Corinne Goldsmith Dickinson Center for Multiple Sclerosis

5 East 98th Street, First Floor

MS Interactions

Mount Sinai

Winter 2007, Vol. 3, (1)

A Word from the Director

Welcome to the third year of the MS Newsletter of The Corinne Goldsmith Dickinson Center for Multiple Sclerosis, a Center that has welcomed many new faces as of late. In the midst of all this growth and change, we continue to work hard to keep our patients, their families, and our colleagues informed about the many exciting developments in the field of MS.

We are continuing our Mount Sinai Medical Center Auxiliary Board Seminars, which occur on the fourth Wednesday of every month from 5:30 to 7 pm in the CGD Conference Room. Each month we feature a different topic and a special presenter. I led January's seminar on Clinical Trials in MS, and Dr. Aaron Miller will host the February 28 seminar on New Treatments in MS.

The New York City Chapter of the National MS Society has

continued on page 2

The Changing Center

Front row: Sabrina Phipps, Dr. Jennifer Finkel, Yvette Lopez, Iris Morales, Donna Polisar, Ann Marie Rooney-Crino, Heidi Sadowsky. Back row: Dr. Thomas Bryce, Tarah Gustafson, Aliza Ben-Zacharia, Tova Epstein, Donna Siegal, Taiwo Baker, Dr. Tracy DeAngelis, Dr. Stephen Krieger, Dr. Aaron Miller, Dr. Fred Lublin (not in the picture, Michele Weber, Francine Fernandez, Stacy Ann Foster).

What Does it Take to Develop New MS Drugs?

Stephen Krieger, MD

The five existing therapies for MS (Avonex, Betaseron, Copaxone, Rebif, as well as the intravenous medicines Novantrone and Tysabri) have all undergone extensive study prior to receiving FDA approval. The first drug therapy for MS, Betaseron, was introduced in 1993, and the most recent, Tysabri, was just re-approved for severe MS in 2006. The process of testing a new drug therapy for MS is time consuming, and there are several phases of investigation that all drugs must undergo in order to be deemed both safe and effective.

continued on page 2

A Word From the Director

continued from page 1

very nicely agreed to highlight each month's seminar in their e-news. If you do not receive that and are interested in our seminars, please call 212-241-6854, choose option 6 to sign up or to learn the topic for the month.

In this issue, we debut a new series titled "Ask the Experts." In each newsletter, we will respond to a frequently asked question and share the answer(s) with everyone. If you have a question, please let us know for an upcoming issue.

Our annual Dance Party is scheduled for Thursday, March 8, 2007, at the Rainbow Room, 30 Rockefeller Plaza, New York. There is a copy of our Save the Date Card in this issue. This is our only fundraising event, and all proceeds benefit the educational work and patient services we continue to refine and expand. We hope to see many of you at our dance party to help celebrate another eventful year at the CGD Center for MS.

Wishing everyone a peaceful, healthy and prosperous 2007.

Best,

Fred D. Lublin, MD
The Saunders Family Professor of Neurology
Director of The Corinne Goldsmith Dickinson Center for Multiple Sclerosis

What Does it Take to Develop New MS Drugs?

continued from page 2

Before a pharmaceutical company can initiate testing in humans, it must conduct extensive preclinical or laboratory research. This typically involves years of experiments in animal and human cells to develop compounds that have the desired biological effect. Once a drug is developed, it is often tested on animals before human studies can even begin. The clinical testing of experimental drugs is normally done in three phases with successsively larger numbers of people.

Phase I studies are primarily concerned with assessing the drug's safety. This is done in a small number of healthy volunteers, to determine what happens to the drug in the human body—how it is absorbed, metabolized, and excreted. A Phase I study will investigate side effects that occur as dosage levels are increased.

Once a drug has proved to be safe, it must be tested for efficacy. This second phase which could last from several months to two years, involves up to several hundred patients. Most Phase II studies are randomized trials. One group of patients receives the experimental drug, while a second "control" group receives a standard treatment or placebo (fake). Often these studies are "blinded"—neither the patients nor the researchers know who is getting the experimental drug. In this manner, the study can provide the pharmaceutical company and the FDA information about the relative safety of the new drug and its effectiveness. Only about one-third of experimental drugs successfully complete both Phase I and Phase II studies.

In a Phase III study, a drug is usually tested in several hundred to several thousand patients. This large-scale testing provides the pharmaceutical company and the FDA with a more thorough understanding of the drug's effectiveness, benefits, and range of possible adverse reactions. Most Phase III studies are randomized and blinded trials. Phase III studies typically last several years. Only after a Phase III study is successfully completed can a pharmaceutical company request FDA approval for marketing the drug.

