

### **CLINICAL AND LAB EVALUATIONS IN "DUAL STIM" PROTOCOL FOR**

## **POOR RESPONDERS**

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#### **INTRODUCTION**

Introduction: Double stimulation (Dual Stim) combines two consecutive stimulations in the follicular and luteal phases of the same

ovarian cycle increasing the number of oocytes retrieved and embryos produced, It is a strategy which has been proposed to poor-

prognosis patients, especially due to reduced ovarian reserve and advanced maternal age, but also for fertility preservation purposes

(Kuang et al., 2014; Vaiarelli et al 2017; Vaiarelli et al. 2020). Objectives: To compare the two phases of the ovarian stimulation in the

dual stim protocol in poor responders in terms of number of follicles, number of international units (IU) of gonadotrophin, number of

oocytes, mature oocytes, fertilization, clivage and blastocyst rate. Material and Methods: Prospective observational study with 25

patients, performed from January 2019 to February 2020 in a cohort of poor responders (Poseidon 3 and 4), that underwent IVF with

the dual stim protocol for recruting and increased number of oocytes in the same cycle. The stimulation protocol was the same described by Ubaldi et al. (2016).

#### **RESULTS**

Patients age ranged from 34-42 years (average 39 years). The Anti-Müllerian hormone ranged from 0.1 to 0.8 (average 0.33). The

average IU of gonadotrophin in the first follicular stimulation was 2050 and in the second follicular stimulation 1600 IU (p=0.4). The

average number of follicles in the first stimulation was 4.2 and in the second stimulation 5.5 (p=0.2). The average of mature oocytes

recovered in the first stimulation was 2.0 and in the second stimulation was 2.6 (p=0.09). The normal average fertilization rate in the

first stimulation was 1.4 and in the second 2.2 (p=0.09). The average cleavage stage day 3 embryos in the first stimulation was 1.0 and

in the second stimulation 1.6 (p=0.13) and the average number of blastocyst grade A and B frozen in the first phase of the stimulation

was 1.0. In the second stimulation the number of blastocysts frozen was 1.3 (p=0.25).

#### **CONCLUSION**

The Dual Stim showed a second ovarian stimulation with oocytes, with the same fertilization rate, cleavage, and blastocyst rate, tending

to be higher than the first stimulation in poor responders. Our study showed a similar response in the first and second stimulation of the

dual stim protocol, with a tendency to have more mature and fertilized oocytes in the second stimulation. The dual stimulation may

increase the number of oocytes and embryos in poor responders.

#### <u>REFERENCES</u>

- Kuang Y, Chen Q, Hong Q, Lyu Q, Ai A, Fu Y, et al. Double stimulations during the follicular and luteal phases of poor responders in IVF/ICSI programmes (Shanghai protocol). Reprod Biomed Online. 2014;29:684–91.

- Ubaldi FM, Capalbo A, Vaiarelli A, et al. Follicular versus luteal phase ovarian stimulation during the same menstrual cycle (DuoStim) in a reduced ovarian reserve population results in a similar euploid blastocyst formation rate: new insight in ovarian reserve exploitation. *Fertil Steril*. 2016;105(6):1488-1495.e1. doi:10.1016/j.fertnstert.2016.03.002

- Vaiarelli A, Venturella R, Vizziello D, Bulletti F, Ubaldi FM. Dual ovarian stimulation and random start in assisted reproductive technologies: from ovarian biology to clinical application. Curr Opin Obstet Gynecol. 2017;29:153–9.

- Vaiarelli A, Cimadomo D, Petriglia C, et al. DuoStim - a reproducible strategy to obtain more oocytes and competent embryos in a short time-frame aimed at fertility preservation and IVF purposes. A systematic review. Ups J Med Sci. 2020;125(2):121-130. doi:10.1080/03009734.2020.1734694

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