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# PRENATAL EXPOSURE TO LITHIUM AND FETAL AND NEONATAL GROWTH

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**Introduction:** Insulin-dependent diabetes, obesity and gestational diabetes are factors associated with macrosomia. Some psychiatric medications have well established side effects of weight changes in exposed pregnants. However, very few studies have investigated about the effects of lithium in fetal and neonatal anthropometry.
**Aims:** To investigate the effects of maternal use of lithium during pregnancy on fetal and neonatal growth.
**Methods:** A case-control study was conducted at the PERINATAL PSYCHIATRY PROGRAM CLÍNIC-BARCELONA. Case group consisted of 18 pregnant women on maintenance treatment with lithium monotherapy (n=13) or polytherapy (n=5) during pregnancy; control group involves 49 healthy women selected from an initial sample of 309. We evaluated sociodemographic data, lithium plasma concentrations in maternal blood and umbilical cord, fetal and neonatal anthropometry.
**Results:** Women did not diabetes or obesity criteria pre-pregnancy and during pregnancy. Mean maternal age (SD) in lithium exposed cases was 33.5 (3.8) and 32.5 (4.1) in non-exposed pregnant. No statistically significant differences were found regarding sociodemographic variables and pre-pregnancy BMI. Caesarean section was required in 91.8% of lithium exposed mothers, whereas 8.2% of non-exposed women did not need it (p=0.000). Fetuses exposed to lithium had greater abdominal circumference (p=0.018) and femur length (p=0.010) compared to non-exposed group. There were no differences in umbilical cord/maternal plasma lithium ratio between women treated with lithium monotherapy or polytherapy (1.11vs.1.03).
**Conclusions:** The fetuses exposed to lithium had a greater abdominal circumference, greater femur length and more caesarean section in comparison to non-exposed group. Fetal growth surveillance is recommended in pregnant treated with lithium.

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