

## **P157. Proposal of necessary tests for all the patients before Assisted Reproduction Treatments in order to prevent factors that could affect implantation failure, miscarriages or other gestational complications.**

*Y Cabello (ES) [1], D Ordonez (ES) [2]*

### Context

Levels of TSH and thyroid AB in pregnant women have been associated with miscarriage and premature delivery. These abnormalities could affect implantation of embryos in IVF patients.

Hypovitaminosis D is associated with a higher incidence of fetal miscarriage, preeclampsia, gestational diabetes and impaired fetal and childhood growth and development.

Abnormalities in the protein C or hyperhomocysteinaemia related to mutation in MTHFR polymorphisms, could affect anticoagulant pathways.

### Objective

To find out which are the crucial tests that should be performed to infertile patients of an assisted reproduction unit to get an evolutive pregnancy.

### Methods

We reviewed all the patients that came during 2016-2017 from other units without getting a pregnancy with no thyroid function, thyroid autoimmunity, Protein C, homocysteine or vitamin D levels determinations previous to IVF.

### Participant(s)

82 no-pregnant patients with previous cycles were included. 53 had no studies of the parameters or even out of range received no treatment.

### Intervention(s)

We measured in blood non studied parameters in order to correct any value out of range before a new IVF attempt.

### Main Outcome Measure(s)

80% of the patients: TSH  $> 2.5 \mu\text{IU/mL}$ . 2 patients TPO antibodies  $> 35 \text{UI/mL}$ . 60% had homocysteine  $> 13 \mu\text{mol/L}$ . 90% vitamin D  $< 20 \text{ ng/mL}$ . If protein C was out of range, we suggested a test of thrombophilia, which studies 15 related genes with possible mutations. In all the cases the test was done, we found 1-5 mutations in those genes.

### Result(s)

Abnormal levels of TSH were treated with levothyroxine, usually used to treat hypothyroidism. After 3 weeks of treatment, we measured again the levels to maintain or changing the dose if it was needed.

Hyperhomocysteinaemia was treated with calcium levofolate. We maintained the dose even the levels were lower in another administration after 3 weeks. Hypovitaminosis D treated with vitamin D. If some mutation in one or more genes responsible of thrombophilia were detected, we administrated different

doses of heparin or/and aspirin from 7 days before the embryo transfer.

#### Conclusions

Elements as thyroid function, vitamin levels, coagulation and immunological factors have to be analyzed in all the patients previously to IVF cycles to prevent further complications to get or maintain a pregnancy.

The patients could avoid performing more than 1IVF cycle and getting a healthy new-born faster with lower cost, although some tests aren't covered by the health insurances.

[1] Hospital Ruber Juan Bravo Quironsalud, Madrid, [2] Hospital Ruber Juan Bravo Quironsalud, Madrid