Scleroderma Center Receives NIH Funding for a Single-Center Study

by Robyn T. Domsic, MD MPH

The Scleroderma Center was recently awarded a NIH grant for a single-center study of 30 patients to examine the effects of Atorvastatin (brand name Lipitor) on Raynaud phenomenon and blood vessel changes in patients with diffuse scleroderma.

Atorvastatin, which belongs to a class of cholesterol-lowering medications referred to as “statins,” is known to have beneficial effects of blood vessels in patients with cardiovascular disease. In part, this occurs because statin drugs have positive effects beyond just reducing cholesterol levels. They include reducing inflammation, increasing the number of blood vessel wall cells, and decreasing fibrosis. In scleroderma we know that there is inflammation, a lower number and poor function of blood vessel wall cells and excessive fibrosis. Therefore, statins have theoretical advantages in patients with scleroderma.

Initial work at our Center in 15 patients with early diffuse scleroderma showed that those with better blood vessel function were taking Atorvastatin. These patients were taking Atorvastatin because of high cholesterol and other cardiovascular risk factors (like high blood pressure), and so should have worse blood vessel function. The fact that they had better blood vessel function suggests that Atorvastatin may be helping to maintain or improve blood vessel function in the setting of early scleroderma. Researchers from Egypt gave patients Atorvastatin and showed improvement in blood vessel function. Initial work at our Center in 15 patients with early diffuse scleroderma showed that those with better blood vessel function were taking Atorvastatin. These patients were taking Atorvastatin because of high cholesterol and other cardiovascular risk factors (like high blood pressure), and so should have worse blood vessel function. The fact that they had better blood vessel function suggests that Atorvastatin may be helping to maintain or improve blood vessel function in the setting of early scleroderma. Researchers from Egypt gave patients Atorvastatin and showed improvement in blood vessel function.

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vessel function at 6 months [1], and investigators from Japan gave Simvastatin, another statin (brand name Zocor), and showed improved blood vessel flow in the fingers [2], and fewer finger ulcers [3]. We think that Atorvastatin will work best in patients with early disease, when the blood vessel changes are absent or minimal.

Our trial, named TAMER, is for patients with early diffuse scleroderma and < 3 years of symptoms. The trial will be for 16 weeks, and half of the patients will receive Atorvastatin, and the other half placebo. Patients will have noninvasive ultrasounds and laser speckle imaging to look at blood vessel function in the hands and arms. We will be looking at the function of different size blood vessels. This imaging and questionnaires will be done at baseline and 16 weeks.

Patients will be able to continue their other scleroderma medications during this trial, and will receive compensation for their time.

If we are able to recruit enough patients to complete the trial over the next year, and the benefits are positive, then we will pursue a larger, multicenter trial of Atorvastatin. If you are interested or know someone who may be interested and eligible, please contact one of our scleroderma research coordinators, Dana Ivanco at 412-648-7040 or des2@pitt.edu or Maureen Laffoon at 412-648-7871 or laffoonm@pitt.edu.

Pediatric Localized Scleroderma Quality of Life Study
by Dr. Kaveh Ardalan

As a Pediatric Rheumatology Fellow, I am doing a research project on how the daily lives of children with localized scleroderma (LS, morphea, linear scleroderma) are affected by their disease. We often hear from patients and their parents that LS makes participation in sports and other activities harder, that medications and their side effects are difficult to tolerate, and how they perceive looking and feeling different from their peers who do not have obvious skin abnormalities. This is an understudied topic. No reports have attempted to identify factors that predict which LS patients might be at higher risk for “poor quality of life”.

Our preliminary findings were that 3 factors were important: (1) non-skin factors such as deformities of the extremities made life more difficult for LS patients; (2) girls said that LS has a greater effect on their lives than boys did; and (3) as time passes, most children say that LS does not affect their lives as much, possibly because they have had effective treatments or have coped with their condition with the help of their parents and supportive peers.

As a follow up, we decided to convene “focus groups” to obtain better insight. Who better understands the impact of LS than the patients themselves and their parents? Thus far we have conducted 3 focus group sessions with LS patients and 3 with their parents. We are currently analyzing the results of these meetings. It is our hope that they will provide insights into how LS patients, their family members, and their physicians can help them to overcome real and perceived obstacles to a healthy quality of life.

Editor’s Note: Many similar studies have been reported for systemic sclerosis, (SSc), but they are not comparable because SSc primarily affects adults and has the potential to seriously affect internal organs. This is a needed and welcome approach to LS. It is possible primarily because Dr. Kathryn Torok, Dr. Ardalan’s supervisor, has assembled a large and thoroughly studied group of pediatric LS patients.
Victoria Octavi Memorial Tea and Luncheon

Thirteen-year-old Rebecca Hammerman has known since a young age that she wants to be a broadcast journalist. When she was younger, she performed on stage often – and her late aunt, Vicki Octavi always tried to be in the audience to show her support. Rebecca loved to bring a smile to her aunt’s face. Vicki had scleroderma for 15 years and received care at the UPMC and University of Pittsburgh Scleroderma Center. It was in Vicki’s memory that Rebecca decided to organize a scleroderma fundraiser as a part of her Mitzvah Project, a charitable act that prepares young Jewish adults for their Bat/Bar Mitzvah. Her event, the Victoria Octavi Memorial Tea and Luncheon, was held on April 12, 2015, and raised more than $5,000 for scleroderma research.

