Wider implications of the findings: The fact of having passed the disease does not affect the ovarian reserve status but the degree of the variation of AMH levels depending on the patient were low or high responder. Nevertheless, we could assume that the chances of success of the Assisted Reproductive treatment remain intact.

Trial registration number: Not apply

O-079 Could ovarian reserve be affected after SARS-CoV-2 infection?

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Study question: Is there a variation in ovarian reserve in women who have passed the disease?

Summary answer: The fact of having passed SARS-CoV-2 does not affect the ovarian reserve status

What is known already: Despite the overwhelming magnitude of this pandemic and its worldwide prevalence, information regarding the effects of the novel coronavirus on human reproduction are currently limited. As the assisted reproductive technology programs resumed operations, it was important to gather information regarding the status of individuals infected with the novel coronavirus, and to assess gametes and reproductive outcomes for those who had SARS-CoV-2 virus. Since it was described the presence of receptors of the virus in the ovary, studies on the reproductive involvement of coronavirus infection are warranted, particularly within recovered patients

Study design, size, duration: During the period May-June 2020, women performing an Assisted Reproductive treatment in any of the 11 clinics belonging to the IVIRMA group in Spain and who had a positive IgG for SARS-CoV-2 were invited to participate in the study; this group of women had a previous AMH determination of no more than 6 months. The study was approved by an Institutional Review Board (2007-MADR-052-AR) and all women provided written informed consent.

Participants/materials, setting, methods: A new AMH determination was made (Elecsys® AMH, Roche Diagnostics) to detect possible variations in the hormone levels. Women were stratified in two groups, according their previous AMH levels: low responders (AMH<1 ng/ml) or normo-high responders (AMH ≥ 1 ng/ml) Statistical analyses were performed using the Statistical Package for Social Sciences 19.0 (IBM Corporation, Armonk, NY, USA).

Main results and the role of chance: After filtering by the inclusion criteria described above, we included 46 patients in this phase of the study; 16 women were diagnosed as having low ovarian reserve (AMH < 1 ng/ml), with an average age of 38.6 years, whereas 30 were classified as having normal ovarian reserve (AMH ≥ 1 ng/ml), with an average age of 34.7 years. Generally, the data show no variation in AMH levels before and after SARS-CoV-2 infection (1.73 ng/ml vs. 1.61 ng/ml, respectively). However, when we analyzed these differences according to the study groups, we observed that, in women with normal ovarian reserve, average AMH level before infection was 4.6 ng/ml, whereas after infection AMH decreased to 3.1 ng/ml. For women with low ovarian reserve, AMH was 0.8 ng/ml before infection and remained at a similar value after infection (AMH=0.7 ng/ml).

Limitations, reasons for caution: This is an observational study and thus possible confounders cannot be completely excluded. More data are needed to draw firm conclusions it will be critical to increase the sample size to check if the results observed in this work remains in the general population