

Psychotropic medication in pregnancy and lactation and early development of exposed children

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Abstract

Aim There is still only little knowledge about alterations of blood concentrations of psychotropic drugs during pregnancy, the transfer of psychotropic drugs into breast-milk and the effects on exposed children. **Methods** We investigated changes in concentrations of psychopharmacological medication during pregnancy and lactation in serum and breast milk at different time points in a naturalistic sample of 60 mothers and observed the development of the exposed children in the first 12 months. **Results** We found a decrease in serum concentrations from the first to the second trimester of amitriptyline, duloxetine, escitalopram, quetiapine and sertraline. Citalopram stayed rather stable during pregnancy, sertraline levels interestingly increased again from the second to the third trimester. Highest concentration-by-dose-ratios in breast milk were found for venlafaxine as well as lamotrigine, lowest for quetiapine and clomipramine. Similarly, clomipramine and quetiapine showed lowest milk/serum-penetration-ratios. Regarding the birth outcome measures in children we found no significant differences between in utero exposed compared to non-exposed new-borns. There were no significant differences in the development in the first 12 months. **Conclusion** Psychotropic medication in the peripartum needs a balancing of risks and benefits and a continuous therapeutic drug monitoring (TDM) can be a guidance for clinicians to monitor drug alteration patterns, which are likely to occur due to physiological pregnancy-associated changes in pharmacokinetics. Accordingly, TDM can optimize a medication in pregnancy and lactation with the lowest but effective dose.

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