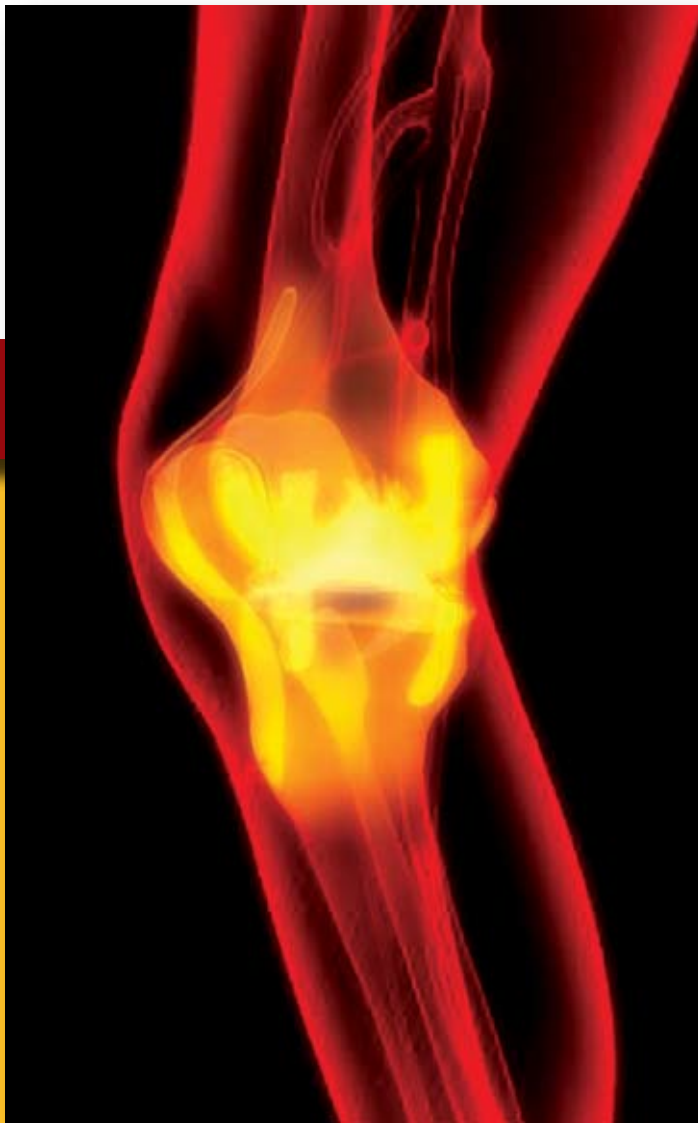


Your Partner in Good Health



Seton
Family of Hospitals

IN THIS ISSUE

Computer-Assisted Orthopaedic Surgery	A2
Neonatal Air Transport	A4
Bottom Up	A5
Continuing Medical Education	A7



Dr. Jack Seaquist (right) demonstrates Medtronic Navigation, which can offer faster recovery times and improved long-term outcomes for patients undergoing total joint replacements.

Next Generation of Computer- Assisted Surgery Transforms Joint Replacements

The Seton Family of Hospitals continuously seeks new technologies to advance patient care. Because of this commitment, Seton Medical Center Austin has been selected as one of only 15 training sites in the country – and the only one in Central Texas – for a new method of electromagnetic (EM) computer-assisted surgery using Medtronic Navigation.

Obtaining correct alignment, size and soft tissue balance is crucial in achieving maximum

results in total joint arthroplasty. With Medtronic Navigation, the computer helps realize these goals by displaying immediate intraoperative data that shows where the anatomy is, where the cuts should be made and when the joint is correctly balanced.

Similar to a global positioning system, Medtronic Navigation uses electromagnetic tracking to visually guide orthopaedic surgeons through complicated operative procedures such as knee replacement surgery. How

does it work? Small trackers are affixed to the patient's anatomy below the skin to track location. A hand-held localizer generates an electromagnetic field – and position sensors on smart instruments localize within the magnetic field in relation to landmarks on the patient. Real-time, digital feedback is provided on the angle and resection depth for the femoral and tibial cuts, and correct sizing, and measurements are provided on soft-tissue balancing and range of motion – both pre- and post-implementation.

