Sexual Hormones and Multiple Sclerosis

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Multiple sclerosis is an immune mediated disorder that occurs in susceptible individuals. Pathologic areas of CNS demyelination secondary to damage of myelin sheaths and oligodendrocytes injury are hallmark. It can occur in all types of people, but affects women of Northern European descent most commonly.

Recently the number of women affected has increased while in men has remained unchanged. As with many other autoimmune disease, men are less likely to be affected; unfortunately in MS, when men are affected it tends to be more severe.

The reason for the increased prevalence of MS among women is unknown, but researchers are beginning to explore how gender affects risk and disease progression. Previous hormone studies have focused primarily on pregnancy. It is well known that MS relapses are less likely to occur during pregnancy especially during the third trimester. Unfortunately, the risk of relapse returns to above baseline during the three to six months postpartum.

Newer studies have compared sex hormone concentrations in MS patients to healthy controls. These hormone levels were also correlated to MRI abnormalities. The studies have found that women with MS showed lower testosterone concentrations than normal subjects. Women with the lowest testosterone levels were found to have more Gadolinium enhancing lesions on MRI (more tissue inflammation). On the other hand, women within the higher testosterone concentration range were more likely to develop irreversible tissue injury and clinical disability.

No significant differences in hormone levels were found in men suffering from MS compared to healthy controls. Yet, there was a tendency of the MS patients to have more brain lesion load when estradiol (estrogens) levels were in the higher range.

A pregnancy hormone, estriol, was studied in a small crossover controlled trial in SPMS and RRMS. The hormone blood levels reached in the study patients were similar to the levels seen in a 6 month pregnancy. Several parameters were studied including EDSS (severity scale), cognitive function and MRI changes.

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Ready for Summer Vacation?
That also means preparing for the HEAT—here are some tips so the heat doesn't get you!

1. Get your cooling devices early! There are 2 sources to get financial assistance with these products: First, the NMSS by calling 713-526-8967 press 2 and ask for Vickie Stevens and Second, the MSAA has a cooling device program where they will send you several pieces of equipment but there is a financial criteria-visit http://www.msassociation.org/programs/cooling/ for the application and criteria. This requires an RX from your physician which we will be happy to provide.

2. Plan your vacations for cooler spots. Ask ahead to make sure the places have air conditioned facilities that are accessible if needed. Make sure you will have access to water and/or a pool for easy quick cool off. If going to the beach, take a cooler and bring extra towels to soak and drape on you to keep your core temperature down. If you know you will be outside for a long time just plan and bring extra water and other cool items

3. Plan a vacation inside. There are several places around the US that are inside and are just as much fun. Aquariums, Museums and malls to name a few. Even Schlitterbahn in Galveston has a year long indoor part. For help you can opt to ask a travel agent that will be able to accommodate you and your family’s needs or may have ideas that you haven’t thought about.
Are you Connected?

While we all have our frustrations about the cost of our medications, the manufacturers do offer some awesome support to help you and your family cope and learn about better ways to manage your MS.

Most companies will have a mailing list to notify you of support groups and other community presentations that health care providers like Dr. Rivera, Dr. Hutton, Toni and Allison speak at in the community.

To check in your area for such programs call:
- Rebif Patients: MS Lifelines 1-877-447-3243
- Avonex & Tysabri Patients: MS Activesource 1-800-456-2255
- Betaseron Patients: Betaplus 1-800-788-1467
- Copaxone Patients: Shared Solutions 1-800-887-8100.

Some even will send out books and other helpful publications to share with family and friends or simply for yourself.

All of these are a great way to get information about a variety of topics. Some programs focus on relationships, sexuality, family, fatigue, cognition, headaches, and treatment management. At times, I will have brochures for the various programs in our lobby and exam rooms.

Hormones continued ...

The study results reported a few relapses and no significant changes during the treatment and post treatment period. Cognitive test scores showed improvement in the small RRMS subgroup but not in the SPMS form. The MRI gadolinium enhancing lesions significantly decreased during the treatment months, but returned to baseline after 6 months of stopping the medication.

In conclusion, promising results were seen, but several drawbacks including short term follow up and very small study group are limitations.

Another pilot study found that male MS patients had better performance in cognitive function assessments after being treated with topical testosterone for one year. They did not find a decrease of brain inflammation by MRI measures. Unfortunately the study has great limitations because of small sample size.

The role of estrogens and testosterone as risk factors for MS, and their relation to disease progression and clinical disability in multiple sclerosis remains unclear.

Further studies with larger sample size are needed. As for now, hormone supplements are not recommended as adjunctive therapy for MS.
Save the Dates for the 2009 MS WALKS!

Saturday, November 7, 2009
Walk MS Kemah

Saturday, November 14, 2009
Walk MS Katy
Walk MS The Woodlands

Sunday, November 15, 2009
Walk MS Downtown Houston
Downtown Aquarium – site change!

www.WalkMSTexas.org