Multiple sclerosis poses a specific set of challenges for clinical research. It is a highly variable disease, with some patients profoundly affected while others only mildly so. Choosing the correct population of MS patients to study poses formidable challenges to clinical research and is one reason why it is impossible to accurately compare the results of different MS drug trials to answer the question "which drug is better?" In addition, MS varies over time even within the same person. There are "good days" and "bad days," relapses that last for days to weeks, symptoms that persist from previous relapses, and other effects that are difficult to study, such as fatigue, stiffness, and pain. Choosing which outcome to study is another challenge to MS research design. Among the most commonly studied are the number of exacerbations, time to next exacerbation, number of new lesions seen on MRI, and cumulative disability (as measured by the EDSS). All of these variables take time to assess. In general, it takes several years of research for an MS drug to even begin Phase III testing. Phase III trials take several months to enroll, often one to two years to run, and a year to be fully analyzed and published. Obtaining FDA approval once studies are complete often takes the better part of a year as well. While there are several new classes of medications in development, they are likely to be several years away from FDA approval. The standards for proving that a drug is safe for patients and proven effective against MS are incredibly high and take years of work to meet.

The CGD Center for MS is involved in an array of projects looking at new therapies. These include a Phase II/III trial of monoclonal antibodies, a Phase III trial to evaluate oral steroids together with Copaxone, and a large, multicenter Phase III trial using Avonex and Copaxone in combination. In addition, we have just begun to participate in a Phase III trial of Fingolimod, a new oral drug for MS. (For more about this trial, see the Keynote Article on page 5.) The modern era of MS care has already seen the development of treatments that were difficult to imagine just 15 years ago. With many new clinical strategies in development, this is truly an exciting time for MS research. As new trials become available we are actively recruiting patients to help further our mission in fighting the disease. (Please see Research Questions on page 8.)

CONGRATULATIONS Aliza Ben Zacharia!!!!!

On Tuesday, February 6, Aliza Ben-Zacharia was honored at the Annual Meeting of the New York City Chapter of The National Multiple Sclerosis Society, 4 to 6 pm, at the Marriott Marquis Hotel, 1535 Broadway (between 45 and 46th Streets).

Aliza received the Chapter's Professional Education Award for 2006 for her years of work both as a clinician and as an educator. Those of you who know her will join us in applauding this well–deserved honor.

It's Time to Start Planning for the 2007 MS Walk

Our team—Team EJ and the Bronx Prepsters for the Mount Sinai and Columbia MS Centers—was once again the top fundraising team in 2006. Last year, our 152-member team raised $142,387, thanks in part to Elissa Levy, co-captain who alone raised over $75,000 and has maintained the top individual fundraiser title for three years! Despite the heavy downpour last year, the MS Walk raised over $2.85 million total.

Our goal this year is to beat all of those numbers, but we need your help.

Join Us...

Walk with us on April 22 at South Street Seaport. Raise money from friends and family, win great prizes, and most importantly, help us find a cure. Visit **www.teamej.com** and click on join our team. We start the morning with a complimentary breakfast and then begin the three mile, accessible walk route together.

If you cannot make it on April 22, please support our team by making a donation. You can use a credit card to donate online at **www.teamej.com.** Or send a check made payable to MSNYC (the NYC Chapter of the MS Society) to:

The Corinne Goldsmith Dickinson Center for Multiple Sclerosis
5 East 98th Street, Box 1138
New York, NY 10029

Grab an opportunity to spend a Sunday with your medical team!

If you have any questions, please call Tova Epstein 212-241-7113 or Aliza Ben-Zacharia at 212-241-0538.

We hope to see you there. . .

Keynote Article:

Fingolimod (FTY-720): An Oral MS Medication on the Horizon

Aaron E. Miller, MD, Medical Director

The Corinne Goldsmith Dickinson Center for Multiple Sclerosis is participating in a Phase III trial of Fingolimod, an oral medication for the treatment of relapsing-remitting multiple sclerosis. Based on the results of Phase II trials, Fingolimod appears to be among the most promising new MS drugs under investigation.

Fingolimod, formerly known as FTY-720, was developed by Novartis Pharmaceuticals. It is a member of a class of drugs known as sphingosine 1-R receptor modulators and is believed to work by trapping immune cells (lymphocytes) in peripheral lymphoid organs (mainly lymph nodes). This prevents them from traveling through the blood stream into the central nervous system (brain, spinal cord, and optic nerves) where they can cause the damage typical of MS.

