

FROM:
Frank Chappell
Director of Medical Information
The University of Texas
Southwestern Medical School at Dallas
5323 Harry Hines Blvd.
ME 1-3220

At his desk in a downtown office building, John Jones leans back in his chair. His secretary has just come in to take some dictation. The executive starts to speak but suddenly, he can't find the right words. Surprised and bewildered, he gropes for, "Take a letter," but it comes out, " Gabe er adoiter."

Jones knows what he wants to say but it doesn't work. His speech becomes more garbled and he tries to get up, only to realize his right arm is hanging limp at his side and that his right leg won't work, dumping him back in the chair.

The secretary reaches for the phone and in a few minutes, Jones will be in an ambulance on his way to a hospital. If he is lucky, by the time he has been in the emergency room a few minutes, he will be almost completely recovered, able to talk intelligibly with the doctor who tells him he has had a mild stroke.

This is a classic example of the third greatest killer behind cancer and heart disease--an affliction against which specialists at the University of Texas Southwestern Medical School and Dallas hospitals have launched a massive, million-dollar assault.

Each year, approximately 200,000 persons in the United States suffer strokes. And at the present, there are more than two million persons now living who have disability as a result of strokes.

(more)

First add stroke

"Stroke," says Dr. William S. Fields, professor of neurology at Southwestern who is directing three major projects in the field, "is the usual lay term applied to symptoms and signs of brain injury due to interference with blood supply."

There are two major types of strokes--one in which bleeding into or around the brain results from rupture of arteries, and the second which is a result of partial or complete blockage of one or more arteries. The first kind may be a result of a defect or weakness in an artery wall and long-standing high blood pressure. The second may result from deposits of cholesterol (fatty material) and calcium inside arteries--choking down or blocking the flow of blood.

"With either of these types of stroke, there is paralysis, disturbance of communication and altered consciousness," says Dr. Fields.

The fight against stroke will be carried out on three broad fronts. The work, in fact, already has begun to the point that computers are now being used to assist physicians in decisions on whether to operate on stroke victims.

One front will be carried on through the mechanism of the Regional Medical Program for Heart Disease, Cancer and Stroke. With the idea of narrowing the information gap between university and research institutions and the practicing physician, Southwestern Medical School will cooperate with Presbyterian Hospital in Dallas in setting up a "Stroke Treatment Demonstration Unit" in the east half of the ninth floor of the hospital.

The demonstration unit, the first operational project to be funded by the Regional Medical Program in Texas, will be dedicated to the continuing education of physicians and persons in allied health professions, such as nurses, occupational and physical therapists, speech pathologists, social workers and vocational counselors.

(more)

Second add stroke

Part of the motivation is a need for follow-up treatment and rehabilitation of the stroke sufferer, according to Dr. Howard C. Coggeshall, member of the medical school faculty and director of the Regional Medical Program in Northeast Texas.

Dr. Fields is project director for the unit at Presbyterian, and heads the computerized stroke registry and stroke research program at Southwestern.

"The ultimate objective of stroke research is to determine whom among the general population is stroke prone and to develop adequate means of stroke prevention," Dr. Fields declares. "Early recognition of warning signs by the patient or his physician may, in many instances, provide clues leading to surgical correction of blockage in accessible arteries."

Most of the stroke patients who are seen by doctors already have established disability and will require the most sophisticated type of rehabilitation program, he said.

"In the immediate future, this aspect of the stroke problem must receive the greatest attention. But research programs must also be directed toward prevention of the catastrophe."

There are more than two million persons now living who have disability as a result of strokes, he said, adding "This creates a tremendous economic burden on the family and the community. With an aging population, this will undoubtedly increase."

(more)

Third add stroke

The goals for the overall program are:

1. To collect information which will assist in learning about people likely to have stroke.
2. To continue in the cooperative study to determine which categories of patients are best suited for surgical treatment.
3. Provide demonstration facilities in which physicians and allied health professionals can be trained to establish more effective programs in their local communities.

Dr. Fields directs the stroke registry in the Department of Neurology at Southwestern. This operation, begun in 1960 in Houston, was brought to Dallas by Dr. Fields last year.

This is a cooperative study in which 23 university medical centers in the United States and one in Montevideo, Uruguay, collect exhaustive records and analyses of stroke patients. Now, data on more than 8,000 patients has been put in computer storage for use in assisting physicians in classifying patients and in decisions on surgery.

The computer program already has provided valuable answers:

"We know now pretty definitely that operations on persons with recent stroke and altered consciousness may be disastrous rather than beneficial," states Dr. Fields.

The third broad area of attack is establishment of a Cerebrovascular Clinical Research Center which will involve facilities at Southwestern and Parkland Memorial Hospital.

The investigation, says Dr. Fields, will be into improved diagnostic methods in neurology and radiology.

"In radiology, one of the most important techniques in diagnosis is x-ray arteriography in which opaque material is injected into the blood to make blood vessels visible," he added.

(more)

Fourth add stroke

For the research, there is an effort to recruit additional specialized personnel, such as psychologists, for measurement of the sometimes elusive disabilities caused by stroke. This program also will involve patients at Presbyterian. In hospitals, there will be specific beds designated and supported for the research program. An on-site physician to assume day-to-day responsibilities for the demonstration unit also is sought.

Notification of a grant of \$317,000 has recently been received by Presbyterian Hospital from the U. S. Public Health Service for completion of the east wing of the ninth floor of the hospital where the stroke demonstration unit will be housed. Some details remain to be worked out on installing the unit, whose modular design has been worked out by the School of Architecture at Texas A&M University.

The National Heart Institute has just announced an additional \$320,000 to support the stroke registry for three more years. (The registry has been funded at the level of about \$100,000 a year for the past eight years.)

Finally, the National Institute of Neurological Diseases and Blindness has advanced \$400,000 as a planning grant to be used over the next three years for the cerebrovascular research effort.

This adds up to more than a million dollars in support for the Southwestern Medical School-directed effort against stroke.

It means that when the doctor places the stethoscope against Jones' neck and hears a "swish, swish" of a clogged artery instead of a good open "thump, thump," he will have the backing of the best research and methods available in making the medical decisions.