Maternal and perinatal outcomes in pregnancies with multiple sclerosis: A case-control study

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Objective
To assess whether maternal multiple sclerosis (MS) is associated with adverse pregnancy outcomes by determining the clinical course of disease during pregnancy and postpartum throughout a 10-year-period in a single tertiary centre.

Methods
We conducted a case-control study that included pregnancies with a definitive diagnosis of MS (n=43), matched with 100 healthy pregnant women with similar characteristics. Maternal and perinatal data were retrieved from hospital files. Groups were compared, using Mann-Whitney and chi-square tests. Logistic regression models were constructed to determine independent effects.

Results
Maternal demographic characteristics (including age, parity, previous abortions, body-mass index, education level, smoking status) and baseline laboratory workup (including complete blood count parameters, serum thyroid stimulating hormone, and urinalysis) were similar across the groups. Considering outcomes, rates of preterm delivery, foetal growth restriction, preeclampsia, gestational diabetes, stillbirth, caesarean delivery, congenital malformation and Apgar score at 5 minute were comparable (p >0.05 for all). General anaesthesia during caesarean delivery (96% vs. 39%, p=0.002), urinary tract infection (UTI) in pregnancy (12% vs. 3%, p=0.04), low (<7) 1-minute Apgar score (21% vs. 9%, P=0.04), and non-breastfeeding (33% vs. 2%, p=0.001) were more frequent in women with MS. Low 1-minute Apgar score and breastfeeding rates were independent of general anaesthesia and UTI in regression models.

Conclusion
MS during pregnancy was generally not associated with adverse maternal and perinatal outcomes. However, increased risk for UTI, low 1-minute Apgar scores and decreased breastfeeding rates in these women are concerns.