Acta Biomed 2025; Vol. 96, N. 1: 16833 DOI: 10.23750/abm.v96i1.16833

Fertility preservation in the pandemic era

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To the Editor,

When talking about fertility preservation with assisted reproductive technology, it is impossible not to think about the arduous journey these patients are living. They are facing an oncologic diagnosis and the life-saving therapies offered to them could possibly impact their future fertility. Given their successful outcomes, oocyte and embryo cryopreservation are gold-standard techniques that should offered and discussed with the patients.

Nowadays, due to many sociological and anthropologic factors, women tend to postpone pregnancies (1). This trend stretches the period of time in which women actively seek to become pregnant. Since women's fertility tends to decrease with age, assisted reproductive technologies (ARTs) may be needed in some cases. Furthermore, this postponement also opens new perspectives: taking care of women who may undergo oncological treatments before their family planning is complete or already pregnant women who need to undergo diagnostic procedures that could harm the product of conception if the patient is already pregnant (i.e. contrast agents imaging). In this context, to provide the best possible care to these patients, fertility counselling and fertility preservation become crucial. Fertility preservation and fertility-sparing surgery for oncologic patients should always be considered when the patient has a desire for parenthood, especially because breast cancer, endometrial cancer, cervical cancer and ovarian cancer can also affect relatively young women (2). In this context, an adequate counselling always needs to be planned. Moreover, fertility after cancer treatment is now becoming an important issue and healthcare providers should know how to manage it. It has been recently observed oncologic patients' interest in fertility preservation has dropped after COVID (3). The limited access to care may cause this trend that these patients experienced during COVID pandemic. It is now clear that COVID has changed the way we perceive global health. As already pointed out, many aspects and consequences of this period of time are still far from being fully understood. However, COVID openly explained a phenomenon that was not known yet: general health and fertility health management during pandemics. It is plausible that this generation of young physicians will likely face numerous pandemics. To cite an example, the Zika virus outbreak and this infection's consequences in fertility are already alarming (4) and should make us reflect on how easily reproductive health can be affected by global issues. This is also a reminder that many strategies can be implemented to limit future damages. During pandemics and global emergencies, some clinical services may be reduced. During the COVID emergency, for example, reproductive health was considered "not essential." Therefore, many wards and departments were forced to close, and physicians could not support their patients for several months. Moreover, infectious diseases in general may have unknown repercussions on fertility, as already discussed for COVID by some authors. This effect was dramatic, even more for those patients who were undergoing fertility preservation practices. To sum up, global pandemics are actual risks for our society. We, as medical professionals, should all learn from our recent past and implement effective strategies that could help us navigate through emergencies. In this scenario, it has recently been demonstrated how

nutraceutical supplementation can be helpful in breast cancer prevention by reducing breast density (1). Moreover, inositols, alpha lipoic acid and vitamin D (5,6). can improve fertility giving a determinate contribution to get pregnant naturally, without needing in vitro fertiliziation (IVF) procedures. Our patients' family planning should always be taken into account, especially for oncologic patients. ARTs, fertility preservation and fertility sparing surgeries are essential tools when taking care of our patients' reproductive health in the genomic and proteomic era.

Ethic Approval: Not needed.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

Authors Contribution: All authors have participated in the work and reviewed and agree with the article's content. In particular, MA and VB designed and wrote the article; KA supervised the project.

Declaration on the Use of AI: None.

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Received: 25 January 2025
Accepted: 12 February 2025
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