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Sexual function affected by stem cell transplant according to long-term study

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A long-term study found that a type of stem cell transplant used for patients with life-threatening diseases, such as leukemia and lymphoma, results in decreased sexual function and activity for recipients. Further, males are likely to recover from these changes over time, while the sexuality of female patients remains compromised. In addition, neither male nor female long-term cancer survivors regained levels of sexual activity and function equal to those of their peers who have not had cancer, according to a Blood First Edition Paper prepublished online today.

“Survival without a sex life should not be what cancer survivors settle for or what health-care professionals consider a successful outcome of cancer treatment,” stated lead study author, Karen Syrjala, PhD, co-director of the Survivorship Program at the Fred Hutchinson Cancer Research Center. “Sexual dysfunction in survivors of cancer needs to become a priority for research funding and a routine topic of discussion between doctors and their patients after cancer treatment.”

In an allogeneic hematopoeitic stem cell transplantation, patients with diseases of the blood, bone marrow, or certain types of cancers receive an infusion of new stem cells from a sibling or tissue-matched unrelated donor to replace the damaged or destroyed cells in their bone marrow needed for the production of blood cells. Before the transplant, high-dose chemotherapy is administered to kill residual cancer cells and to suppress the immune system so that the patient’s body will not reject the new tissue.

The results of questionnaires on sexual function were reported for 161 patients scheduled to receive this procedure at the Fred Hutchinson Cancer Research Center in Seattle. The patients ranged in age from 22-64 years with an average age of 41 and a nearly even split by gender.

Before the transplant, study participants completed an assessment of their sexual health at the clinic, and, after the procedure, surveys were mailed to the patients to complete at the six-month interval and after one, two, three, and five years. The response rate to the questionnaire averaged 84 percent with all participants completing one or more surveys during the five-year period.

The surveys included 37 questions in the areas of interest, desire, arousal, orgasm, satisfaction, activity, relationship, masturbation, and sexual problems. The male and female versions had the same content except for variations in the problems section according to sex. In addition, those who were not sexually active were provided with a list of possible reasons and asked to mark as many as applied.

At five years, the assessments were compared against a control group consisting of siblings or friends of the study patients that were within five years of the participant's age and who were of the same gender, ethnicity, race, and educational background. If a local match was not available, the researchers recruited volunteers from the community that fit the criteria.

At the six-month mark, both genders had decreased sexual activity, but, by one year, sexual activity for the majority of the men (74 percent) had recovered to the levels seen at the beginning of the study. For women, recovery of sexual activity took longer, with just over half (55 percent) returning to sexual activity after two years. Though sexual activity was restored for these patients, for those who were sexually active at the five-year mark, 46 percent of the men and 80 percent of the women reported

problems that disrupted sexual function.

According to the researchers, sexual dysfunction in transplant patients is likely caused by systemic therapies, such as total body irradiation and chemotherapy drugs known as alkylating agents, which are known to permanently damage endocrine glands that play a critical role in the development and regulation of the reproductive system.

In addition, chronic graft-versus-host disease (GVHD), a common complication of transplantation experienced by 65 percent of the patients in this study, may cause shrinkage of the vaginal tissues and changes to the vaginal lining that can contribute to sexual dysfunction in women. For males, testosterone levels and the cavernosal arteries of the penis are affected, eroding libido and erectile function.

Lack of interest or libido explained sexual inactivity in part for nearly 20 percent of female survivors at both six months and five years, suggesting that this problem did not improve over time. In contrast, for males, lack of interest or libido as a reason for inactivity declined from 14 percent to 6 percent between six months and five years.

At the five-year mark, the rates of sexual activity and sexual function for both male and female patients were below those of the control group, suggesting that they did not fully recover from the effects of the cancer itself or cancer treatments. Further studies are needed to determine if hormone treatments for both sexes or other therapies will help these patients achieve the same sexual function and activity as their peers.

The researchers also recommend that patients undergoing stem cell transplantation be made aware of potential changes in their sexuality and given resources to address these needs to help improve long-term quality of life. Men may benefit from reassurance that erectile function and sexual desire should improve by one to two years after treatment, but

that methods such as testosterone replacement, erectile-function medications, and other adaptive strategies can be considered if problems continue. For women, methods that focus on communication with their partners about changes in sensation, strategies for enhancing libido, and use of vaginal lubricants, dilators, or vibrators to assist with adapting to genital changes may help to maintain sexual responsiveness.

Source: American Society of Hematology