As a result, patients undergoing EM computer-assisted total joint replacements benefit from less-invasive surgeries, smaller incisions, faster recovery times and improved long-term outcomes.

The technique is now available for total knee replacements, but future applications could include

hip replacements and surgeries for bone trauma and ACL injuries. Currently, candidates include anyone who requires a total knee replacement. However, Medtronic Navigation especially benefits younger, active patients who will put more wear on the joint during a longer period of time.

Accuracy is key to the surgery's success. All studies comparing the accuracy of EM computer-assisted surgery to that of the traditional

"human eye" approach show the results of EM computer-assisted surgery to be more accurate. The likelihood of a prosthesis providing good pain relief, motion and longevity is increased by correct alignment.

The computer increases the chance that the surgical result will be within the narrow limits that have been shown to be optimal. With computer-assisted surgery, surgeons can get within zero to two degrees of accuracy – compared to three to five with the human eye. Each improved degree of accuracy can affect patient range of motion and longevity of the implant. About 95 percent of computer-assisted cases fall within the optimal cut alignment compared to only 75 percent without it. If the position is a few degrees off, the implant may wear more quickly, which could result in additional surgeries.

Following a computer-assisted surgery, some patients are able to return to work in about one week and can resume recreational

activities within two months. From the surgeon's perspective, the technique is somewhat complicated which makes for a slow learning curve. The procedure takes about 20 minutes longer to complete than traditional surgery and requires the assistance of specialty-trained personnel.

Each year, more than 400,000 knees are replaced in the United States – and another 29,000 knees are surgically revised. EM computer-assisted surgery is still in its infancy, yet to date,

approximately 70 total knee replacements have been performed at Seton alone with a high degree of success.

The future of navigation-assisted joint replacement continues to evolve and improve – and the Center of Excellence for EM Navigation Surgery at Seton will help develop this technique and continue to be in the forefront of clinical care, teaching and science for the benefit of the orthopaedic patient.

Each year, more than 400,000 knees are replaced in the United States – and another 29,000 knees are surgically revised. EM computer-assisted surgery is still in its infancy, yet to date approximately 70 total knee replacements have been performed at Seton alone with a high degree of success.



For More Information

contact Dr. Jack Seaquist, orthopaedic surgeon with Medical Park Orthopaedic Clinic Associated, at (512) 454-4561.

Seton's Neonatal Transport Team *Takes to the Air*

By Dr. John Loyd, Neonatology

On May 15, the Seton Family of Hospitals Neonatal Transport Team joined with Travis County's emergency helicopter life support and rescue team – STAR Flight – to create the first 24-hour neonatal air transport service in Central Texas. Three days later, the team flew a premature infant with congenital heart disease from Metroplex Hospital in Killeen to the Children's Hospital of Austin to receive life saving medical care. During the first month of operation, a total of six neonates were transported by air, with the smallest patient weighing only 1.5 lbs. All transports have gone smoothly and have united these critically ill neonates with the advanced medical services and personnel available at the Children's Hospital of Austin and Seton Medical Center Austin in about one-third the time it would have taken by ground.

While these were the first neonatal transports done by air, the team is anything but inexperienced. The team is made up of registered nurses and respiratory therapists under the direction of a neonatologist (a Pediatric Neonatal Critical Care Physician). Each member of this group has specialized in the care of one of the most unique populations in all of medicine, the critically ill neonate. Neonatal critical care services originated in Austin with the recruitment of Dr. Jacob Kay from Dallas by Sister Mary Rose McPhee and Dr. Karen Teel. They established the Neonatal Intensive Care Unit at Seton Medical Center Austin in 1972. Seven years later, the recently deceased Dr. George Sharpe was recruited from Oklahoma to start the Neonatal Center at Brackenridge, now part of the Children's Hospital of Austin. The same year that Dr. Sharpe



Members of Seton's neonatal transport team meet with Austin-Travis County EMS STAR Flight District Commander Paul Kuper (center) to prepare for neonatal air transport service.

arrived in Austin, Seton began the first 24-hour neonatal ground transport service in Central Texas.