The Phase III trial is the most advanced stage of testing a new drug. Positive results would lead to submission to the U. S. Food and Drug Administration (FDA) for licensure. The design of the study, typical of such trials, is multicenter, randomized, double-blind, and placebo-controlled. This means the study will be conducted in many sites throughout North America. Patients will be assigned randomly by code to receive either Fingolimod or placebo (fake medication). Because two different doses of Fingolimod will be studied, two thirds of patients in the trial will receive the test medication. The term "double-blind" means that neither the patient nor the investigator knows whether a particular subject is receiving Fingolimod or placebo. This design is used in order to prevent the introduction of bias into the study.

In a very successful six months Phase II trial, patients who took Fingolimod developed significantly fewer new abnormalities on MRI scans than did those who were assigned to receive the placebo. Furthermore, even in this short study, the number of relapses (attacks or exacerbations) experienced by the group receiving Fingolimod was reduced by more than 50 percent.

The medication, which is taken once a day, appears to be well-tolerated by patients. However, because some patients develop a slowing of the heart rate with the first dose, the initial treatment is given under close supervision at the hospital.

As with all clinical trials, participants must meet certain specific criteria. Most importantly, those who are interested in the study must prefer not to take the currently approved injectable medications that are widely prescribed for relapsing forms of MS. They must understand that they are foregoing these accepted treatments to participate in a trial in which they may receive fake medication or a test medication that may or may not ultimately prove to be effective.

Individuals who are interested in learning more about the Fingolimod trial or other studies currently in progress at the Center should speak to their physician or call the Center at 212-241-6854 and select option 8 (the line only takes messages).

Ask the Experts

Aliza Ben-Zacharia, CRRN, MSN, ANP

Question: In the last few days I have experienced urinary urgency and a burning sensation while urinating. Is it related to my multiple sclerosis?

Answer: Urinary symptoms can be related to the effects of multiple sclerosis or to an infection called a urinary tract infection (UTI). It is very important to rule out other causes before "crediting" a symptom to MS. Therefore, the first step is to check for an infection. Urinary tract infection symptoms can include one or multiple signs and symptoms, but many patients can have a UTI without any symptoms.

Urinary Signs and Symptoms

- A burning sensation when you urinate;
- Feeling like you need to urinate more often than usual;
- Feeling the urge to urinate but not being able to;
- Leaking a little urine;
- Urine that smells bad;
- Cloudy, dark, or bloody urine.

The diagnosis of a urinary tract infection is made by a urinalysis and urine culture, in which urine is collected in a sterile manner and tested for the presence of bacteria. Your practitioner will prescribe an antibiotic if your infection has been confirmed. Usually, symptoms of the infection go away one to two days after you start taking the medicine. It is essential that this medication be taken as directed for the complete time period indicated. Often, patients with MS take medications to control their urgency or urinary incontinence and they might be asked not to use these medications when they have an infection. These patients need to follow-up with a urologist.

Patients with MS may also experience urinary symptoms without the presence of an infection. The elimination of urine is dependent on intact pathways between the brain, spinal cord, and bladder. Urinary symptoms are prevalent among MS patients. The bladder symptoms may include urinary urgency, urinary incontinence (loss of control), urinary hesitancy, or the inability to empty one's bladder (also known as urinary retention). A common symptom among MS patients is urinary urgency. The management of these urinary symptoms is diverse and based on individual urinary tests and the quality of the symptoms. Usually, symptoms may be controlled by medications that enhance quality of life without negative side effects.

Tips

- Drink plenty of water.
- Don't hold your urine.
- Urinate after having sex.
- Discuss taking medicines for your urgency.
- If urinary retention is related to your MS, follow-up with a urologist. Infections may be prevented by complete bladder emptying using self-catheterization techniques, if necessary.
- If you are prone to repeated UTIs, follow-up with a urologist and consider taking vitamin C and cranberry tablets or juice.
- Your urologist may give you antibiotics for several months or longer to prevent infections.

Caring for Your Skin: Prevention of Pressure Ulcers

Ann Marie Rooney-Crino, CRRN, MSN, NP

People with MS may be at risk for developing pressure ulcers. Decreased mobility, poor nutritional intake, lack of appropriate equipment and knowledge regarding prevention, age, and underlying health issues can all place an individual at risk. Prevention of pressure ulcers is an essential part of maintaining wellness and quality of life for someone with MS.

A pressure ulcer is an area of localized damage to the skin and underlying tissue, caused by pressure, shearing, and/or friction from clothing, bedding, or seating devices. Pressure ulcers usually occur in sites where there are bony prominences such as the tailbone, buttocks, hips, ankles, heels, elbows, and the back of the head.

