# SOUTHWESTERN NEWS

Contact: Emily Martinez
(214) 648-3404

## NEW COILS OFFER ALTERNATIVE TREATMENT FOR ANEURYSM PATIENTS

DALLAS — September 5, 1995 — Platinum microcoils are being employed by physicians at UT Southwestern Medical Center at Dallas as part of a new method for treating patients with ruptured brain aneurysms.

The procedure may offer hope to patients whose lives are threatened by the ruptures but who are not suitable candidates for surgery. UT Southwestern's team of neuroradiologists and neurosurgeons are eager to "get the word out" about the procedure to physicians and the public, said Dr. Phillip Purdy, vice chairman of radiology.

UT Southwestern is one of only two medical centers in the state performing this experimental procedure. "We feel there may be people lying in hospital beds, thinking they have no real chance, and we have something that could make a difference," Purdy said.

UT Southwestern is conducting its own research project involving the coils as well as participating in a nationwide trial. Early results indicate the platinum coils may be effective as a temporary or permanent approach for obliterating certain cerebral aneurysms. Patients who are too ill to tolerate surgery or who have several lesions may be best served by this new technique, Purdy said.

The procedure involves the placement of detachable coils via microcatheter inside the aneurysm. The intent is to deposit enough wire inside the aneurysm to halt blood flow by filling the aneurysm sac and encouraging clot formation. Aneurysms are sacs that are formed when part of the weakened wall of the artery or vein becomes enlarged. The coil itself is a piece of platinum wound into a springlike configuration that is from .010 to .018 inches in diameter. Platinum is used because it doesn't rust and is pliable enough to allow relatively easy navigation through blood vessels.

"Tremendous advances in technology have been made to enable this kind of work," Purdy said. "We are just starting to scratch the surface with these coils, too. They're going to get better and better."

Besides Purdy, the other faculty members involved in the research are: Drs. Duke Samson, chairman of neurological surgery; Michael Horowitz, instructor in radiology and

(MORE)

neurological surgery; and Tom Kopitnik, assistant professor of neurological surgery.

The procedure is performed while the patient is under light anesthesia. A microcatheter is inserted in the leg and is wound through the arteries to the brain. X-rays are used to help doctors guide the catheter into the aneurysm. When it is properly positioned, the coil is released inside and an electrical current is used to destroy the end of the wire that connects with the coil, setting the coil free from the wire.

The neurosurgeon takes responsibility for patients after they awake. They monitor the patient's condition in the hospital during recovery and drain any fluids that develop in the brain. If the aneurysm is not obliterated using the coils, the neurosurgeon also may be called upon to operate, placing a clip on the aneurysm to prevent it from hemorrhaging, the traditional method of treatment.

Purdy says that clip surgery has been a highly effective method for dealing with aneurysms, but when physicians need to find a less invasive method of treatment, the coils offer an alternative. The surgical clip method is still the "gold standard" of treatment, according to Purdy, but the coil approach compares favorably to surgery in some circumstances. For example, the aneurysm sometimes is located in a part of the brain that is inaccessible to surgeons unless another portion of the brain is removed.

UT Southwestern's neurosurgeons operate on about 200 aneurysm patients annually, Samson said. Although their rate of success is outstanding, he is encouraged by the possibility of offering severely ill patients an option other than surgery.

"We are very hopeful that the early use of the coils will markedly improve the outlook in a very high-risk patient group," Samson said.

Of about 20 patients, three or four needed to have surgery after having the coils inserted, but the coils allowed doctors to put off the operation until the patient's overall health improved. The coil technique also has risks. As the catheter is fed through the body, it could wind up rupturing an artery or the aneurysm itself; however, UT Southwestern has had substantial success so far.

Researchers still are not sure exactly why the coils have worked so effectively in early trials. They believe it has to do with platinum's ability to induce clot formation, along with the tendency for clotting that comes from the disruption in blood flow caused by the placement of a foreign material inside the aneurysm.

###