More than 75 people attended the event, which featured guest speaker, Thomas A. Medsger, Jr., the director of the Scleroderma Center. Dr. Medsger also serves as a professor at the University of Pittsburgh School of Medicine. As a leading expert in scleroderma research, he discussed various subsets of scleroderma according to how they affect the skin and internal organs, and how different blood antibodies found in scleroderma patients can predict the natural history of the disease. During the program, Rebecca also took the time to recognize family members, caregivers, and other individuals who positively impacted her aunt’s life. She hopes that the money raised from the event will not only go toward research projects, but also toward improving the lives of others affected by the disease.

Rebecca credits the staff she worked with at the Scleroderma Center for collaborating with her to organize this successful fundraising event. They helped her to learn a lot about the effectiveness of teamwork, the importance of setting and achieving goals, and the significance of doing work that benefits the lives of others. Because of this, Rebecca plans to continue supporting scleroderma research throughout her life.

Furthermore, Rebecca would encourage others to honor and/or remember their loved ones in a meaningful way, such as this. “I think that Aunt Vicki would have been proud of me,” she said. “By organizing this fundraiser, I was able to honor my aunt’s life and bring smiles to the faces of those who knew her.”

If you would like to learn more about how you can support the Scleroderma Center, please contact Gary Dubin at 412-647-9113 or dgary@pmhsf.org.

Looking for Subjects: Clinical Trials in Scleroderma

As many of you know, there are no FDA-approved medications for the treatment of scleroderma or Raynaud phenomenon. This is becoming an increasingly difficult problem for scleroderma and other patients with rare diseases, as health insurances are now sometimes refusing to pay for any medication that is not FDA-approved for a particular disease.

In recent years our understanding of the pathogenesis of scleroderma, and potential drug targets to modify disease has increased. As a result, this is an exciting time in scleroderma research, as there are several clinical trials for new drugs on the horizon. Clinical trials rely on successful patient recruitment of a specific number of individuals to be able to answer the question whether or not a drug is both safe and beneficial. In order to advance the field of scleroderma and eventually to have approved therapies, patient participation in clinical trials is crucial.

Our Scleroderma Center is committed to participating in clinical trials. We currently have
four actively recruiting drug trials, which are described below. We are most excited about our own trial, which is detailed on the front page.

In the next six months, we will enter 3 additional trials, which will be described in our next newsletter. We hope that if you are eligible that you will consider participating. We will be happy to speak with you to answer any questions you may have. If you are interested or know someone who may be interested and possibly eligible, please contact one of our scleroderma research coordinators, Dana Ivanco at des2@pitt.edu or Maureen Laffoon at lafoonm@pitt.edu.

TAMER
See the front page of the newsletter for information about this clinical trial.

RAYVAS
This study examines the safety and effectiveness of a medication called alprostadil for Raynaud symptoms and blood flow of the hands in patients with scleroderma. Alprostadil is a prostaglandin, which acts to open blood vessels (a vasodilator). It has been approved in an injection form for erectile dysfunction in the US since 1995. In this study it is applied as a cream placed on the fingers of one hand. Patients will be seen twice. On one visit they will have cream containing the active drug placed on their hand and then have their blood flow response measured. On another visit they will receive the cream without the drug (placebo) followed again by blood flow monitoring. All scleroderma patients with moderately severe Raynaud symptoms are eligible for this study.

RITUXIMAB
This study evaluates the safety and tolerability of rituximab (Rituxan) for the treatment of SSc-PAH, while looking at the drug’s effect on PAH. We want to learn if treatment with rituximab results in improvement in SSc-PAH. Rituxan is an immune suppressing drug currently used by hematologists for certain malignancies such as lymphoma. It is also approved for use in rheumatoid arthritis. Rituxan temporarily eliminates B cells from the blood stream. These cells participate in immune responses and may be responsible for some types of immune injury to tissues in patients with rheumatoid arthritis, lupus, and other related diseases, including scleroderma. It is given by vein twice, two weeks apart at the beginning of the study, which should last for 6-12 months. This study is recruiting scleroderma patients who have confirmed pulmonary arterial hypertension (PAH or high blood pressure in the lungs) for less than 3 years, regardless of how much skin thickening they have. Half of the patients will receive Rituxan and half placebo. A right heart catheterization both before the study (to determine eligibility) and after 6 months on treatment (or placebo) is required. Other PAH medications can be continued throughout the study. Patients will be followed for 1 year or until the B cells in their blood have returned.
We would like to thank the following donors for their support of scleroderma research:

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