

Sexual Dysfunction After Hematopoietic Stem Cell Transplantation

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Eighteen months after undergoing unrelated hematopoietic stem cell transplantation (HSCT) for acute myelogenous leukemia, 28-year-old E.M. was experiencing sexual difficulties. For E.M. and her husband, sexual intimacy had been an integral part of their relationship. However, since the transplantation, on the few occasions that she and her husband had attempted to reinitiate sexual intimacy, the physical discomfort E.M. experienced and her lack of desire resulted in dissatisfaction. This frustrated E.M. and her husband, neither of whom could understand this change. Although most other aspects of her life were returning to normal, E.M.'s sexual dysfunction persisted.

Prior to transplantation, E.M. had been informed that the treatment would result in premature ovarian failure, leaving her incapable of having children. Long-term side effects and complications of HSCT were discussed, but the possibility of sexual dysfunction was never addressed. The unexpected loss of her sexuality, of the intimacy that she shared with her husband, was negatively affecting her quality of life (QOL) and relationship. Upon questioning E.M., the nurse identified that a decreased libido combined with vaginal dryness and dyspareunia (pain with intercourse) were major challenges. Treatment options were discussed, and E.M. was started on hormone replacement therapy and the use of vaginal lubricants was suggested. Although these treatments were helpful, E.M.'s sexual responsiveness never returned to the level it was prior to HSCT. The nurse referred E.M. and her husband to couple-based therapy to facilitate behavior interventions. In therapy, E.M. and her husband were able to communicate openly with one another and discuss alternate ways for increasing sexual satisfaction. Those interventions helped E.M. and her husband to gradually return to sexual activity and, although different, they found their renewed intimacy to be rewarding.

Sexuality and Cancer

Sexuality is defined by the World Health Organization (WHO, 2011) as a dynamic multidimensional construct involving physiologic, psychological, and social processes. Sexuality includes the concept of oneself as a sexual being; sexual expression is an integral part of self-identity and the human experience. Sexuality is a means by which personality is expressed, love is communicated, and emotions are experienced (Tierney, 2008; WHO, 2011). The innate desire to express and experience sexual and emotional closeness often is abruptly and irreversibly changed by the diagnosis of cancer and its subsequent treatment.

Survival rates for HSCT have increased significantly since the 1990s with the advent of better management of acute toxicities and advances in treatment. With improved survival rates, attention has shifted to the long-term effects of HSCT and QOL issues (Yi & Syrjala, 2009). Studies have concluded that sexual dysfunction is one of the most commonly reported QOL issues; many cancer survivors experience alterations in sexuality regardless of age, gender, or relationship status (Tierney, 2008).

Causes of Sexual Dysfunction

Sexual dysfunction is a group of disorders characterized by physiologic or psychological changes that adversely affect sexuality, leading to psychological and social distress (American Psychiatric Association, 2000). Sexual dysfunction in the HSCT survivor can be attributed to the type of treatment, side effects associated with treatment, the psychological distress of diagnosis or treatment, and alterations in relationships (Tierney, 2008; Yi & Syrjala, 2009).

Physiologic Changes

Physiologic issues regarding sexual dysfunction are caused by a disruption of the neurovasculature of the genitalia

or irreparable changes in hormonal milieu, often a direct result of cancer therapy (Tierney, 2008). Rigorous HSCT conditioning regimens include high-dose chemotherapy and radiation, causing direct injury to gonads. This may result in infertility in both genders and premature ovarian failure in women. Indirect effects of chemotherapy and radiation include irreversible damage to the hypothalamic-pituitary-gonadal axis, resulting in changes in the hormonal milieu (Syrjala, Kurland, Abrams, Sanders, & Heiman, 2008; Yi & Syrjala, 2009). Side effects of treatment, such as nausea and vomiting, diarrhea, pain, skin changes, weakness, fatigue, and chronic graft-versus-host-disease (cGVHD) also contribute to alterations in sexual function. High-dose corticosteroids commonly used to treat cGVHD not only suppress endogenous hypothalamic and adrenal hormones, but also have a major impact on physical features and body image. Corticosteroids also may cause emotional lability and depression (Mosher, Redd, Rini, Burkhalter, & DuHamel, 2009; Yi & Syrjala, 2009).

Psychological Impact

Psychological distress experienced by HSCT survivors begins at the time of diagnosis and persists throughout treatment and into survivorship. The psychological dimension encompasses anxiety, anger and depression, grieving the loss of fertility, fear of recurrence, vulnerability, decreased self-confidence, and changes in body image. This psychological distress has a significant impact and lingering effect on sexual functioning. Because sexuality is a complex interaction of physiologic, psychological, and social factors, alterations in sexuality cannot be confined to one aspect alone (Tierney, 2008).

Social Impact

In one study of cancer survivors, altered sexuality was one of the highest