The purpose of the neonatal transport team is to stabilize and transport infants with illnesses that lie beyond the institutional capabilities of hospitals in the surrounding communities to the Neonatal Intensive Care Units of the Seton Family of Hospitals. (These facilities will soon include the Dell Children's Hospital of Central Texas, which is scheduled to open June 2007). The team is comprised of 19 highly trained nurses and respiratory therapists with as much transport and

neonatal critical care experience as any such group in the country. The nurses on the team are all Neonatal Resuscitation Program instructors with an average of almost 25 years of neonatal critical care and more than 10 years of neonatal transport experience. The respiratory therapists average more than 15 years of neonatal critical care and transport experience. The nurses and respiratory therapists are trained and experienced in advanced life support of neonates,

CONTINUED ON PAGE A6

For More Information

about the transport team or other Perinatal services available from the Seton Family of Hospitals, please contact Nancy Sheppard at nsheppard@seton.org. For more information about STAR Flight, please contact Casey Ping at casey.ping@ci.austin.tx.us.



Bottom Up

*For more information, contact
William M. Loving, MD,
at (512) 451-1473.
Dr. Loving is board certified
in Psychiatry and certified
by the American Society
of Addiction Medicine.
He is medical director
of the Seton Shoal Creek Hospital
Chemical Dependency Unit.*

It is said “that alcoholics and addicts don’t get help until they hit bottom.” Families of these patients feel very helpless and suffer a great deal while they watch their loved ones sink to this bottom. It’s not so agonizing for a “high bottom” alcoholic or addict because something as small as a cross word from a spouse will drive them to seek help or treatment. “Low bottom” patients, however, may lose virtually everything in their lives and end up literally eating out of dumpsters before they seek help. Doctors have a valuable opportunity to help by bringing the bottom up to their patients so that they will get help before they have lost everything.

Did you know that alcohol and drug problems are involved in more than 60 percent of child abuse cases, more than 60 percent of fatal car accidents and more than 50 percent of drownings? It also plays a role in more than 50 percent of family violence cases as well as many medical problems and ER visits. And 33 percent of fatally injured bicyclists have elevated BAL.

The problem is so big that we cannot see it, and because of that, under-react to it. The use of alcohol and drugs is quite engrained in culture and goes along with a natural human desire to have a shortcut to happiness; have control over feelings; and have a method to shut out unpleasant and difficult parts of reality.

The use of chemicals (especially alcohol) has been with man for centuries and probably started the first time a caveman tasted the sweet smelling liquid left behind from a bunch of fermented grapes he had left on the ground. Alcohol and drugs are here to stay, as are the problems that directly affect almost 20 percent of the population. These people get out of control with one of the chemicals that make them “high” or change the way they feel. Tolerance and dependence

sneak up on them, compulsive use continues despite harmful consequences and attempts to quit become futile.

No one uses these substances to get DWIs, act like a fool or cause problems at home or on the job. Substance abuse is a self-induced central nervous system disorder, but over time, the “self-induced” part becomes less and less volitional. The end organ for drugs that make a person “high” is the brain, and so judgment and insight are significantly affected and the patients become unable to identify their problem even though it may be obvious to everyone around them.

The most effective way to treat the alcoholic or addict is to view the problem as a chronic disease, not as a willpower or moral problem. These patients become truly out of control with their drug of choice to the point that willpower cannot overcome the problem.

Research shows that the etiology is multi-factorial, but genetic and biological factors are a significant part of the problem. Strong evidence shows that 18-20 percent of the population directly affected have a physiologically different reaction to alcohol and addictive drugs than the average person. They are more strongly affected by the drugs (get “higher”) and are more likely to become dependent. These people have a type of “allergy” and the best treatment is abstinence.

