Verapamil

Study Details	Patients	Prognostic factors	Outcome measures	Effect size	Comments
Author & Year: Weber-Schoendorfer et al, 2008[842] **Study design:** Prospective observational study **Setting:** Multicentre study (11 centres) **Duration of follow-up:** Birth or end of pregnancy	**Patient group:** Pregnant women in their first trimester **Inclusion criteria: NR** **Exclusion criteria: NR** **Group 1** **N:** 299 (62 to verapamil) **Maternal age (median):** 33 (16-48) **Group 2** **N:** 806 **Maternal age (median):** 30 (17-44)	**Group 1**: verapamil Pregnant women with first trimester exposure to calcium channel blockers (CCBs) whose physician contacted a Teratology Information Service (TIS) that was a member of the European Network of Teratology Information Services (ENTIS) between 1986 and 2003 **Group 2**: all calcium channel blockers As above but includes several calcium channel blockers including verapamil **Group 3:** controls Pregnant women who had been counselled during pregnancy about exposures known to be to non-teratogenic. Controls enrolled in the same country and year as exposed pregnancies. **Confounding factors:** More women using CCBs: Smoked (26.5% vs 11.%5) Smoked >5 cigarettes/day (23.1% vs 7.9%) Previous miscarriages (24% vs 13.2%)	**Miscarriage (after exclusion of elective termination of pregnancy)** N (%)	**Group1:** 4/62 (6.9%) **Group 2:** 39/299 (14.6%) - adjusted odds ratio 2.21 (1.39, 3.50)* **Group 3:** 59/806 (7.6%)	**Funding**: German Bundesinstitut für Arzneimittel und Medizinprodukte (BfArm) **Limitations:** Not stated if exposed patients and controls were selected consecutively. Unclear how controls were selected. Reports baseline characteristics for all CCB patients but not verapamil alone. *States outcomes parameters were adjusted for: maternal age, concomitant medication, alcohol and cigarette consumption, previous miscarriage and birth defects in previous offspring. Unclear if this refers to the adjusted odds ratios for calcium channel blockers as a whole. **Additional outcomes:** Live pregnancies, gestational age at delivery, birth weight **Notes:** Data collected by similarly structured questionnaire used by all centres to record following data at the first contact (early pregnancy before outcome known): drug exposure, demographics, medical & obstetric
			Still births (after exclusion of elective termination of pregnancy) N (%)	**Group1:** 1/62 (1.7%) **Group 2:** 6/299 (2.2%) - adjusted odds ratio 2.98 (1.02, 8.72)* **Group 3:** 6/806 (0.8%)	
			Elective termination of pregnancy (ETOP) N (%)	**Group1:** 4/62 (6. 5%) **Group 2:** 31/299 (10.4%) **Group 3:** 30/806 (3.7%)	
			Preterm children (<37 weeks) N (%)	**Group1:** 12/62 (21.8%) **Group 2:** 54/299 (23.8%) - adjusted odds ratio 4.63 (2.94, 7.27)* **Group 3:** 47/806 (6.5%)	
			All birth defects N (%)	**Group1:** 6/62 (10.7%) including 1 ETOP **Group 2:** 15/299 (6.6%) including 2 ETOPs - adjusted odds ratio 1.58 (0.81, 3.07)* **Group 3:** 33/806 (4.6%) including 2 ETOPs	
			Major birth defects (excluding chromasomal anomalies/syndromes)	**Group1:** 2/62 (3.6%) **Group 2:** 8/299 (3.5%) including 1 ETOP - adjusted odds ratio 2.27 (0.90, 5.69)* **Group 3:** 14/806 (1.9%)	

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		Had additional diseases - not defined (85.6% vs 27.3%)	N (%)	including 1 ETOP	history. Follow up after expected date of delivery by mailed questionnaire or telephone interview.

Abbreviations: NR=not reported, NA=not applicable, M/F=male/female, N=total number of patients in group, SD=Standard deviation, SE=Standard error, ITT=Intention to treat analysis, CCBs=calcium channel blockers