Epilepsy and pregnancy - which antiepileptic drug should we choose?

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Women with epilepsy have a slightly higher risk for some pregnancy and birth complications and require increased surveillance during pregnancy. Although two of three women with epilepsy remain seizure free throughout pregnancy, antiepileptic drugs (AEDs) dosages may need to be adjusted and therapeutic drug monitoring should be performed, at least every 4 weeks. Due to pharmacokinetic changes during pregnancy, the most pronounced decline in serum concentrations is seen for AEDs eliminated by glucuronidation, in particular lamotrigine (LTG). Consequently, the risks for uncontrolled seizures during pregnancy need to be balanced against potential teratogenic effects of AEDs. AED pregnancy registries continue to confirm that valproate (VPA) poses a significantly increased dose-dependent risk of structural and cognitive teratogenesis, ranging from 5.6% (750mg/day) to 24.2% (1500mg/day). Phenytoin (PHT), phenobarbital (PB) and topiramate (TPM) likely confer an intermediate risk of congenital malformations. Data thus far suggest that LTG, oxcarbazepine (OXC) and levetiracetam (LEV) are associated with a relatively low risk for both anatomic and developmental adverse effects. Accordingly, women with epilepsy should be treated with a low-dose monotherapy during pregnancy and VPA should be avoided. Supplementary folic acid (5 mg daily dose) is recommended, because this lowers the risk of cognitive teratogenicity. Third-trimester vitamin K supplementation has been suggested for women taking enzyme-inducing AEDs (eg. CBZ, PHT, PB), based on a concern for increased risk of intracranial neonatal haemorrhage. Experiences of the Referral Centre for Epilepsy of the Ministry of Health of the Republic of Croatia in treating pregnant women with epilepsy will also be presented.