

Behavioural teratogenicity of psychotropic drugs: results from the Francophone mother-baby units database

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Background. Women with severe mental disorders may not discontinue their treatments during pregnancy because of the high risk of relapse (1,2). Nonetheless, the knowledge about infant and child development in the context of prenatal exposure to psychotropic drugs remains weak. The aim of the present study was to explore the independent impact of perinatal exposure to psychotropic drugs (antipsychotics, antidepressants, mood stabilizers, anxiolytics-hypnotics) on infant interactive skills from 2 to 6 months of age, in infant admitted with their mothers in psychiatric Mother-Baby Units (MBUs).

Methods. Mothers and babies jointly admitted for more than 5 days to Francophone MBUs between 2001-2007 were included in the study. Motor, visual, vocal, and facial babies interactions were rated using the Bobigny scales. Logistic Generalized Estimating Equation (GEE) regression models giving odds ratios (ORs) and 95% confidence intervals (CIs) were used to explore the independent associations between prenatal exposure to each classes of psychotropic drugs and Bobigny scales scores with adjustment for many variables especially *ICD-10* psychiatric maternal diagnoses, exposure to tobacco during pregnancy and prematurity.

Results. The studied population included 225 mother-baby dyads. Antipsychotics and anxiolytics-hypnotics were the most frequently used drugs (respectively 30.7% and 26.2%) whereas antenatal exposure to antidepressants and mood stabilizers were less frequent (respectively 16.0% and 6.7%). Prenatal exposure to antipsychotics had no impact on infant interactive patterns, as well as prenatal exposure to mood stabilizers. Antenatal exposure to antidepressants was significantly linked with poorer babies' visual (aOR=2.38; 95%CI=1.05-5.37; $p=0.04$) and facial (aOR=2.89; 95%CI=1.47-5.68; $p=0.002$) interactions skills; anxiolytics-hypnotics use during pregnancy also increased the risk for poorer visual interactions (aOR=1.79; 95%CI=1.06-3.04; $p=0.03$).

Conclusion. Antidepressants and anxiolytics-hypnotics antenatal exposure was correlated with poorer babies' visual and facial skills between 2 to 6 months after birth, independently from maternal mental illness and exposition to other psychotropic drugs. Further studies are needed to evaluate the possible effect of prenatal exposure to antidepressant and anxiolytics-hypnotics on child development.

1. NICE guideline 'Psychosis and schizophrenia in adults: prevention and management', 2014. <https://www.nice.org.uk/guidance/cg178/resources/psychosis-and-schizophrenia-in-adults-prevention-and-management-35109758952133>

2. Viguera AC, Whitfield T, Baldessarini RJ, Newport DJ, Stowe Z, Reminick A, Zurick A, Cohen LS. Risk of recurrence in women with bipolar disorder during pregnancy: prospective study of mood stabilizer discontinuation. *Am j Psychiatry* 2007;164(12):1817-24.