SICKLE CELL DISEASE
CONTINUING EDUCATION OPPORTUNITY

Save the Date

Practical Issues IX: Bringing Hope to
Healthcare in Sickle Cell Disease

April 25, 2009 • 8:15 am - 1 pm
Registration begins at 7:45 am

Conference Center (Richards Room)
University of South Alabama
Medical Center
2nd floor

For additional information call (251) 470-5893

University of South Alabama
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Sickle Cell Today
USA Comprehensive Sickle Cell Center

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Table of Contents

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Blood Transfusion Therapy

Every 3 seconds, someone needs blood. One out of every seven people entering a hospital needs blood. This includes patients with sickle cell anemia, cancer, accident victims, surgery patients, premature babies and bleeding disorder patients. This results in more than 4.5 million patients who need blood transfusions each year in the United States and Canada. From October 2007 to September 2008, USA Children's and Women's Hospital transfused 2346 units of blood and USA Medical Center transfused 6606 units. The demand for blood can be great leading to shortages of all blood types especially during the summer and winter holidays. If only one more percent of all Americans would give blood, shortages would disappear for the foreseeable future.

Blood transfusion is an important therapy for sickle cell disease (SCD). Although there are many SCD patients who are relatively asymptomatic and do not need transfusion, for many it can prevent organ damage and save lives. Patients who develop severe episodes of worsening anemia benefit from transfusions. The most common causes of these episodes are acute splenic sequestration crisis and aplastic crisis secondary to parvovirus infection. The leading causes of death in SCD such as acute chest syndrome, stroke, sepsis and acute multiorgan failure require transfusions as part of their management. There is good evidence to recommend that SCD patients be transfused before major surgery. In addition, transfusions are used in pregnancy with complications of SCD and in priapism unresponsive to other treatments.

Chronic transfusion therapy is indicated to avoid potentially serious and life-threatening medical complications and involves SCD patients receiving transfusions every 3 to 5 weeks for the rest of their lives. Approximately 10% of SCD patients have strokes and the highest risk is between the ages of 2 to 16 years. Without transfusion, up to 80% of these patients will have recurrent strokes. Since the 1990s, we have been able to identify children who are at risk for stroke with transcranial doppler ultrasonography. Once these children are identified, chronic transfusion can prevent the first stroke from ever occurring. Chronic transfusion therapy may be warranted for chronic debilitating pain, pulmonary hypertension, acute chest syndrome and anemia associated with chronic renal failure.

While transfusion can improve quality of life and longevity for patients with SCD, it is not without complications. It is important to note that there are racial and ethnic differences in blood type and composition. Everyone carries substances on their red blood cells called antigens which determine blood type. All blood types are inherited and therefore certain combinations of antigens are more common in specific ethnic and racial groups. During transfusion, if a person is exposed to blood group antigens different from their own, an antibody is developed. Antibodies are proteins that attack and destroy a foreign substance. A person receiving repeated blood transfusions may develop multiple antibodies. This process is called alloimmunization and makes repeated transfusion more difficult or even impossible. This occurs in 18 to 36% of patients with SCD patients on chronic transfusion.

With this high rate of alloimmunization in SCD, the Comprehensive Sickle Cell Center urges more African-Americans to donate blood. It's about one hour of your time. It's about life.

Felicia L. Wilson, M.D.
Associate Professor of Pediatrics
Director, Division of Hematology/Oncology

UNIVERSITY OF SOUTH ALABAMA MEDICAL CENTER BLOOD BANK

The USAMC Blood Bank has an important role in the care of adult sickle cell patients in this area. This is written to share with the readers some information about the part this department plays in the care of this special group of patients who come to USAMC for care. Many sickle cell patients are transfusion-dependent throughout their lives, requiring transfusion as a part of their overall care management.

Ordinarily, blood for patients is matched to the patient depending on the patient's blood group (A, B, AB, or O) and the Rh type (Positive or Negative). However, because sickle cell patients often receive multiple transfusions during a lifetime, units that are provided for many of our sickle cell patients are further "biologically" matched to the patient's particular profile to reduce the risk of possible reactions or further transfusion complications. Because the Blood Bank at USAMC does this extended matching, the staff of the blood bank screens a large number of units of blood, as they come into inventory. As the units of blood, suitable for our sickle cell patients are identified, they are kept in a special location in the blood bank, so that they are ready when our sickle cell patients need them. The average number of biologically-matched units of packed red blood cells transfused monthly in our adult sickle cell clients is ~ 30 units per month.

The units of blood that best match our sickle cell patients is generally easier to locate among blood donors who are of African descent. Our primary blood supplier is LifeSouth Community Blood Centers, so we encourage donors to participate in providing for the blood needs of the sickle cell patient by donating through LifeSouth. Appointments to donate or to schedule a blood drive can be made at 1-888-795-2707 or 967 Hillcrest Ave, Mobile, AL 36695. Some questions that potential donors often ask are, "I have sickle cell trait. Can I donate?" And, "I have high blood pressure. Can I donate?" The answers are "yes" and "yes." In an otherwise healthy individual, who meets all other criteria for blood donation, and everything is OK on the mini-physical on the day of donation, may give blood.

