

Pregnancy in women with two types of MS may mitigate MS progression

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(Medical Xpress) -- Pregnancy appears to have a positive effect on long-term disability in women with two types of multiple sclerosis, indicating that reproductive hormones may play a protective role in MS progression, neurology researchers at the University at Buffalo have found.

Women with either relapsing (R-MS) or primary [progressive disease](#) (PPMS) who do not bear children are more likely to have higher disability scores than women who had a least one child, results of their research show.

The research was presented at the meeting of the American Academy of Neurology held in April in Honolulu. Barbara Teter, PhD, assistant professor of neurology and director of research and development for the New York State MS Consortium (NYSMSC), is first author.

"In multivariable logistic regression models adjusted for duration of disease and year of registration, women with no live births (nulliparous) with [progressive MS](#) disease were 2.1 times more likely to have more severe disability compared to women with at least one live birth (parous.)

"Women with MS have a chronic and unpredictable course of disease that strikes during childbearing years," continues Teter. "Evaluation of the differences between parous and nulliparous women with long-standing MS provides clinical insight regarding the potentially protective

influence of pregnancy on long-term disability."

The study is based on retrospective data from the NYSMSC registry, in which UB's Department of Neurology is the lead site.

In a recent retrospective study conducted by the consortium, researchers found that, in a registry of 3,038 women with MS, those who had given birth had significantly lower odds of reaching an EDSS score equal to or greater than 6, compared with women who had no children.

The EDSS score is an average number derived from measures of various functions of the [central nervous system](#), based on a scale from 0 to 10, with 10 representing death from MS. EDSS 6.0 represents an ambulation milestone of requiring an assistive device to walk.

"Although studies have found differences in progressive disease from onset between men and women," says Teter, "to date, no studies had evaluated the potential association between parity and clinical outcomes for women with primary progressive MS from onset versus relapsing MS."

The current study was based on 2,411 cases of those two MS types: 2,117 with R-MS and 354 with PPMS. Among relapsing MS women, 79.9 percent had children, versus 83.6 percent of the women with progressive MS.

Results showed that among women with relapsing MS who had children, 81.2 percent had had EDSS scores equal to or lower than 5.5, meaning they were still able to walk without assistance. Among women with progressive MS who had children, 90 percent had EDSS scores equal to or lower than 5.5.

"Parity was independently associated with long-term disability of EDSS

equal to or greater than 6.0 for women with relapsing or progressive clinically diagnosed MS disease types," says Teter. "Women who bore children were significantly less likely to be in the EDSS equal to or greater than 6.0 group compared to nulliparous women."

It is generally assumed that pregnancy modifies MS disease during and after giving birth, due to its hormonal changes that interfere strongly with the immune system.

"Biological mechanisms that offer protection during pregnancy are also likely to provide favorable, long-term anti-inflammatory effects," says Teter. "This effect likely overcomes the well-known postpartum instability usually characterized by relapses during the first 3-4 months after giving birth that is seen in one-third of patients.

"Recent studies propose that exclusive breastfeeding and subsequent suppression of menses may decrease the postpartum relapse rate, lending further evidence of the potential beneficial effect of reproductive hormones," Teter says.

Provided by University at Buffalo

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