Nonsurgical Therapy Highly Effective for Pain and Infertility Caused by Enlarged Veins in Men
918-Patient Study Shows Interventional Radiology Treatment Is Safe and Effective with Lowest Recurrence Rate

SEATTLE, Washington (March 5, 2007) – Research presented today at the Society of Interventional Radiology’s 32nd Annual Scientific Meeting shows that nonsurgical embolization is ninety-eight percent effective, offers a lower recurrence rate and much quicker recovery than surgery for the treatment of varicoceles (varicose veins in the testicle and scrotum). This condition in men can cause pain, testicular atrophy or fertility problems—and can greatly impact quality of life. “Varicoceles are a major, but underdiagnosed cause of infertility—it is important for these patients to have an early diagnosis and quick management,” said Maurizio Grosso, M.D., interventional radiologist and study author. Statistical analysis of the data from spermiograms showed constant improvement in sperm count, motility, structure and form.

In the research presented today, a liquid alcohol (hydroxypolyethoxydocanol) was used in the procedure to sclerose, or close off, the faulty veins so they can no longer enlarge with blood, alleviating the symptoms. After the outpatient procedure, each patient stayed six hours at the hospital before being discharged. There is an average of one to two days for complete recovery, including resuming physical activity, with embolization. Surgery has a two to three weeks recovery time, with another two to three weeks until the patient can return to full exercise, such as jogging. The interventional radiology treatment is much less painful and does not have the risks associated with general anesthesia.

“This interventional radiology procedure does not require hospitalization or general anesthesia, results are comparable or better than surgery and the recurrence rate is lower,” said Grosso. “The male fertility center at St. Anna Hospital in Turin, which is the largest obstetric and gynecologic hospital in Italy, has recommended the interventional radiology treatment to all varicocele patients for about nine years. Hopefully this research will make American men more aware of their treatment options.” Of the 918 patients treated, only 19 had to be retreated during the follow-up period (1999-2006). Fourteen of those who received further treatment required it in the first six months following the procedure. Varicoceles sometimes recur due to the growth of new collateral veins surrounding the treated vessel, or due to incomplete treatment for technical reasons.

This study out of Cuneo, Italy, was conducted over seven years with 918 male patients ranging in age from nine to 65 years-old. During the procedure, the interventional
radiologist made a nick in the skin to access the femoral vein, then used X-ray imaging to
guide a catheter up the femoral vein into the faulty vein, introducing the alcohol to seal
the vein shut and allow healthy veins to take over.

Abstract 303 is available on www.SIRweb.org.

About Varicoceles
A varicocele is a varicose vein of the testicle and scrotum that may cause pain, testicular
atrophy or fertility problems. Veins contain one-way valves that work to allow blood to
flow from the testicles and scrotum back to the heart. When these valves fail, the blood
pools and enlarges the veins around the testicle in the scrotum to cause a varicocele.
Open surgical ligation, performed by a urologist, is the most common treatment for
symptomatic varicoceles in the U.S. A significant risk in surgery is a hydrocele—the
collection of watery fluid around the testicle—which can develop after surgical ligation
due to occlusion of lymphatic drainage. This complication is not a risk with the
interventional radiology treatment. Varicocele embolization, a nonsurgical treatment
performed by an interventional radiologist, is a highly effective, widely available
technique to treat symptomatic varicoceles, yet is greatly underutilized in the United
States.

Prevalence
- Approximately 10 percent of all men have varicoceles—among infertile couples, the
  incidence of varicoceles increases to 30 percent
- Highest occurrence in men aged 15-35
- As many as 70-80,000 men in America may undergo surgical correction of varicocele
  annually

About the Technique
Embolization is a nonsurgical, outpatient treatment performed by an interventional
radiologist using imaging to guide catheters or other instruments inside the body.
Through mild IV sedation and local anesthesia, patients are relaxed and pain-free during
the procedure.

For the procedure, an interventional radiologist makes a tiny nick in the skin at the groin
using local anesthesia, through which a thin catheter (much like a piece of spaghetti) is
passed into the femoral vein, directly to the testicular vein. The physician then injects
contrast dye to provide direct visualization of the veins so he or she can map out exactly
where the problem is and where to embolize, or block, the vein. By using coils, balloons,
particles or sclerosing agent, the interventional radiologist blocks the blood flow in the
vein, which reduces pressure on the varicocele. By embolizing the vein, blood flow is
redirected to other healthy pathways. Essentially, the incompetent vein is “shut off”
internally by preventing blood flow, accomplishing what the urologist does, but without
surgery.

About the Society of Interventional Radiology
Interventional radiologists are board-certified physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-rays, MRI and other imaging to advance a catheter in the body, usually in an artery, to treat at the source of the disease nonsurgically. As the inventors of peripheral angioplasty and the catheter-delivered stent, interventional radiologists pioneered minimally invasive modern medicine, and provide treatments that offer less risk, less pain and less recovery time compared to open surgery. More information can be found at www.SIRweb.org.

Local interviews, medical illustrations and broadcast quality video footage are available by contacting SIR’s Communications Department at Emily@SIRweb.org or (703) 691-1805.

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