Hypertension drug does not increase breast cancer risk for women over 55

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(Medical Xpress) -- A commonly prescribed medicine used to treat conditions such as heart failure and hypertension does not present women over 55 with any increased risk of breast cancer, a new study at the University of Dundee has shown.

Many breast cancers are female hormone (oestrogen) dependent. The medicine, spironolactone, blocks male hormones (androgens) and increases the relative effects of oestrogens. As such, spironolactone can cause painful breast enlargement by altering the balance of male to female hormonal effects allowing the female effects to predominate.

This led to fears that this mechanism might increase hormone-dependent breast cancer in women, something researchers in the School of Medicine at Dundee has disproved in the case of women over the age of 55. They looked at data held in the General Practice Research Database (GPDR) relating to women over the age of 55 who had no history of breast cancer.

By examining anonymized medical records they were able to compare how many of the 28,000 women who had received spironolactone treatment went on to develop breast cancer with 56,000 women who had not been administered the drug. They found no association between exposure to spironolactone and the risk of breast cancer.

Use of spironolactone has increased greatly in recent years and is expected to rise further following changes in guidelines on hypertension

treatment from the National Institute for Health and Clinical Excellence (NICE).

"Recent UK blood pressure guidelines recommend the use of spironolactone for patients with difficult-to-treat hypertension, meaning increasing numbers of people are being treated with it," explained Dr. Isla Mackenzie, Clinical Senior Lecturer and Honorary Consultant in Clinical Pharmacology at the University.

"This is a drug that has hormonal effects and can lead to swelling in the breasts as a side effect, and so this is why it was important to determine whether or not it led to an increased risk of breast cancer. What our study showed is that, in women over 55, there was no increased risk at all for women who have been treated with spironolactone.

"By looking at a large number of patients we were able to determine that there was no increased risk for women in this age group. This is important because the drug has become much more commonly used in recent years, and is now being given to a lot of women.

"With the numbers of women in this group receiving spironolactone set to increase further, it was important to obtain reassurance that the risk of breast cancer was not raised, which our research has indeed shown."

Breast cancer is the most common cancer in women in the UK. About 46,000 women get breast cancer in the UK each year. Most of them (8 out of 10) are over 50, but younger women, and in rare cases men, can also get breast cancer.

The research, which appears in the latest edition of the *British Medical Journal*, was carried out through examining anonymised data from the GPRD.

The GPRD, managed by the Secretary of State for Health, United Kingdom (UK) contains over 3 million active patient records drawn from approximately 400 primary care practices in the UK. The Medicine Control Agency manages the GRPD. The GPRD is the world's largest database of anonymised longitudinal primary care medical records.

The database has clinical and prescription data and can provide information to support pharmacovigilance (indication, utilisation, and risk/benefit profiles of drugs) and formal pharmacoepidemiologic studies, including information on demographics, medical symptoms, therapy (medicines, vaccines, devices), and treatment outcomes.

Provided by University of Dundee