

Epilepsy drugs taken by pregnant women associated with higher risk of language impairment in their children

Pregnant women who took anti-epileptic drugs (AEDs) during pregnancy had children who were at an increased risk of language impairment at age 5 and 8.

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/EINPresswire.com/ -- Pregnant women who took anti-epileptic drugs (AEDs) during pregnancy had children who were at an increased risk of language impairment at age 5 and 8, new research has found.

The AEDs investigated included sodium valproate – a drug which is now only used when there is no alternative in pregnant women because of its known risks to unborn babies, including birth defects and learning and development delays – and carbamazepine, previously believed to be safer.



5th Congress of the European Academy of Neurology

The new findings, presented today at the 5th European Academy of Neurology Congress, also showed that taking folic acid supplements had a protective effect against language impairment in babies born to women who took these drugs.

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The main findings are that fetal antiepileptic drug exposure is associated with an increased risk of language impairment in children of mothers with epilepsy at age five and eight years.”

Dr Elisabeth Synnøve Nilsen Husebye

“The main findings of the research are that fetal antiepileptic drug exposure is associated with an increased risk of language impairment in children of mothers with epilepsy, at age five and eight years, especially after exposure to carbamazepine and valproate exposure,” says lead researcher Dr Elisabeth Synnøve Nilsen Husebye.

“These results have not been reported previously. We have previously shown that language impairment and risk of autistic traits at age 1.5 and 3 years depend on maternal plasma AED concentrations and folate status. Similar results regarding in utero AED exposure and language impairment have been reported after valproate exposure,

but data regarding carbamazepine exposure and language impairment has been conflicting.”

Dr Husebye also warned that data on new antiepileptic drugs, such as levetiracetam, lamotrigine and topiramate, and their long-term effects on language are lacking. “Few studies have examined the effects of plasma AED concentrations and maternal folate status during pregnancy on language abilities in older children,” she added.

“Adverse neurodevelopmental effects after AED exposure in utero could be permanent. Not only valproate but also carbamazepine exposure is associated with language impairment. Clinicians should be aware of children with potential language impairment after AED exposure in utero with a precise assessment and appropriate interventions. Taking folic acid supplements in the periconceptual period, before conception and in early pregnancy, is particularly important for women with epilepsy.”

The study population was made up of children of mothers with and without epilepsy enrolled in the Norwegian Mother and Child Cohort study 1999 to 2008. Mothers provided information on their epilepsy diagnosis, AED use during pregnancy and the child's verbal abilities at age five and eight years in questionnaires with validated language screening tools. AED blood concentrations in maternal blood samples were measured at gestational weeks 17 to 19 and sample taken from the umbilical cord directly after birth.

The researchers found that for AED exposed children, the adjusted odds ratio for language impairment was 1.6 at age five years and 2.0 at age eight years, compared to children of mothers without epilepsy. Children exposed to carbamazepine monotherapy had a significantly increased risk of language delay compared to control children at age eight years. Higher maternal plasma valproate concentrations correlated with language delay at five years. But children of mothers taking periconceptual folic acid supplement had a lower risk of AED-associated language impairment at both ages.

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Background Information:

On 21 March 2018, the European Medicines Agency endorsed new measures to avoid exposure of babies to valproate medicines in the womb because exposed babies are at high risk of malformations and developmental problems.

Valproate-containing medicines have been approved nationally in the EU to treat epilepsy and bipolar disorder and in some countries for prevention of migraine. The new measures include a ban on the use of such medicines for migraine or bipolar disorder during pregnancy, and a ban on treating epilepsy during pregnancy unless there is no other effective treatment available. Further, the medicines must not be used in any woman or girl able to have children unless the conditions of a new pregnancy prevention programme are met. The programme is designed to ensure that patients are made fully aware of the risks and the need to avoid becoming pregnant.

A visual warning of the pregnancy risks (in the form of boxed text with other possible elements such as a warning symbol) must also be placed on the packaging of the medicines and warnings be included on patient cards attached to the box and supplied with the medicine each time it is dispensed.

About the Expert:

Dr Elisabeth Synnøve Nilsen Husebye is a Ph.D. candidate at the University of Bergen, Norway.

EAN – The Home of Neurology:

The European Academy of Neurology (EAN) is Europe's home of neurology. Founded in 2014, through the merger of two European neurological societies, EAN represents the interests of more than 45,000 individual members and 47 national institutional members from across the continent. This year, EAN celebrates its fifth year of fostering excellence in European neurology and will bring together more than 6,000 neurologists and related scientists to the biggest general

neurology conference in Europe.

In Oslo, Norway, from June 29 to July 2, there will be an exchange of knowledge and promotion of best practice, with a focus on the main theme of neuroinflammation. The EAN Congress will also cover all neurological diseases and disorders, including the big 7: epilepsy, stroke, headache, multiple sclerosis, dementia, movement disorders, neuromuscular disorders.

References:

1. Language delay in children with epilepsy is associated with the use of antiepileptic drugs- The Norwegian Mother and Child Cohort. E. S. N. Husebye, A. K. daltveit O. spigset , N. E. Gilhus, M. H. Bjørk, presented at the 5th Congress of International Neurology in Oslo.

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