Chemically dependent people need treatment similar to treatment for any chronic or relapsing disease. As in any chronic disease, the patient has difficulty accepting the diagnosis and tries to deny and rationalize away the problem. Education is fundamental to the treatment because there is no cure and patients must

CONTINUED ON PAGE A6

Bottom Up

CONTINUED FROM PAGE A5

be taught to manage their illnesses. Fortunately Alcoholics Anonymous and Narcotics Anonymous (AA and NA) are active, effective and free groups that provide not only support but also a step-wise plan of recovery. The only reason these 12-step programs have survived since inception at around 1937 is because they are helpful and work. No one profits financially from AA; there are no marketing directors or missionaries – and yet these programs have spread all across the world with Austin alone having more than 40 meeting sites.

In the early stages of recovery, the patients feel and look mentally disturbed to some degree, and about 30-40 percent of the chemically dependent patients have true psychiatric problems (depression or anxiety disorders primarily). Some patients will need a psychiatric evaluation and some will need medical care. Secondary medical problems such as pancreatitis, liver disease, HIV and many other physical problems are common and need to be addressed. Doctors in all specialties have some patients with drug and alcohol problems causing or complicating the disease for which the patient is coming to the doctor's office.

What can the doctor do if a chemical dependency problem is suspected? The doctor should discuss these concerns with the patient in a direct and non-judgmental way. For example, an internist knows his patient drinks and then finds on lab work that the MCV and GGT are elevated, plus the physical exam shows slight liver enlargement and elevated blood pressure. This patient has an alcohol problem. Rather than minimize

the mildly elevated GGT and physical signs, the doctor should take the opportunity to talk to the patient about these abnormalities in the most negative of terms. It even helps to show the patient the lab values and to really emphasize the abnormalities and the dangers. This is the time when the doctor needs to help the patient be appropriately fearful of the true dangers

to come, such as cirrhosis, if they do not stop drinking. This is the meaning of "bringing the bottom up to the patient." The doctor has a golden opportunity to help the patient before sinking to a "low bottom," and should use this opportunity and its power in the patient's best interest by confronting the problem and bringing the bottom up to the patient.

Neonatal Transport

CONTINUED FROM PAGE A4

including airway management and central line placement.

Always seeking to provide the best and most comprehensive services for the infants of Central Texas, Seton Neonatal Services began searching for an air transport program to work with the Neonatal Transport Team to decrease the response time in support of the most critically ill infants. It did not take much investigation to realize that the professionals at STAR Flight provided a perfect match.

STAR (Shock Trauma Air Rescue) Flight began operation in 1985 and is funded by Travis County. They are one of the most versatile emergency flight operations in the country, providing rapid response life support and transport, helicopter rescue, land/water rescue and wilderness search and rescue to the residents of Travis and surrounding counties. This year, they upgraded their fleet with a helicopter that is ideal for neonatal transport (EC 145) and have added night goggle capabilities to their already impressive list of services. Jim Allday, STAR Flight

liaison with the Neonatal Transport Team, Seton sees the relationship with Seton and the Daughters of Charity to provide neonatal transport as further evidence of his program's commitment "to putting patients first in our desire to be a premier air medical service."

The process of joining these two exceptional medical teams on this initiative took more than a year of planning and cross training for both staffs. This laborious process was spearheaded by Nancy Sheppard, Seton's perinatal outreach coordinator, and is the product of both organizations' commitment to excellence and the provision of the best possible care for all of their patients. No patients in all of medicine are more vulnerable than 1-lb. babies. Now, those babies who are born in the surrounding counties without advanced neonatal services will be united with those specialized therapies and clinicians here in Austin in the most rapid manner possible.

CONTINUING MEDICAL EDUCATION

The following activities are offered throughout the Seton Family of Hospitals.

***Brackenridge Adult Cancer Management Conference**

Brackenridge Hospital
9th Floor Conference Room
4th Wednesday, 7 - 8 a.m.

