

Fertility Preservation: Still having doubts?

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Oocyte vitrification and Fertility Preservation (FP) have provided a new future for cancer patients who wish to become mother. Since it is no longer considered experimental^[1], it enables women to remain independent and, unlike embryo freezing, it has no personal, legal or even ethical implications. Both medical and surgical cancer treatments may affect women's fertility, and this generates an anxiety that affects their quality of life or, even worse, their oncological treatment decisions related to maintaining their fertility. Nowadays there is no evidence that FP reduces the success of cancer treatment or increases maternal or perinatal complications^[2]. On the other hand information about FP has a beneficial psychological impact even if it is not performed (Levine et al., 2015). But the lack of information is precisely the main problem: 30% - 50% of young cancer patients do not receive information about the possibilities of FP (Quinn et al., 2009; Corney et al., 2014), and this is reflected in the data, since only 4% of cancer patients undergo FP in USA (Barri and Pellicer., 2014). Therefore, a great deal of work remains to be done, although many scientific societies (American Society of Clinical Oncology, European Society for Medical Oncology, American Society for Reproductive Medicine, International Society for Fertility Preservation) strongly recommend that these patients should be referred to Reproduction Units for information about FP options.

There is no reason to think that we are wasting patients' time. We now know that chemotherapy can be delayed for 12 weeks with no impact on survival in patients diagnosed in early stages of cancer (Lohrisch 2006). What is more, the multiple follicle wave theory allows us to start ovarian stimulation at any moment in the menstrual cycle^[3], and we have reasons to believe that the response to ovarian stimulation in cancer patients is as expected according to an age specific-nomogram^[4]. Obviously, aromatase inhibitors are recommended in oestrogen-dependent tumours to avoid supraphysiological levels of estradiol, and

GnRh agonist should be considered for triggering in antagonist cycles. Even if it were not possible to perform ovarian stimulation (prepubertal, impossibility of delaying oncological treatment, bone marrow transplant), we should consider the possibility of ovarian freezing, even although it is still regarded as experimental (Practice Committee of the American Society for Reproductive Medicine, 2014). Nevertheless, many authors criticize this argument as more than sixty live births have been published all over the world after the transplantation of cryopreserved ovarian tissue, and it is the only possibility in prepubertal patients (Donnez and Dolmans., 2015).

Anyway caution should be exercised when extrapolating the excellent results obtained in oocyte vitrification to cancer patients since few women have returned to seek pregnancy after cancer treatment^[5]. Even more there are still many concerns about the quality of the oocytes obtained after luteal phase stimulation although results are encouraging^[2].

However, cancer is a rare situation in our daily practice and it is not the only reason for FP. We must not forget many other medical situations that we encounter virtually every day and could benefit from FP. These cases are more frequent than we might think: endometriosis, ovarian surgery, genetic factors or a family history of premature ovarian failure. We must warn these patients about the possibility of FP and the risks involved in delaying pregnancy. It is also important to consider that oocyte vitrification does not guarantee pregnancy in the future, irrespective of the number of oocytes vitrified, and inform patients accordingly.

Delayed pregnancy is a reality in western countries. Many women cannot contemplate pregnancy until they reach their forties due to work or to the lack of an ideal partner. This has a huge demographic and economic impact as the population is aging. Neither can the risks of pregnancy in advanced maternal age be overlooked. There is a very thin line between medical

FP and social egg-freezing when we consider the loss of fertility associated with age. Hence, it is important to remember that we cannot prejudge women for social egg-freezing (ESHRE Task Force on Ethics and Law, 2012), but FP does not resolve the problem of finding an ideal partner or striking a proper work-life balance (Swiss National Advisory Commission on Biomedical Ethics, 2013). There is a cost-benefit in social egg-freezing between the ages of 37 and 38 years compared with seeking pregnancy or resorting to assisted reproductive techniques at a later point (Devine et al., 2015; Mesen et al., 2015).

Fertility preservation is a quick, safe and perhaps a cost-benefit procedure that could help to reduce all these problems. We see patients that could benefit from this technique virtually every day: still having doubts?

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