SSRI use in pregnancy linked to speech, language disorders in offspring

Women who purchase two or more prescriptions for the antidepressants selective serotonin reuptake inhibitors during pregnancy may be more likely to have children with speech and language disorders, finds a new study published in *JAMA Psychiatry*.

The new findings suggest children born to mothers who use SSRIs during pregnancy may be at greater risk of speech and language disorders.

However, the research team - including Dr. Alan S. Brown of the Columbia University College of Physicians and Surgeons and the Mailman School of Public Health in New York - says further studies are needed before drawing conclusions about the clinical implications of this observational study.

According to the Centers for Disease Control and Prevention (CDC), the use of antidepressants in the United States has increased significantly over the years, rising by almost 400 percent from 1988-1994 through 2005-2008.

Now, around 1 in 10 Americans aged 12 and older use some form of antidepressant medication, and selective serotonin reuptake inhibitors (SSRIs) are among the most common.
SSRIs work by increasing levels of serotonin in the brain - a neurotransmitter that helps regulate mood.

While considered an effective treatment for depression, concerns have been raised about the use of SSRIs during pregnancy, especially as the drugs can cross the placenta and enter the circulation of the fetus.

Previous studies have suggested that children born to mothers who use SSRIs during pregnancy are more likely to have developmental and behavioral disorders, such as autism. One such study, published in JAMA Pediatrics last year, found an 87 percent increased autism risk for offspring of mothers who used SSRIs while pregnant.

**SSRI exposure and the risk of speech, language disorders**

For their study, Dr. Brown and team set out to investigate how maternal SSRI use might influence the risk of speech, language, motor, and scholastic disorders in offspring.

"[...] to our knowledge, previous studies have not examined clinical disorders of speech, language, scholastic, and motor function," the authors note.

The team used national registries in Finland to identify and analyze the data of 56,340 singleton children born between 1996-2010 and their mothers. The children were followed from birth until the age of 14 years.

The researchers divided the children into three groups:

- **SSRI-exposed group (15,596)** - children whose mothers had been diagnosed with a depression-related disorder and had purchased SSRI prescriptions during pregnancy
- **Unmedicated group (9,537)** - children whose mothers had been diagnosed with a depression-related disorder but had not purchased SSRI prescriptions during pregnancy
- **Unexposed group (31,207)** - children whose mothers had not been diagnosed with a depression-related disorder and had no history of purchasing SSRI prescriptions.

**SSRI exposure may raise speech, language disorder risk by 63 percent**

Overall, compared with infants in the unexposed group, those in the SSRI-exposed group and the unmedicated group were found to be at increased risk of a speech disorder, language disorder, or both.

A stronger link was found for offspring whose mothers purchased more SSRIs during pregnancy, the researchers report.

On looking at the number of SSRI prescriptions purchased, the team found that infants whose mothers had purchased at least two SSRI prescriptions during pregnancy were found to be at 37 percent and 63 percent greater risk of speech and language disorders than infants in the unmedicated and unexposed groups, respectively.
"We believe that our finding about children of mothers who purchased at least two SSRI prescriptions during pregnancy is particularly meaningful because these women are more likely to have taken these medications, and more likely to have been exposed for a longer period and to larger amounts of the SSRI in pregnancy, compared to women who filled only one prescription," notes Dr. Brown.

No differences in the risk of motor and scholastic disorders between the SSRI-exposed group and the unmedicated group were identified.

Based on their results, the researchers say it is possible that SSRI use during pregnancy may mean an increased risk of speech and language disorders for offspring. They add:

"We found a significant increase in the risk of speech/language disorders among offspring of mothers who purchased SSRIs at least twice during pregnancy, compared with mothers diagnosed as having depression or other psychiatric disorders not treated with antidepressants.

Further studies are necessary to replicate these findings and to address the possibility of confounding by additional covariates before conclusions regarding the clinical implications of the results can be drawn."

While the current study has a number of strengths, such as the large, population-based birth cohort and a comparison group of mothers with depression who were not taking SSRIs, there are some limitations.

"[...] the severity of maternal depression cannot be ruled out as an explanation for the increased childhood speech and language disorders among mothers who filled more than one SSRI prescription, and further study is warranted," says Dr. Brown.