***Brain & Spine Clinical Grand Rounds**

Brackenridge Hospital
3rd Floor Boardroom
4th Friday, 7 - 8 a.m.

***Breast Pre-treatment Planning Conference**

Brackenridge Hospital
9th Floor Conference Room
1st Monday, 12:15 - 1:15 p.m.

***Chest Conference**

Seton Medical Center
Front half of McFadden Auditorium
1st Wednesday, noon - 1 p.m.

Internal Medicine Grand Rounds

Brackenridge Hospital
The Annex Classroom
1st and 3rd Thursday, 12:30 - 1:30 p.m.

Neonatal Grand Rounds

Location alternates between Brackenridge/Children's Hospital of Austin and Seton Medical Center
3rd Tuesday every other month beginning in January
Noon - 2 p.m.

OB/GYN Grand Rounds

Seton Medical Center
Network Boardroom
3rd Monday every other month beginning in February
12:15 - 1 p.m.

***Pediatric Cancer Management Conference**

Children's Hospital of Austin
Lower Level ABC Conference Room
3rd Tuesday, 12:15 - 1:15 p.m.

***Pediatric Cardiac Conference**

Brackenridge Hospital
Emergency Department Conference Room
Every Friday, 7 - 8 a.m.

Pediatric Grand Rounds

Children's Hospital of Austin
Lower Level ABC Conference Room
2nd and 3rd Thursday, 12:15 - 1:15 p.m.



Seton Medical Center Grand Rounds

Seton Medical Center
Front half of McFadden Auditorium
Every Thursday, except 2nd Thursday
7 - 8 a.m.

***Seton Medical Center Adult Cancer Management Conference**

Seton Medical Center
Front half of McFadden Auditorium
2nd Thursday, 7 - 8 a.m.

***GYN Cancer Management Conference**

Seton Medical Center
Front half of McFadden Auditorium
Quarterly (Jan, Apr, July, Oct), 1st Wednesday, 7 - 8 a.m.

***Seton Northwest Adult Cancer Management Conference**

Seton Northwest
Private Dining Room 2
3rd Thursday, 12:15 - 1:15 p.m.

***Stroke Case Conference**

Location varies: Brackenridge Hospital - 2 North Conference Room, or Seton Medical Center - Support Services Conference Room
3rd Thursday every other month beginning in February
Noon - 1 p.m.

***Transplant Board Meetings**

Seton Medical Center Boardroom
2 Wednesdays/month, date varies
7 - 8 a.m.

***Trauma Rounds**

Brackenridge Hospital
9th Floor Conference Room
Every Thursday, except 3rd Thursday
6:45 - 7:45 a.m.

Q&As:

Are the programs listed above open to all physicians?

Activities are open to all Seton medical staff. An activity with an asterisk is closed to non-Seton medical staff and all others.

How do I obtain my CME report?

Contact Medical Staff Services at **(512) 324-1000, ext. 14621**.

Is there a fee for CME reports?

There is no fee for members of Seton's Medical Staff. For all others, there is a \$25 fee.

Is there a registration fee for the programs listed above?

The activities listed above do not have a fee. The majority of special conferences charge a fee. These conferences can be located on **DoctorLink at www.doctors.seton.org**.

Could I submit topics for an activity or present an activity myself?

Yes. If you are interested in a specific topic, would like to present at one of the activities or for more information regarding application process, please contact the CME office at **(512) 324-3023**.

Get CME Credits for Your Activity

Does Seton participate in Joint Sponsorships?

Yes. Please call **(512) 324-3023** for more information about applying for a Joint Sponsorship activity.

For more information regarding application process, please contact the CME office at (512) 324-3023 or visit DoctorLink at www.doctors.seton.org.

Current listings for each open activity can be found on **DoctorLink at www.doctors.seton.org**, or in the Seton Family of Hospitals *Medical Staff Newsletter*. For more information, please contact **Casey Harrison at (512) 324-3023**.