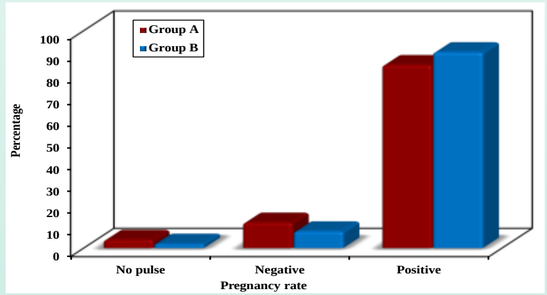

Figure 1: Comparison between the two studied groups according to pregnancy rate

Table 2: Comparison between the two studied groups according to stimulation duration

Stimulation duration (days)	Group A (n = 51)	Group B (n = 51)	U	p
Min. – Max.	12.0 – 14.0	8.0 – 12.0	13.0*	<0.001*
Mean ± SD.	13.37 ± 0.87	8.61 ± 1.0		
Median (IQR)	14.0 (12.50–14.0)	8.0 (8.0–9.0)		

U: Mann Whitney test
p: p value for comparing between **Group A** and **Group B**
*: Statistically significant at $p \leq 0.05$
Group A: COCS, **Group B**: E2

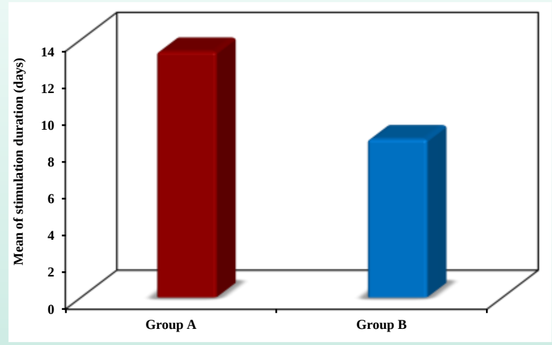

Figure 2: Comparison between the two studied groups according to stimulation duration.

Conclusion

In conclusion; the pregnancy rate in E2 valerate group was higher compared to OCPs, However the differences were not statistically significant, but pretreatment with oral Estradiol Valerate (E2 regimen) is associated with a shorter duration of ovarian stimulation and lower stimulation dose in normal-responder patients undergoing fresh IVF. Therefore, luteal estradiol pretreatment is an encouraging option to facilitate cycle scheduling in GnRH antagonist protocol.