Fertility Preservation in the Gynecologic Cancer Patient

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Clinicians, researchers, and survivorship communities are beginning to recognize the late effects of cancer treatment, such as infertility, and the negative impact this can have on cancer survivorship. Reproductive concerns that emerge within cancer experiences have been shown to be negatively associated with quality of life. Gynecologic cancer can present before childbearing has been started or completed, during pregnancy, or can even arise out of pregnancy, as is the case with gestational trophoblastic disease. Parenthood has been cited as an important aspect of cancer survivorship. As a result, interest concerning fertility preservation, reproductive concerns, and family-building options in cancer survivorship has increased, in addition to awareness of the emotional ramifications of cancer-related infertility. Education and support are clearly an essential component of cancer survivorship. Furthermore, more attention and investigation is still needed about the reproductive issues of gynecologic cancer survivors in the future.

We would like to commend Dr. Carter and her colleagues for a thorough review outlining the contemporary management of and recent advances for women with cancers of the reproductive tract. They have also depicted the emotional burden carried by gynecologic cancer patients who are at or before their reproductive years. Along with treating and providing long-term survival for women with a gynecologic cancer diagnosis, we have the responsibility of preparing for their quality-of-life issues beyond their treatment, such as unresolved grief and depression, reduced life satisfaction, and increased anxiety.

Fertility Preservation Methods
The fields of oncology and reproductive endocrinology recently developed guidelines for practicing oncologists about fertility preservation methods and related issues in women of reproductive age undergoing cancer treatment. These guidelines stress that the patient, upon diagnosis and the assessment of infertility risk, should be referred to a specialist in fertility preservation methods, usually a reproductive endocrinologist. Proven methods exist for both men (sperm cryopreservation) and women (embryo cryopreservation, conservative gynecologic surgery, oophoropexy). In addition, there are techniques that are still considered experimental (ovarian and testicular cryopreservation, oocyte cryopreservation, hormonal ovarian suppression).[1]

As discussed in this article, although oncologists may discuss the subject of future fertility after treatment with their patients, many patients either have no clear recall of the discussion or feel that the information was inadequate when surveyed after their treatment course.[2,3] Realistically, patients are often more concerned initially by the serious potential complications of neutropenia and cardiopulmonary toxicity and are obviously still reeling from the cancer diagnosis itself. In addition, it is difficult for the oncologist to counsel patients on the risks of infertility from chemotherapeutic agents when the data are poor or nonexistent. While the initial medical appointment where the diagnosis of cancer is revealed is not the appropriate time to discuss reproductive potential, it is necessary for the subject to be broached and for an appointment with a reproductive endocrinologist who specializes in fertility preservation to be scheduled as early in the pretreatment process as possible. Many fertility preservation techniques require timing with the menstrual cycle, so early referral provides the most options in fertility preservation. The oncologist's input is invaluable in guiding the patient on how to prioritize fertility preservation in the context of a treatment plan. Oncologists should remember that many methods are still investigational. Recent ethical guidelines published by the American Society for Reproductive Medicine (ASRM) state that fertility preservation involving oocyte, ovarian, and testicular harvesting for freezing should be performed only in specialized centers working with institutional review board-approved consents.[4]

Multidisciplinary Team
As discussed in the recent American Society of Clinical Oncology guidelines, after the patient has been referred to the reproductive specialist, a team discussion should evaluate who is an appropriate candidate for specific fertility preservation techniques. This team should ideally include the oncologist, reproductive endocrinologist, and a psychosocial provider, and they should be guided
by written protocols that can be shared with the patient. Potential legal aspects such as ownership of embryos and reproductive tissues in the event of a patient's death, divorce, or incapacity should also be discussed by the reproductive endocrinologist as well as treatment costs, specific success rates, and whether this cancer could be genetically transmitted to offspring.[1] It is extremely important to take a multidisciplinary approach that includes not only a reproductive endocrinologist but also a reproductive psychosocial provider[normally either a psychiatrist or psychologist. Reproductive endocrinologists already use the psychiatric evaluation as vital to the appropriate management of infertile patients. Most in vitro fertilization (IVF) programs have either a psychiatrist or psychologist affiliated with their practice who are routinely involved with patients who have any history of psychiatric disorder, are taking psychiatric medications, have used any donor material (egg, uterus, or sperm), or have experienced repeated pregnancy loss, or in other cases where such consultation is deemed appropriate by the treating physician. Logically, newly diagnosed cancer patients and cancer survivors pursuing fertility would be included in this group and would benefit from a specialist trained in the impact of infertility and reproductive dysfunction on the psyche.

Support Groups
As mentioned in the article by Carter et al, there are organizations and support groups that are geared toward gynecologic cancer patients and their reproductive concerns. Through these organizations, there has been a push for the pharmaceutical industry to offer medications for IVF-controlled ovarian stimulation cycles at an extremely reduced cost. In addition, there is a trend for IVF centers to offer IVF cycles at a reduced cost for patients with cancer-related infertility, although the availability of this financial offer is not universal and there is continued discussion as to which patients to include in these programs.

Many cancer patients are extremely vulnerable, and their fear of the future is heightened to a level of desperation when fertility options seem bleak. It is imperative that we, as the medical team, provide appropriate information about the fertility options available after remission or cure. We should also protect patients against false expectations with a concise, factual discussion of the various techniques and success rates, given their individual fertility hurdles[whether it is an actual loss of organs or decreased functionality of components of the reproductive system. Obviously, this information needs to be given early in the development of a treatment plan. Above all else, we should respect the patient's autonomy and right to embark on the posttreatment course that best fits her desired quality of life.

The ASRM has two useful websites for both professionals and patients with a desire for more information about fertility preservation after gynecologic cancer:

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References:

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