



Perspective

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Assisted reproduction in the COVID–19 era: Dilemmas and conundrums

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The coronavirus disease 2019 (COVID-19) pandemic is the biggest pandemic of its kind in modern times, and has been running for over two years. It has grown exponentially from a cluster of unexplained cases of pneumonia in December 2019 to a full-grown pandemic[1]. With a sharp ascending limb in its initial stages, it was announced by the World Health Organization as public health emergency of international concern on January 30, 2020, subsequently acquiring the definition of a pandemic on March 11, 2020. Despite sustained efforts of governments and public health agencies to contain the virus, it has become a global challenge and treads unabated. It is a unique virus with unique characteristics and knows no borders[2].

The ongoing COVID-19 pandemic has raised concerns if subfertile women should consider postponing pregnancy to mitigate risk. The question in itself involves ethical, moral, social and economic issues.

On March 17, 2020, the American Society for Reproductive Medicine (ASRM) and the European Society of Human Reproduction and Embryology (ESHRE) promulgated guidelines pertinent to infertility and reproductive care specialists. A complete suspension of new treatment cycles including both *in vitro* fertilization and embryo transfers (except urgent fertility preservation procedures) was suggested. In 2021, newer guidelines were set out to assist health care professionals in order to re-initiate, organize and manage artificial reproductive technologies (ART) care in the face of the current or future COVID-19 waves[3].

We know from experience that the subject of delaying infertility treatments had arisen during previous pandemics like 2009 H1N1 influenza and Zika outbreak in 2016-2017. Back then, the Centers for Disease Control had recommended clinicians to arrive at a decision after an informed and mutual discussion with the patient about his/her reproductive plans as well as the risks of the virus during pregnancy[4].

Delaying assisted reproductive treatment is a major concern during the COVID-19 pandemic. Indeed, the pandemic has landed everyone in uncertain times, but for infertile couples, it has only

added to their already building mental stress. A global challenge as it is, there is probably no definite answer to its time to resolution.

There are ethical and moral dilemmas associated with reproductive care during the pandemic. Reproductive care is indeed a quintessential human right[5], but it is not indispensable. There are papers that consider the reproductive impact of the virus itself on male and female infertility. Could delaying pregnancy lead to more infertility? We do not have a definite answer[6,7].

We must also remember that a pregnant lady getting infected with the SARS-CoV-2 could impact her as well as her baby's life. Pregnant women getting the virus could have a higher chance of requiring intensive care unit admission and/or mechanical ventilation as per some studies. The impact on new born is less substantial[6].

Assisted reproductive treatment often needs multiple health-care visits, often in a joint care facility with other specialities, and often includes multiple tests, ultrasound scans, and *in vitro* fertilization treatment. This might expose the women to higher risk of acquiring COVID-19 infection. Although a case can be made for telemedicine and teleconsultation in these circumstances, the treatment would need facility visits.

However, we must also remember that infertility is a serious disease that impacts one's physical, emotional and psychological state. For patients who have waited years to conceive, another

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delay can be anxiety-provoking and particularly, difficult to come to terms with.

Elderly couples are more likely to develop infertility. Also, treatment and prognosis get worse with time. With advanced age women, particularly in their 40s, every month passed by, not conceiving can become a psychological as well as medical burden.

Fertility care operates on the doctrine of nondirective counselling where the physician discusses with the patient about the benefits and risks and assists them in making informed choices. As voluntary a choice as it is, couples can choose to delay or go ahead with fertility treatments adjusting to the new reality of uncertain times[8].

Indeed, now as vaccines become available to populations, and with the severe variants of the virus having calmed down – though we do not know if a newer variant could emerge – fertility clinics have started operating again, albeit with cautious optimism. However, attendance is low, for both health-care providers and patients, particularly in places seeing an upsurge of cases due to the new omicron variant.

As the pandemic abates down further, we can anticipate the numbers of infertile couples seeking treatment increase, with possibly poorer prognosis. We could have an ARTemic in the making. And it is something we, as clinicians and fertility treatment specialists gear up for. This could be the silence before the storm.

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