Mellen Center Approaches: MS and Pregnancy

How should women with MS be counseled about having children?

Having children is a decision made by the woman with MS and her partner. Guidance from health professionals should include information about the impact of MS on pregnancy, the ramifications of pregnancy on MS course and treatment, and the genetics of MS. The decision to have children may also bear in part on the present or expected disability issues of the mother which may affect child rearing. Ultimately it is the health care worker's job to support the mother and partner in their decision. On the other hand, if there are serious concerns about the patient's disease activity, ability to tolerate pregnancy, or ability to care for an infant it is appropriate to express these concerns to the family and patient.

What effect does MS have on fertility?

MS has no effect on fertility. Women with MS have a normal fertility rate and no increase in fetal abnormalities or spontaneous miscarriage. The standard immunomodulating agents for MS (interferons, copolymer) do not affect fertility itself, though they are not recommended during pregnancy. Mitoxantrone (Novantrone), an FDA approved medication for progressive MS, may reduce fertility. Cyclophosphamide may also affect fertility. Interferons and methotrexate can cause spontaneous miscarriage.

What is the risk of MS in children of women with MS?

Children of women with MS have a 3-5% lifetime chance of getting MS. In other words, they have an approximately 96% chance that they won't develop MS, or 24 to one odds against having MS. In other words, they have an approximately 96% chance that they won't develop MS, or 24 to one odds against having MS.

REFERENCE:

Dwosh, E., Guimond, C., Duquette, P., Sadovnick, A.D. The interaction of MS and pregnancy: a critical review. Int. MS J. 2003;10(2):35-36

What is the effect of pregnancy and breast feeding on the course of MS?

Having children does not have a major impact on the long term course of MS.

During pregnancy relapses are less common, and in the 6 months after delivery they are more common. Breast feeding does not have an impact on MS. There is little or no information on standard disease modifying agents and breast feeding.

Are there difference in outcome in pregnancy in women with MS?

Outcomes of pregnancy for women with MS are not substantially different than for other women. There is no increase in significant fetal malformations or major growth abnormalities.

REFERENCE:

Dwosh, E., Guimond, C., Duquette, P., Sadovnick, A.D. The interaction of MS and pregnancy: a critical review. Int. MS J. 2003;10(2):35-36

What should women with MS do with their medications and activities before becoming pregnant?

Interferons should be stopped 1 month prior to attempting conception. Copaxone is category B in pregnancy but is usually also stopped before conception. Chemotherapies and natalizumab are contraindicated in pregnancy. In general all medications that can be stopped before conception should be; lioresal (Baclofen) should be tapered due to risk of seizures with withdrawal). If necessary symptomatic medications (i.e. for spasticity, pain, bladder issues) can be reintroduced one by one later in pregnancy. Women should start a standard prenatal vitamin before conceiving and continue through pregnancy.

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Just like other women planning pregnancy, women with MS should start prenatal vitamins before conceiving, as well as seek regular obstetrical care as soon as possible. They should avoid drinking, smoking and drug use. They should be encouraged to participate in gentle regular exercise during pregnancy.

Are pregnancies in women with MS considered "High risk"?

There is no substantial increase in adverse outcomes to the mother or fetus during pregnancy. We do not recommend considering the pregnancy a high risk one.

REFERENCE:

Dahl J, Myhr K-M, Daltveit AK, et. al. Pregnancy, delivery, and birth outcome in women with multiple sclerosis. Neurology 2005;65:1961-1963

How should exacerbations be treated during pregnancy in women with MS?

In general women are less likely to have exacerbations during pregnancy, particularly as they reach the second and third trimesters. However if they do have an exacerbation that significantly affects function we do use standard protocol steroids. At the Mellen Center we usually use a 3-5 day course of IV methylprednisolone 1 gram with or without a tapering dose after the IV course. An alternative is IVIG for women where steroids are contraindicated (i.e. significant gestational diabetes). We try to avoid steroids in the first trimester if possible.

REFERENCE: Mellen Center Consensus

What about delivery? Can a woman have an epidural or a caesarian section?

Women with MS can have a normal vaginal delivery without an effect on their MS. Women with MS who are pregnant can have an epidural or caesarian section if these are necessary. There is no robust data that shows an increased risk of these interventions. Recent case series of epidural and spinal anesthesia in women with MS have not supported the concerns raised in the past by case reports of increased disease activity with spinal anesthetics.

REFERENCE:

Hebl JR, Horlocker TT, Schroeder DR, Neuraxial Anesthesia and Analgesia in Patients with Preexisting Central Nervous System Disorders Anesth Analg 2006;103:223-228

How should women with MS restart DMA after pregnancy?

We recommend to the mother to restart disease modifying therapies after they stop breast feeding. There is no evidence that breast feeding per se changes the course of MS: however, delaying the reinstitution of disease modifying agents may increase the risk of post partum relapses. If women are starting an interferon they may need to restart using a titrating dose similar to their initial start up. We recommend that they get the baby used to bottle feeding from time to time in case they have to stop breastfeeding suddenly (for example, if they need steroids or IVIG for an exacerbation).

REFERENCE: Mellen Center Consensus

Vikusic S, Hitchinson M, Hours M, et al. Pregnancy and multiple sclerosis (the PRIMS study): clinical predictors of post-partum relapse. Brain 2004;127:1535-1360

Should we use IV steroids or IVIG preventively after delivery in women with MS?

While there have been small trials assessing the preventive use of these medications in the post partum period, there is no long term data that such preventive treatment is better than treating exacerbations as they occur. Since many women will not develop exacerbations after delivery, using these medications in the entire population exposes patients who would otherwise do well to unnecessary medication. One might consider monthly steroids or IVIG in women who have had very active MS before their pregnancy.

If women need IV steroids while breast feeding they should 'pump and dump' for 24 hours after each dose of steroids and use formula during this time to avoid exposing their infant to steroids.

REFERENCE:

De Seze J, Chapelotte M., Delalande S, et. al. Intravenous corticosteroids in the postpartum period for reduction of acute exacerbations in multiple sclerosis. Multiple Sclerosis. 2004;10:596-597

Achiron A, Kishner I, Dolev M, et al. Effect of intravenous immunoglobulin treatment on pregnancy and postpartum-related relapses in multiple sclerosis. J. Neurol. 2004;251:1133-1137

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Mellen Center Approaches: MS and Pregnancy, continued

Can the patient have an MRI during pregnancy?

In general we try to avoid imaging during pregnancy unless absolutely necessary. Gadolinium is contraindicated in pregnancy. We try not to perform an MRI in the first trimester. There is at present no documented evidence of harm in pregnancy for MRI scanning without gadolinium. Gadolinium should be avoided when women are breastfeeding, but if necessary women can pump and discard their breast milk for a day after the gadolinium injection.

REFERENCE:

M. M. Chen, F. V. Coakley, A. Kaimal, and R. K. Laros Jr

Guidelines for Computed Tomography and Magnetic Resonance Imaging Use During Pregnancy and Lactation Obstet. Gynecol. 2008; 112(2): 333 - 340.

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