

Schizophrenia Linked to Increased Breast Cancer Risk

Nancy A. Melville | February 16, 2017

Women with schizophrenia have nearly a twofold increased risk for breast cancer compared to their counterparts without schizophrenia, new research suggests.

"Given that breast cancer is more prevalent in women with schizophrenia than in the general population, our study highlights the importance of adequate cancer screening in this population," senior author Chia Hung Kao, MD, China Medical University Hospital, Taichung, Taiwan, told *Medscape Medical News*.

The study was [published online](#) January 17 in *Schizophrenia Research*.

Antipsychotic Use

The study included women identified through Taiwan insurance claims data from 1998 to 2008 who had been diagnosed with schizophrenia and were taking antipsychotics (n = 29,641) or who were without any serious mental illnesses or receiving antipsychotics (n = 59,282).

After adjusting for factors that included age, occupation, medications, and various comorbidities, women with schizophrenia had an overall risk for breast cancer that was higher than women without the illness (adjusted hazard ratio [aHR], 1.94; 95% confidence interval [CI], 1.43 - 2.63).

In examining antipsychotic use, the researchers found a significantly higher risk for breast cancer only among women taking a combination of first- and second-generation antipsychotics (aHR, 2.17; 95% CI, 1.51 - 3.14). There was no significantly increased risk when first- or second-generation antipsychotics were used alone.

The higher risk with combination therapy may be due to the fact that patients treated with the combination of therapies had more severe mental illness, Dr Kao said.

"Patients placed on both first-generation and second-generation antipsychotics are more likely to have more symptoms and have poorer global, personal, and occupational functioning," she said.

"It would be interesting to see if patients receiving a combination of first- and second-generation antipsychotics have poorer physical health, lead more unhealthy lifestyles, or simply are less able to take good care of themselves," she added.

Dr Kao noted that the reported prevalence of combination therapy ranges from 10% to 45%. Some antipsychotic drugs, particularly first-generation agents, are linked to heightened prolactin levels because they block dopamine-2 receptors, so the authors stratified patients by subgroups according to antipsychotics with prolactin-elevating properties.

They found that women with schizophrenia who were using risperidone (*Risperdal*, Janssen), paliperidone (*Invega*, Janssen), or amisulpride (multiple brands), which have been associated with increased prolactin levels, had a higher risk for breast cancer compared to those without schizophrenia (HR, 1.96; 95% CI, 1.36 - 2.82). However, the risk was not significantly higher among women who were receiving any of the other second-generation antipsychotics.

Furthermore, the risk for breast cancer was no higher among women taking second-generation antipsychotics in comparison with those taking first-generation antipsychotics.

Other Risk Factors

Age was also a factor linked to an increased risk for breast cancer in women with schizophrenia. Women with schizophrenia who were younger than 50 years had a 2.14-fold increase in the risk for breast cancer compared to those in the same age group who did not have schizophrenia. The investigators found no difference in breast cancer risk among women with or without schizophrenia who were aged 50 years or older.

In women with schizophrenia who were using anxiolytics or hypnotics, the risk for breast cancer was 1.9-fold higher compared to those without schizophrenia but who were also taking these types of medications.

The authors note that although the use of anxiolytics and/or hypnotics is not directly linked to a breast cancer risk, their use is associated with an increased risk for mortality and could be indicative of other breast cancer risk factors, including substance abuse or more severe mental illness.

Of note, among women who were not taking antidepressants, the risk for breast cancer was 1.47-fold higher in those with schizophrenia compared to those without the disorder. In addition, even among those who were taking antidepressants, women with schizophrenia had an even higher risk for breast cancer (adjusted HR, 3.46) than those without schizophrenia.

"In our study, we found that schizophrenia women receiving and those not receiving antidepressants both, had an increased breast cancer risk compared with the non-schizophrenia cohort," the authors write.

It is known that in women with schizophrenia, the prevalence of risk factors for breast cancer is higher. Such risk factors include unhealthy lifestyle behaviors, obesity, diabetes, and having fewer children.

The authors note that because of the nature of the database, they were not able to control for some of those risk factors, as well as for smoking or hormone therapy.

"Should antipsychotic medications play a role in the development of breast cancer, their effects are probably minor compared to other important risk factors that schizophrenia women are vulnerable to," said Dr Kao.

Poor General Health

The results showed that schizophrenia patients who did not have medical comorbidities such as hypertension, diabetes mellitus, and dyslipidemia had a 2.42-fold increased risk for breast cancer compared with women who did not have schizophrenia, whereas the risk was not increased in those with medical comorbidities.

"This suggests that poor physical health, indicated by the presence of chronic diseases like hypertension, diabetes mellitus, and dyslipidemia, may contribute to an increased risk of breast cancer and may outweigh other factors contributing to the increased risk of breast cancer in patients with schizophrenia," Dr Kao said.

"The good news of this finding is probably that the most important breast cancer risk factor is modifiable, and good patient education regarding the importance of adopting healthy lifestyles may be the most important preventive measure we can proactively take," she added.

The results of other studies evaluating the risk for breast cancer in women with schizophrenia have been inconsistent.

One [11-year prospective study](#) found that breast cancer was the most common type of cancer among female patients with schizophrenia and that mortality rates were higher than in the general population.

One reason for the higher mortality rate could be that women with schizophrenia are not properly screened for breast cancer. In a [recent study](#), researchers reported that patients with schizophrenia often deny that they have cancer, and therefore the disease is more advanced once it is diagnosed. In addition, such patients may delay or refuse therapy.

A [recent meta-analysis](#) of 24 studies of breast cancer showed significantly reduced rates of screening associated with mental illness, mood disorders, and especially severe mental illness.

Commenting on the findings for *Medscape Medical News*, Alex J. Mitchell, MD, Department of Psycho-oncology, Cancer and Molecular Medicine, University of Leicester, United Kingdom, said the current study could have benefited from a comparison group of mentally ill patients who were not receiving medications.

"The main limitation is there is no untreated drug-naïve group which would highlight if antipsychotics are the major factor or background factors," he said.

"Prolactin may be raised in patients off medication," he said, citing another [recent study](#) that showed such an effect.

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