

Participants/materials, setting, methods: The study group included patients that received 2 doses of the Pfizer SARS-COV-2 vaccine between 7-180 days prior to starting IVF and without a history of COVID infection. Controls included unvaccinated patients from the same time period and historical age matched patients from our hospital from the same months in prior years. 385 patients under the age of 40 years met the inclusion criteria, 349 in the control and 36 in the vaccinated group.

Main results and the role of chance: Demographic and clinical characteristics were comparable between groups. The pregnancy rate was 33.3% (n=12) in the vaccinated group vs 31.8% (n=111) in the control group (p>0.1). There were no statistically significant differences between the control and vaccine groups with a small non-significant trend to higher pregnancy rates in vaccinated patients: pregnancy rate OR for vaccination group was 1.17 (95% CI 0.56-2.44).

Limitations, reasons for caution: Our study size was small and was observational leaving it open to confounding and selection bias regarding who chose to receive the vaccine and those in high risk groups for COVID infection. Additionally, longterm effect of the vaccine and booster were not assessed.

Wider implications of the findings: We did not observe any effect of this vaccine regimen on IVF outcomes or pregnancy rates. This underscores worldwide data and physiologic reasoning that there should not be significant effects of this COVID vaccine on developing gametes quality and function and is a good option for those trying to conceive.

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O-142 SARS-CoV-2 vaccination and IVF cycle outcomes

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Study question: Does recent mRNA SARS-CoV-2 vaccination effect IVF pregnancy rate?

Summary answer: We observed no influence of mRNA SARS-CoV-2 vaccine on patients' IVF cycle outcomes; vaccination did not change pregnancy rates.

What is known already: Two recent studies showed that the BNT162b2 mRNA SARS-COV-2 vaccine does not appear to have negative effects on oocytes during controlled ovarian stimulation. Assessment of follicular fluid after vaccination (1) concluded that there was no affect on the follicle quality or function. An additional study of 36 patients that underwent IVF both immediately before and immediately after vaccination found no change in ovarian yield or embryo quality (2).

Study design, size, duration: A retrospective case control study including 385 women from January 1, 2021 to May 31st of the same year.