The international Academy of Human Reproduction

17th World Congress of the Academy of Human Reproduction

15–18 March 2017

Rome, Italy

TITLE

AGE-RELATED AMH DECREASE IN ART PATIENTS

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ABSTRACT

OBJECTIVE: To investigate AMH levels in ART patients submitted to one or more pick-up.

MATERIALS AND METHODS: 288 ART patients, aged 18- 42 years, retrospectively evaluated and allocated into two groups: 159 women waiting for the first ART treatment (Group A) and 123 previously submitted to one or more oocyte retrievals (Group B). Exclusion criteria were: BMI>30, PCOS, previous ovarian surgery, previous neoplasia and chromosome abnormalities. AMH levels and day 3 FSH, LH and E2 levels relative to the two groups were collected and evaluated by statistical analysis according to a multivariate linear regression model. In order to better evaluate age-based stratification of the effect of a pick-up, we tested (t-test) whether AMH, FSH, LH and E2 levels were significantly different in patients who were exposed to a pick-up compared to patients who were not, stratifying according to 3 age bands: below 35 years, between 35 and 39, and between 40 and 42.

RESULTS: No statistically significant difference was found between group A and group B regarding AMH, FSH, LH and E2 levels. After age-based stratification, we found that in group B, only women aged over 40 had lower AMH levels when compared with women over 40 in group A (p=0.04). No statistical difference was found in AMH levels between the two groups in women younger than 40. Even after adjusting for age, FSH, LH and E2 were found no statistical difference between the two groups in all the classes of age.

CONCLUSIONS: There is no correlation found between AMH levels and previous oocyte retrievals in women younger than 40 years. However, in our series of patients the effect of previous oocyte pick-up seems to be associated to lower AMH levels in women over 40 years. Further studies are necessary to confirm our observations and to evaluate the relationship with the the number of oocytes retrieved.

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