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P-741 The COVID-19 pandemic: is there any impact on male fertility?

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Study question: Is there any impact of the pandemic period on semen parameters?

Summary answer: Both total and progressive sperm motility as well as sperm morphology were impaired during COVID-19 pandemic.

What is known already: Male fertility could be affected by many environmental conditions. The COVID-19 pandemic has led to many dramatic consequences on human lives (psychological, financial level...). However, little information is available on the impact of the emergent COVID-19 on male fertility.

Study design, size, duration: This was a cohort study comparing semen parameters before and during the two first COVID-19 waves in infertile Tunisian patients.

Participants/materials, setting, methods: Were included in the current study 90 patients followed in the consultation of the department of Cytogenetics and Reproductive Biology (Monastir, Tunisia) for hypofertility. Each of the included patients has already a spermogram before the COVID-19 pandemic and a spermogram during the COVID-19 pandemic allowing the comparison of semen parameters for each patient so that he was considered as his own control. Patients who received medication (antibiotics, antioxidants...) were excluded from the current study.

Main results and the role of chance: Among standard semen parameters, we have shown a significant decrease in both total and progressive sperm motility during COVID-19 pandemic ($p < 0.0001$ and $p = 0.001$ respectively). The observed decrease 30 min after ejaculation was maintained 2 hours and 4 hours after ejaculation. Furthermore, we observed an impairment in sperm morphology. Indeed, the percentage of morphologically abnormal spermatozoa raises from 90.99±7.37% to 93.67±4.54% ($p < 0.0001$). The remaining semen parameters was similar between the two compared timepoints except a slight decrease in sperm count during the pandemic ($p = 0.079$).

Multivariate analysis didn't show among clinical and epidemiological characteristics any associated factor with the observed decrease in semen quality.

Limitations, reasons for caution: The included patients didn't have any COVID-19 symptoms on the day of sperm collection. However, as we have no proof of negative PCR test, the observed impairment in semen quality could be not only the consequence of psychological stress but may be also induced by a latent infection.

Wider implications of the findings: Even in patients with no proof of COVID-19 infection, the pandemic seems to have a real impact on hypofertile men as sperm motility and morphology were significantly impaired. It would be preffered to control semen parameters away from such period before referring patients to assisted reproduction.

Trial registration number: Not Applicable