Medical Xpress

Female childhood cancer survivors at increased risk of infertility

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New research published in *The Lancet Oncology* shows that although women who survive childhood cancer are at an increased risk of infertility, if they have clinical infertility they still have a good likelihood of going on to conceive; about two thirds of them get pregnant, a rate similar to the rate of pregnancy seen in non-cancer survivors with clinical infertility.

Researchers from Dana-Farber/Boston Children's Cancer and Blood Disorders Center and Brigham and Women's Hospital, led by Dr Sara Barton of Brigham and Women's Hospital, Boston, USA, surveyed participants in the Childhood Cancer Survivor Study (CCSS), which tracks people who were diagnosed with cancer when younger than 21, across 26 Canadian and US institutions. From more than 20000 people included in CCSS overall, this study included 3531 women aged 18 who reported having ever been sexually active, along with 1366 of their female siblings, who were included as controls.

Most prior studies of infertility in cancer survivors have focused on increased rates of early menopause or ovarian failure, both of which can be caused by cancer therapies. As in other studies, childhood cancer survivors in this study were more likely to have early menopause than their siblings. However, this study focused on women who were trying to get pregnant. Women who had survived childhood cancer were nearly 50% more likely to experience clinical infertility, compared to siblings.

In the youngest group of survivors and siblings (age less than 24)

infertility was nearly three times more common in the survivors than in the siblings. This difference between survivors and siblings was less pronounced in women in their late thirties, probably because infertility is more common in all women at that age, not just cancer survivors.

Although survivors had, on average, an increased time to pregnancy compared to their siblings, around two thirds (64%) of 455 study participants who reported clinical infertility eventually became pregnant, comparable to the historical pregnancy rate in all women with clinical infertility.

Although survivors and their siblings were equally likely to seek medical treatment for infertility, survivors were nearly half as likely to be prescribed drugs for infertility treatment than were their siblings.

According to Dr Barton, "We do not have data about why providers did not prescribe infertility drugs, but are concerned about a provider bias against treating cancer survivors for infertility. Perhaps providers assessed the chance of success as poor and therefore decide not to attempt therapy, or perhaps survivors were less motivated to take drugs after previous extensive treatment. Alternatively, reproductive medicine providers might have been uncomfortable with perceived medical comorbidities."

"Clinicians caring for survivors who request information about likelihood of pregnancy or success of treatment for infertility have a paucity of data on which to base their recommendations," adds Dr Barton. "To our knowledge, ours is the first large study of female childhood cancer survivors to quantify the risk of infertility that is based on a clinical definition, and characterises the use and success of infertility treatments in this setting. These data confirm a high risk for infertility and childlessness for female cancer survivors that have received high doses of alkylating agent chemotherapy or pelvic

radiation."

In a linked Comment, Professor Richard Anderson, of the University of Edinburgh, writes that, "'Barton and colleagues' data highlight the risk of infertility in childhood cancer survivors beyond the risk of ovarian failure. There is a need for this risk to be addressed by oncologists at the time of diagnosis and during follow-up as a key part of long-term care. Fertility preservation is now part of mainstream fertility treatment, but requires seamless links between oncologists and reproductive medicine."

More information: www.thelancet.com/journals/lan … (13)70251-1/abstract

Provided by Lancet

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