

## Abstract

### Introduction:

Multiple sclerosis (MS) is an autoimmune disorder of the CNS that typically affects young women of childbearing age. Due to the international published data, safety for pregnant women with MS can be assumed. However, no study has been published in the Czech Republic to address the effect of MS on pregnancy and perinatal outcomes.

### Objective:

Analysis of the clinical course of patients with MS during and after pregnancy, and perinatal outcomes in comparison with healthy pregnant women.

### Methods:

A single centre prospective observational study in the period 2006–2015 was conducted. Complete data from 68 patients with MS were analyzed (85 deliveries) and were compared with a control cohort of 68 age- and parity - matched healthy pregnancies.

### Results:

The comparison between relapse rate and EDSS before, during and after delivery showed no statistically significant difference (relapse in 7.4% and 9.5%, EDSS 1.27 and 1.49). Perinatal outcomes were comparable in both cohorts. The weight of newborns differed by 159 g, ( $p = 0.295$ ), complications in pregnancy were represented in 16.2% in the group with MS and in 27.9% in controls ( $p = 0.295$ ), caesarean section was performed in 16.2% in patients with MS and in 23.5% of controls ( $p = 0.629$ ), 79.4% of patients with MS were breast-feeding. In the MS cohort, we found a higher and statistically significant incidence of administered epidural analgesia (29.4 % vs 8.8 %,  $p = 0.0367$ ), instrumental vaginal delivery was performed more often.

### Conclusion:

Our series confirms that pregnancy has no negative long-term impact on the progression of MS and there is no increased perinatal morbidity compared to controls.