

Chemotherapy during pregnancy: effective for the mother, safe for the child

10 years of research on cancer and pregnancy

A decade of research by gynaecological oncologist and professor Frédéric Amant (KU Leuven, Belgium) has shown that treating pregnant women using chemotherapy is both effective for the patient and safe for the foetus and its later development after birth. New doctoral research confirms that chemotherapy is just as effective in pregnant women as it is in non-pregnant women. Drawing on insights from ten years of research and clinical work in the field, Frédéric Amant provided an overview of the state of the art at the 'Cancer in Young Women' international symposium in Leuven, Belgium on 5-6 February 2015.

Many physicians are still hesitant to recommend chemotherapy for pregnant women with cancer. In many cases, life-saving treatment is postponed, pregnancies are terminated or labour is induced prematurely. Research carried out by Frédéric Amant and his team shows that administering chemotherapy has no negative effects for the foetus, which remains protected by the placenta. Children whose mothers have been treated during pregnancy develop just as well as their peers.

At the same time, cancer treatment during pregnancy raises questions about the effects on the mother. Does pregnancy affect the success rate of cancer treatment? Does pregnancy affect the tests needed to make a diagnosis and select a therapy?

In new doctoral research, Dr. Sileny Han focuses on the effectiveness and consequences of cancer treatment in women with breast cancer. Breast cancer is the most common cancer in pregnant women. In Belgium, approximately 25 to 35 pregnant women are diagnosed with breast cancer each year.

In the largest comparative study of its kind, Dr. Han compared the survival rate of 311 women who received treatment for breast cancer during pregnancy and 865 non-pregnant young women with breast cancer (University Hospitals Leuven database). Data on the pregnant patients were accessed with the help of an international registry in cooperation with the German Breast Group. Results show that the survival rate among pregnant women who received timely cancer treatment was similar to that of their non-pregnant counterparts.

Further, Dr. Han established for the first time that a procedure called sentinel lymph node dissection, which is used to help determine the extent, or stage, of cancer in the body, is just as effective at staging cancer in pregnant women as in non-pregnant women. The procedure is much less invasive than an alternative called a full axillary lymph node dissection, where different/many lymph nodes are removed from the armpit area.

The sentinel lymph node is the first lymph node in the armpit area to be affected by cancer. For small tumours, removal and biopsy analysis of the sentinel lymph node is sufficient, found Dr. Han. Her study of 97 pregnant women with cancer showed that changes in the breast related to pregnancy do not compromise the reliability of the procedure. Pregnant women who underwent a sentinel lymph node dissection did not experience a higher rate of relapse in the armpit area compared to non-pregnant women. In this sense, there is no need for an alternative staging strategy for pregnant women.

Sileny Han also studied a new approach for cancer detection and diagnosis in pregnant women. She looked at whether full-body scans are detailed enough to provide a complete enough picture of a cancer. MRI, or magnetic resonance imaging, uses strong magnetic fields and radio waves to produce

images of the body. MRI scans do not expose the foetus to radioactivity. Dr. Han's preliminary results show that MRI is also helpful in detecting tumour metastasis of other types of cancers. Dr. Han and a team of radiologists will continue this promising line of research.

Conclusion: Cancer treatment during pregnancy offers the best outlook for mother and child. Physicians must find a balance between the wellbeing of both. A multidisciplinary approach is the best guarantee for this. Centralisation of specialised care and targeted communication can significantly improve the treatment of pregnant women with cancer.

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