

EVALUATION OF THE INCREASE SERUM BASAL ESTRADIOL CONCENTRATION ON ICSI OUTCOME

M. Ajina¹, S. Kbailli⁴, M. Khila⁴, J. Zaafrane⁴, M. Fekih⁴, A. Saad², H. Khairi⁴, M. Zaouali³

¹ *Unit of Reproductive Medicine, Hospital University Sousse*

² *Laboratories of Cytogenetic, Molecular Biology and Human Biology of Reproduction, Sousse*

³ *Laboratories of Physiology and Functional Exploration, Faculty of Medicine, Sousse*

⁴ *Department of Obstetrics and Gynaecology, University Hospital F. Hached Sousse, Tunisia*

Introduction: The aim of our study was to evaluate the effects the relationship between the elevations of basal E2 concentration and ICSI outcome.

Materiel and Methods: Our study examined 396 ICSI. E2 concentrations were quantified with radio-immunoassay technique and by the values of E2 we created two groups of patients: The first group G1 (n= 236), E2 [60-80] pg/ml, the second group G2 (n = 160), E2 > 80 pg / ml.

Results: The average age of patients was 33.32 years \pm 4.76 .

The two groups were statistically comparable. We compared several clinical and biological parameters between these two groups. The average thickness of the endometrium on the day of onset was 10.32 \pm 1.82 , mm in the first group and 10.06 \pm 1.99 , mm in the second group (P = 0 19).

The rate of maturation, fertilization, and cleavage were respectively 78% and 100%, 72% in the first group, they were 77 % , 86%, 67% in the second group and the difference was not significant (p> 0.05).

However, the pregnancy rate was 27.7% in patients with E2 levels <80 pg / ml, while it decreased to 15.6% in patients with a blood E2 \geq 80 pg / ml and the difference between the two groups was significant (p = 0.005).

Conclusions: High levels of basal E2 concentration do not affect significantly the biological parameters of IVF, as well as the thickness of the endometrium. However, the increase level of basal E2 concentration was responsible for a significant reduction in pregnancy rate and an increased risk of cancellation.