Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company’s public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
patients diagnosed as premature ovarian failure (POF). We evaluated the use of AMH value and basal AFC to predict the ovarian reserve and ovarian response to COH in HH women; women with POF have been involved as a control group. We reviewed the recorded AMH and basal AFC, and the total number of retrieved oocytes and fertilized ones in both groups. We used unpaired student t-test for statistical comparison. P<0.05 was considered for statistical significance.

RESULTS: Both groups were similar in age, BMI, AMH and basal AFC. Basal FSH and LH were higher in the POF group. Despite the low AMH and the low basal AFC in women with HH (average 0.46 and 1.6 respectively), we report significant high number of retrieved oocytes and fertilized ones in response to high dose of gonadotropins stimulation compared to the reverse in the POF group. (Table 1)

Pregnancy has been reported in 9 women (out of 19) in the HH group. Only one woman (out of 21) got pregnant in the POF group.

**TABLE 1. Baseline characters and response to COH in women with HH Vs. POF.**

| HH (n=19) | POF (n=21) | P value |
|-----------|------------|---------|
| Age       | 26.33      | 23.55   | 0.15   |
| BMI       | 22.7       | 24.9    | 0.08   |
| FSH       | 0.87       | 24.9    | <0.001 |
| LH        | 0.75       | 21.5    | <0.001 |
| AMH       | 0.46       | 0.29    | 0.11   |
| AFC       | 1.6        | 0.91    | 0.34   |
| Total gonadotroph dose | 5600 | 4081 | 0.03 |
| Peak E2   | 3344.4     | 427.3   | <0.001 |
| Total retrieved oocytes | 12.8 | 1.3 | <0.001 |
| Total fertilized oocytes | 8.1 | 0.45 | <0.001 |

CONCLUSIONS: AMH and basal AFC has limited value in women with HH regarding prediction of ovarian reserve and ovarian response to COH. Higher doses of gonadotropins can be used rather than early giving up.

**IMPACT STATEMENT:** Clinicians should not use AMH or basal AFC in assessing the ovarian reserve or the prospective response to COH in women with HH.

**REFERENCES:** Pandurangi M, Tamizharasi M, Reddy NS. Pregnancy outcome of assisted reproductive technology cycle in patients with hypogonadotropic hypogonadism. *J Hum Reprod Sci.* 2015;8(3):146-150. doi:10.4103/0974-1208.165141

**SUPPORT:** None

**P-296 6:30 AM Tuesday, October 19, 2021**

**FIRST TRimester OUTCOMES OF PATIENTS SEEKING INFERTILITY CARE AFTER COVID-19 INFECTION.** Kyle Nguyen Le, MD,1 Leah M. Roberts, MD,1 Cheri K. Margolis, MD,2 Amber M. Klimczak, MD,3 Nola S. Herlihy, MD,4 Julia G. Kim, MD, MPH,5 Brent M. Hanson, MD,5 Emre Seli, M.D.,6 Richard T. Scott, Jr., M.D.,7 Marie D. Werner, MD8 Cooper University Health Care, Camden, NJ; 3IVI-RMA New Jersey, Basking Ridge, NJ; 4Reproductive Medicine Associates of New Jersey, Basking Ridge, NJ; 5IVI RMA New Jersey, Basking Ridge, NJ; 6IVI-RMA.

**OBJECTIVE:** To assess if COVID-19 infection differentially impacts first trimester outcomes in patients seeking infertility care at one large fertility practice.

**MATERIALS AND METHODS:** A retrospective chart review of all female patients actively pursuing fertility care in a single fertility center with positive COVID-19 test results from March 2020 to February of 2021 was performed. Positive COVID-19 test results included PCR tests performed in our clinic and symptomatic patients who informed us of their outside positive test results by phone during their treatment with our clinic. This was compared to a control group of all comers in our clinic in 2020. Information was gathered on infertility treatment type, and pregnancy outcomes. Chemical pregnancy rate (CPR) is documented as a positive pregnancy test and ongoing pregnancy was documented as a positive fetal heart beat between 7-8 weeks of gestation and discharge to routine OB/GYN care. Fischers exact test was used to calculate p value, statistically significant associations were considered to exist when the p value ≤0.05.

RESULTS: A total of 178 cases of COVID-19 were documented in patients between April 2020 and February 2021. After COVID-19 infection (Covid+) sixty-two pregnancies were documented, with sustained implantation in fifty-three (85%) patients. In the subgroup of Covid+ patients that underwent subsequent fertility treatment the CPR was 30.1% with IUI, and 70.1% with IVF and single frozen embryo transfer. This is in comparison to our control population CPR of 14.1 % with IUI (p=0.002) and 68% (p=0.78) with IVF with single embryo transfer (Table 1). Clinical pregnancy loss rate was recorded and shown in Table 1.

**CONCLUSIONS:** In an infertile population, a recent history of COVID-19 diagnosis did not negatively impact pregnancy outcome as measured against a control population. One of the limitations of this study was the relatively small sample size, which may have conflated our data on COVID-19 patients who underwent IUI, whose higher rate of pregnancy is unlikely to be clinically significant.

**IMPACT STATEMENT:** Patients who have had COVID-19 and then proceeded with infertility treatment were no more likely than our control population to have first trimester complications in one fertility clinic. The findings from this study should provide reassurance that attempts at pregnancy do not need to be delayed after recovery from a COVID-19 diagnosis.

**TABLE 1. First Trimester Outcomes**

| Treatment | Number of Cycles | Chemical Pregnancy | Chemical Pregnancy Rate % | Fisher’ Exact P-value | Pregnancy Loss | Loss Rate % | Fisher’ E exact P-value |
|-----------|------------------|--------------------|---------------------------|-----------------------|----------------|------------|-----------------------|
| Control IUI | 3645             | 514                | 14.1%                     | 0.002                 | 82             | 15.9%      | 0.16                  |
| Covid + IUI | 52               | 16                 | 30.1%                     | 0.002                 | 5              | 31.3%      |                       |
| Control FET | 4334             | 2968               | 68.5%                     | 0.78                  | 432            | 14.6%      | 1.00                  |
| Covid + FET | 58               | 41                 | 70.1%                     | 0.78                  | 3              | 7.3%       |                       |

**P-297 6:30 AM Tuesday, October 19, 2021**

**INTRAUTERINE INSEMINATION CYCLE CHARACTERISTICS ASSOCIATED WITH MULTIPLE GESTATION.”** Mabel Lee, MD,1 Samantha Sechler, MS,2 Akalah T. Mason, MS,2 Rebecca Flyckt, MD,3 Sung Tae Kim, PhD, HCLD4 1University Hospitals Fertility Center/Case Western Reserve University, Beachwood, OH; 2University Hospitals Fertility Center, Beachwood, OH; 3Case Western Reserve University, Cleveland, OH; 4UH Fertility Center, REI Division.

**OBJECTIVE:** Since the 1980s, the incidence of multiple gestation has risen and the use of assisted reproductive technologies (ART) has been identified as a contributing factor. The incidence of twin gestations attributed to ART is approximately 20 times greater and the incidence of higher order multiple gestation is more than 100 times higher than compared to natural conception. Correlation between number of embryos transferred during IVF and multiple gestation is well understood; this led to the development of guidelines encouraging single embryo transfer. In intrauterine insemination (IUI), research is more scarce surrounding risk factors for multiple gestation. The purpose of our study is to determine whether there is a correlation between multiple gestation and IUI cycle characteristics.