

INVITED SESSION**SESSION 16: SAFE TREATMENTS IN UNSAFE TIMES –
LESSONS LEARNED FROM COVID-19**

Monday, 4 July 2022

Silver 14:00 -15:00

Abstract citation ID: deac104.063**O-053 ART treatment and pregnancy during covid 19 pandemia:
what we learned****A. Veiga¹**¹IDIBELL, Regenerative Medicine Programme, Barcelona, Spain

In 2020, SARS-CoV-2 and the COVID-19 pandemic had a huge impact on the access to and provision of ART treatments. Gradually, knowledge about the virus and its transmission has become available and has allowed ART activities to resume with certain restrictions. Still, questions on the impact of the virus on fertility and ART treatments remain.

Regarding the possible consequences of COVID-19 in men, ACE2 and TMPRSS2, the receptors required for the viral penetration into cells, are highly expressed in the testis and the presence of SARS-CoV-2 has been demonstrated in the testicular tissue and the ejaculate in a small percentage of males with active and severe COVID-19 infection. Impairment of the sperm quality has been described during the acute and recovery phase of infection.

In the female scenario, low levels of ACE2 have been reported in ovarian tissue and co-expression of ACE2 and TMPRSS2 has been demonstrated in oocytes, zygotes and blastocysts that are thus potentially susceptible to SARS-CoV-2 infection upon exposure to the virus. The endometrium has been shown to be at a low risk of infection. Although infrequent, vertical transmission of SARS-CoV-2 has been reported in cases of severe maternal infection.

The effects of SARS-CoV-2 infection have been analysed in ART patients. Certain studies suggest that ovarian function might be altered and that IVF results could be poorer in patients that have recovered from COVID-19 while others show no evidence of compromised follicular function. The possible effects of vaccination in male and in female patients have also been explored. Neither the ovarian response nor the sperm quality is affected by the administration of COVID-19 vaccines, which are highly recommended in couples planning a pregnancy, either spontaneous or through ART.

During the different waves of the COVID-19 pandemic, the ESHRE COVID-19 Working Group has produced recommendations and publications to guide patients and professionals in their journey through ART during these difficult times.