Chemotherapy during pregnancy does not appear to increase complications for newborn infants

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The study examined a group of more than 400 women from across Europe who were diagnosed with early-stage breast cancer while pregnant. 197 (48%) of the women underwent chemotherapy during pregnancy, and the authors assessed whether their newborn babies suffered any ill effects that could be attributable to the cancer drugs.

While infants whose mothers had undergone chemotherapy while pregnant had, on average, a lower birth weight than those whose mothers had not had chemotherapy, there were few other noticeable differences between the groups. Babies exposed to chemotherapy in utero appeared to have no higher risk of birth defects, no lower Apgar scores, no more frequent blood disorders or alopecia than those whose mothers did not receive chemotherapy while pregnant.

According to Professor Sibylle Loibl, of the German Breast Group which led the study, "If our findings are confirmed by other studies, breast cancer during pregnancy could be treated as it is in non-pregnant women without putting foetal and maternal outcomes at substantially increased risk."

The number of chemotherapy cycles received during pregnancy did not appear to affect the babies' birth weight, leading the authors to suggest that the lower birth weight is not clinically meaningful.

"In the general population, about 10-15% of infants are born preterm, but in our study, 50% of women with breast cancer delivered preterm, with 23% delivering before the 35th week of gestation. More complications were reported in the group of infants exposed to chemotherapy than in the group not exposed to chemotherapy. However, most complications were reported in babies who were delivered prematurely, irrespective of exposure to chemotherapy."

"Our findings emphasise the importance of prioritising a full-term delivery in women who undergo chemotherapy while pregnant", adds Professor Loibl. "Illness and mortality in newborn babies is directly related to gestational age at delivery. This is an important clinical message because the decision to deliver the foetus preterm is often taken without medical indication. Our work suggests that treating patients with breast cancer while pregnant is possible, and there is no need to interrupt the pregnancy or receive inferior therapy."

In a linked Comment, Olivier Mir of the Cancer Associated with Pregnancy Network, France, highlights the timeliness of the findings: "The concomitant incidence of breast cancer and pregnancy is rising in high-income countries, because of increases in maternal age at the time of first pregnancy."

However, Dr Mir points out that the effect of chemotherapy in pregnant women is under-researched, and further research should address how chemotherapy doses should be worked out for pregnant patients, and longer-term studies need to assess the effect of in utero chemotherapy on children as they grow older: "Very few studies have assessed the long-term outcomes of chemotherapy during pregnancy, and further work is needed to determine whether the foetal risks outlined by Professor Loibl and her colleagues could be minimised with optimal drug selection and dosing."

More information: www.thelancet.com/journals/lan … (12)70261-9/abstract

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