EP16.02

Prenatal exposure to antiepileptic drugs and use of primary healthcare in childhood: a population-based cohort study in Denmark

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Background: Prenatal exposure to antiepileptic drugs has been associated with several health outcomes like impaired neurodevelopment, cognitive problems, behavioural problems and childhood autism in preschool children. Little is, however, known about the physical health of children prenatally exposed to antiepileptic drugs.
Aim: To investigate whether prenatal exposure to antiepileptic drugs is associated with future health measured as use of primary healthcare in childhood.
Method: All live born children in Denmark 1997-2012 were identified in the Danish National Patient Register and followed until 31 December 2013 (n= 1,012,192). Information on the mother's use of antiepileptic drugs during pregnancy was obtained from the Danish Register of Medicinal Product Statistics. The outcome of interest was the children's use of general practice after birth. This information was obtained from the Danish National Health Service Register which also included information on specific services provided by the general practitioner. Incidence rate ratios (IRR) and corresponding 95% confidence intervals (CI) were estimated using negative binomial regression model.
Results: A total of 6,155 children were exposed to antiepileptic drugs during fetal life. Overall exposed children had more contacts to general practice (IRR=1.13, 95 % CI: 1.11-1.16) but after adjusting for maternal factors the difference attenuated substantially (IRR=1.03, 1.00-1.05). Exposed children more often had a CRP-test and urinary stix taken compared to unexposed children, but the difference was not statistically significant after adjustment. When stratifying on maternal epilepsy status, there were no difference in the use of general practice for exposed and un-exposed children among children with mother having epilepsy, while exposed children more often had a telephone contact compared to unexposed children among mother without epilepsy.
Conclusions: Prenatally exposure to antiepileptic drugs was associated with a small increase in the use of general practice during childhood but not with indicators of physical health.