Although the sickle cell patients are a unique group of patients served by the USAMC Blood Bank, the blood bank provides service to a large number of other patients. Many of the patients transfused at USAMC are the victims of traumatic injuries such as motor vehicle accidents, gunshot wounds, or burns. Some are cancer patients and some are patients having a variety of surgeries. In serving these populations of patients, the USAMC blood bank transfuses an average of over 500 units of Red Blood Cells per month. Since the need for blood is so great in our community, it is important for the able-bodied among us to do our part in providing this valuable resource.

The Blood Bank is accredited by the College of American Pathologists and the AABB (formerly American Association of Blood Banks).

Lynn A. Andrews, PhD, CLS (NCA)
Blood Bank Supervisor
USAMC Blood Bank

FROM THE DIRECTOR'S DESK

Dr. Bantval Surendra Baliga's Retirement

From a premier educational institute in India, Indian Institute of Science, Bangalore, to Massachusetts Institute of Technology, Cambridge, Massachusetts as a Senior Research Associate in the Department of Nutrition and Food Science, came Bantval Surendra Baliga, PhD in 1978 to the University of South Alabama Department of Pediatrics as an Associate Professor. Dr. Baliga remained on the faculty in the Department of Pediatrics from 1978 to his retirement in 2008. He joined the University of South Alabama Comprehensive Sickle Cell Center as an Associate Scientist in 1989 and remained a scientist in the Center until his retirement in 2008. He has provided 30 years of service to the University of South Alabama and will be missed as he retires to his life fulfilling his commitment as a father and grandfather and as an adjunct Professor helping in research projects in the basic science departments. During his tenure in academic life, he has authored 93 peer reviewed publications and 8 book chapters. He has been a co-investigator on 7 NIH sponsored grants, mentored 9 post doctoral trainees and holds memberships in the American Society for Biochemistry/Molecular Biology and the American Institute for Nutrition. In 2008, Dr. Baliga was awarded the rank of Professor at the University of South Alabama. As Director of the University of South Alabama Comprehensive Sickle Cell Center, I would like to extend a heartfelt thank you from the Center, the Center's faculty and staff. We would like to congratulate you for all of your contributions in the scientific and academic world. Again, many, many thanks.

Johnson Haynes, Jr., MD
Director, USA Comprehensive Sickle Cell Center

Left to right Stephanie Durggin, R.N, Dr. Felicia Wilson, Dr. Surendra Baliga, Ardie Pack-Mabien, C.R.N.P., Dr. Aarata Rao.

SEPTEMBER 20, 2008 BLOOD DRIVE FOLLOW-UP

Carolyn Williams, R.N. and Mattie Williams, R.N.

The 10th Annual Sickle Cell Center Blood Drive sponsored by Alpha Phi Alpha Fraternity, Inc., Beta Omicron Lambda Chapter, USA Comprehensive Sickle Cell Center, Sickle Cell Disease Association of America, Mobile Chapter, and Franklin Primary Health Center was held Saturday, September 20, 2008 at the Franklin Primary Health Center. The goal was to collect 49 units of blood. The goal was exceeded for the third consecutive year. **Sixty-seven individuals presented as possible blood donors and 54 units of blood were collected**. There were a total of 21 first time donors. Each unit donated was separated into red cells and plasma which will possibly touch 108 individuals, their families, and friends. Special recognition to Delta Sigma Theta Sorority Iota Nu Chapter and Triple B Motorcycle Club for recruiting the most donors. Event sponsors would also like to recognize the local nurses, and the following organizations: Alpha Kappa Alpha, Chi Eta Phi, Sigma Gamma Rho, Omega Psi Phi, and the Classic Corvette Club, who came in support of the annual blood drive.

This blood drive has become a gathering of old friends with a common interest and desire to support the Mobile community. Thank you for your continuous dedication and support in our efforts to save lives. It takes a village to make a community successful and prosperous.

Please remember, September is "National Sickle Cell Awareness Month". The 2009 Blood Drive is tentatively scheduled for Saturday, September 19, 2009 at Franklin Primary Health Center at 1303 MLK Drive from 9 am until 1 pm. Please come and participate in the Blood Drive by "Giving the Gift of Life Thru Blood Donation".

Ardie Pack-Mabien, CRNP

SOCIAL WORKER'S CORNER

Many of you may not be aware of the Sickle Cell Disease Association of American, Mobile Chapter's (SCDAA-MC) role in assisting clients with payment for their prescriptions. The Association has a contract in place with a local pharmacy in an effort to help supplement the cost of prescribed medications for individuals diagnosed with sickle cell disease. The program provides assistance to clients that exhibit extreme hardship when purchasing their prescribed medications. For our intent and purposes, hardships may be defined as an individual who presents as a self-pay and has little or no prescription benefits in place. The program is also designed to aid individuals who have exhausted their monthly prescription limitations due to extenuating circumstances. And finally, individuals that incur costly prescription co-payments may be eligible for assistance as well. All requests for assistance must be authorized. For more information on this program or any other related services, please contact me at (251) 432-0301. Until next time, so long from the Social Worker's Corner.

Adrienne Petite, LBSW
SCDAA-MC