Ulcers are categorized into four stages, based on their depth. The first stage is an observable change in intact skin, in which one might notice changes in skin temperature and/or sensation (pain/itching) compared to the same area on the opposite side of the body. The ulcer appears as a defined area of persistent redness in lightly pigmented or fair skin. In persons with darker skin tones, the ulcer may have a persistent red, blue, or purple appearance. The stage II ulcer is usually superficial and looks like an abrasion, blister, or shallow crater. The third stage is known as a full thickness wound involving the epidermis, dermis, subcutaneous tissue, and muscle. It may appear as a deep crater. The fourth stage moves farther down, with extensive destruction, causing tissue death and damage to muscle, bone, tendons, and joints.

If you spend a great deal of time in a chair, you are at high risk for a pressure ulcer. Prevention is very effective in maintaining skin integrity. Suggestions include:

- Shift your weight every 15 minutes, if possible. Shift to one buttock, hold the position for one minute, and then shift to the other side and hold for one minute.
- Have your caregiver reposition you at least every hour if you are unable to shift.
- Use a pressure-reducing cushion as recommended by your MS clinician or physical therapist (best not to use donut type devices).
- Have a seating assessment done by an occupational or physical therapist.

A few suggestions for individuals who spend a large part of the day in the bed:

- Ensure that your position is changed every two hours. A 30-degree turn to either side is recommended to avoid positioning directly on the hip.
- Keep the head of your bed no higher than 30 degrees to prevent sliding and friction to the lower back and buttocks.

If you spend a lot of time in either a chair or a bed, check or have your caregiver check for signs of pressure ulcers twice daily. And always call your clinician if you notice any breaks in your skin.

Please Join Us for MS Awareness Week
March 5 to 9, 2007

Monday, March 5
Lunch with the CGD Center
Doctors and Healthcare Team
11:30 am-1:30 pm
5 East 98th Street, First floor
Please RSVP 212-241-6854, option 6

Wednesday, March 7
Sign up for the MS Walk
(See article on page 4)

Thursday, March 8
Dance Party
to Benefit the CGD Center
The Rainbow Room
7 to 11 pm
Tickets prior to event—212-659-9701

RESEARCH QUESTIONS

If you are interested in participating in a clinical trial, please e-mail **multiple.sclerosis@mssm.edu** with your contact information and answers to these three questions:

1. Have you been diagnosed with MS?

2. Are you currently being treated for MS?

3. Are you interested in participating in a clinical trial?

Everyone will receive a response. If you are not eligible for a current study but would like to be kept on our list of possible participants, please let us know.

Thank you for your interest.

Clinical Trials Update for Acute Relpases in MS

A clinical trial called OMEGA is underway to compare the use of oral versus intravenous (into the vein) Solumedrol in relapsing forms of multiple sclerosis (MS). Intravenous methylprednisolone (Solumedrol) is currently used to treat acute MS attacks. This study will evaluate the standard dose given by an IV compared to an oral dose. Treatment is given for five days, and eligible subjects will be followed for 12 months. There are two treatment groups for this trial. One group will have an active IV and an oral placebo, while the second group will have an IV placebo and an active oral dose. Therefore, each subject will receive an active treatment.

The MS Center is seeking eligible volunteers who are presently experiencing an acute exacerbation (flare up) of MS that started within the past seven days. This study is seeking both male and female volunteers between the ages of 18 and 50 years old with a relapsing form of MS. If you have an increase in your symptoms lasting for more than 24-hours without an infection, please promptly call your MS doctor or call 212-241-6854 and press option 8 (a line that only takes messages). A research coordinator will return your call.

Our Phone Tree and How to Best Use it:
We can serve you better and faster if you use our phone system to direct your call. Here's a handy cheat sheet.

Main Number: 212-241-6854
Options:
1. **Emergency line.** Please do not use unless you are a doctor or have a true emergency.
2. **Appointments,** cancellations, rescheduling
3. **Prescription line.** Please leave all necessary information.
4. To reach a **nurse or social worker**
   - Aliza (Nurse Practitioner working with Dr. Lublin)
   - Ann Marie (Nurse Practitioner working with Dr. Miller)
   - Tova Epstein (Social Worker, Wednesday, Thursday)
   - Donna Siegal (Social Worker, Monday, Thursday, Friday)
5. **Billing questions**
6. **Administrator,** Donna, or one of the doctors.
7. **Directions**
8. **Research line.** Only takes messages; someone will return your call.