

COGNITIVE FUNCTIONS IN CHILDREN WITH FETAL ANTIPILEPTIC DRUG EXPOSURE - STUDY IN GEORGIA

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Background and aims

Influence of in utero antiepileptic drug (AED) exposure on cognitive development is limited and conflicting. We have assessed the late effects of fetal AEDs on cognitive development in children.

Methods

In this prospective **cohort** study children aged 3-6 years with fetal exposure to AEDs were included. Individuals from the same age range but without fetal AED exposure were enrolled as a control group. In all cases Intelligence Quotient (IQ) were assessed. A two sample T test and multiple linear regression were used. Probability less than 0.05 was considered as statistically significant.

Results

In total 100 subjects were evaluated. Among them 50 (mean age – 52.5 month; SD 12.8) have experienced AED exposure in utero and remaining 50 (mean age – 54.2 month; SD 14.5;) have not (unexposed group). In overall the mean IQ for exposed population was significantly lower (mean – 84.02; SD – 13.6) than in unexposed individuals (mean – 101.4; SD – 13.4)(p0.001).

Multiple regression analysis revealed mother's non-verbal IQ (B; 0.447; p0.001), age of walking (B; -2.1; p=0.009) and breastfeeding (B; 10.03; p=0.009) to be independent factors associated with IQ. No particular AED alone showed significant association with IQ compared to others.

Conclusions: In utero AEDs exposure can hinder cognitive development. Breastfeeding, mother's non-verbal IQ and age of walking could independently contribute in cognitive development of individuals during early childhood.

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