



Cancer survivors more likely to develop heart failure with pregnancy



Previous findings have shown that cancer treatments can lead to heart disease in women of child-bearing age. A new study also indicates that women exposed to cardiotoxic cancer treatments are more likely to develop clinical congestive heart failure (CHF) during and after pregnancy.

The study, published in *Journal of the American College of Cardiology*, found that among women with a history of cardiotoxicity, there's approximately a 1 in 3 chance of developing CHF with pregnancy. "These women should receive close cardiac surveillance during pregnancy," says lead author Paaladinesh Thavendiranathan, MD, SM, director of the Ted Rogers Programme in Cardiotoxicity Prevention at Toronto General Hospital.

In the U.S., approximately 60,000 new cancer cases in young adults are reported each year and young women are more likely to be diagnosed than young men, according to the American Cancer Society.

Dr. Thavendiranathan and co-researchers retrospectively looked at female cancer survivors who were given potentially cardiotoxic cancer treatments, such as chemotherapy or radiation therapy to the thorax, to evaluate the impact of a cardiotoxicity history on the risk of heart failure during or soon after pregnancy. Their study aimed to identify the rate at which adverse cardiac events occurred in women exposed to cancer therapy, specifically cardiac death, CHF, acute coronary syndrome or arrhythmia.

The researchers followed 78 cancer survivors from a high-risk pregnancy clinic who had 94 pregnancies over a 10-year period. All the women had received cancer therapy as children, adolescents or young adults. Of the total women, 55 had received anthracycline-based chemotherapy, while 23 received non-anthracycline chemotherapy or radiation therapy only.

Of survivors exposed to anthracyclines, 13 women had a prior history of cardiotoxicity, and 12 of these women had been treated with anthracycline-based chemotherapy. During pregnancy or soon after delivery, CHF occurred in 31 percent of women with a history of cardiotoxicity, with no reports of acute coronary syndrome or arrhythmia. There was no difference in the age of cancer diagnosis, age at pregnancy, cancer type or exposure to anthracyclines between the women diagnosed with CHF and without. There were no maternal deaths.

According to previous studies, the rate at which CHF occurs in young female cancer survivors can vary anywhere from 0 to 5.4 percent. However, these study methods varied, making the ability to determine a single percentage difficult.

"Our study followed the cardiac outcomes in consecutive pregnancies of cancer survivors. We collected data on any cardiac events occurring immediately before, during and after pregnancy," Dr. Thavendiranathan notes. "From this streamlined approach, we could pinpoint just how high the risk of developing CHF was for young, pregnant women exposed to anthracyclines."

Source: American College of Cardiology

reference

Thavendiranathan P, Liu S et al. (2018) Cardiac Outcomes in Pregnant Women With Treated Cancer. *J Am Coll Cardiol* 72(17): 2087-2089 <https://doi.org/10.1016/j.jacc.2018.07.085>

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