

The University of Texas Health Science Center at Dallas

Spectrum



Sherry...a medical miracle, one year later

Contents

President's Message	2
For the first time, a picture of a heart attack	3-4
Carver Clinic: community prescription for healthier kids	5-10
A medical miracle, one year later: Sherry White, burns victim	11-14
Waging war on pain	15-18
Campus recap	19

Staff:

BOB FENLEY, director of information

JOHN WEEKS, editor

BILL GRAMLEY, art director

BOB POINTER, layout

ANN HARRELL, staff writer

JILL BURNS, circulation

JOLENE GUTHRIE, JOHNIE QUALLS, staff assistants

ON THE COVER

Sherry White, who made medical history with her successful struggle to survive burns over 92 per cent of her body, cavorts in her new backyard pool that is part of continuing therapy vital for her return to a near-normal life. For an update on Sherry, one year later, see Page 11.

Color photograph is by Bob Pointer.

SPECTRUM is a publication of the Office of Medical Information of The University of Texas Health Science Center at Dallas. Permission is hereby granted to reprint any material herein, provided proper credit is given. Requests for change of address should be addressed to 5323 Harry Hines, Dallas, Texas 75235.



President's Message

As The University of Texas Health Science Center at Dallas nears successful completion of an unparalleled phase of physical growth, our institution enters another equally crucial period: one in which programs of teaching and clinical experience are expanded to keep pace with a growing student population.

Already, Southwestern Medical School students and graduates have established an enviable national record of excellence, academically and clinically. We must make certain that this high level is sustained, that quality matches quantity as the teaching load undergoes a period of dramatic growth in the years just ahead. This places a burden on all our teaching departments, which are thoroughly committed to the task of educating more students. The University of Texas System has made a commitment to provide sufficient faculty and facilities for what is the equivalent of another medical school equal in size to Southwestern as of only five years ago.

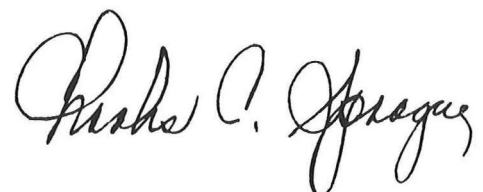
But as growing numbers of future doctors and allied health professionals reach their clinical years, the availability of teaching hospital facilities becomes an increasingly crucial factor in the total training picture. Obviously, superior classroom performance is useless without a sufficient number and variety of clinical patients to complete a rounded medical education. This places enormous importance on our institution's continued reliance on Parkland Memorial Hospital, which will remain the primary teaching facility.

As enrollment expands, our teaching programs will similarly grow in scope at Veterans Administration Hospital and the other major affiliated hospitals in Dallas, and at John Peter Smith Hospital in Fort Worth. And possible new, uncharted opportunities for clinical experience may well

develop as new means of delivering and financing health care evolve. But basically, the backbone of our enlarged clinical program will continue to be Parkland.

This fact places special emphasis on a study currently being conducted by a panel of nationally recognized consultants of the relationship between the medical school and the hospital. This study will form the basis for recommendations that a committee of Dallas leaders will make as to how the quality of the hospital's services may be improved, and how the medical school may alter its role in helping overcome problems that have arisen between the two institutions. Hopefully, the report will result in an enhanced relationship between the school and the hospital upon which it so heavily relies. If Parkland suffers significant further decline in patient population, if it shrivels ultimately in the competitive marketplace once a national health insurance system offering more options to charity patients becomes a reality, our medical teaching and related research efforts also will suffer.

We look with hope to the findings of the experts who are now reviewing this crucial institutional intermarriage, to point the way to an improved pattern of interaction that will be mutually beneficial. We stand ready to cooperate fully in implementing their recommendations. Meanwhile, we shall continue to strengthen our ties with other teaching facilities so as to insure long-term attainment of the goals set forth a number of years ago when a small, high quality but low profile medical school embarked upon an ambitious program of expansion and academic diversity to help meet the need for more medical and health care practitioners as well as provide an academic environment conducive to the creation of new knowledge essential to answering the health problems of our people.



CHARLES C. SPRAGUE, M.D.
PRESIDENT

For the First Time, a Picture of a Heart Attack

**Nuclear scanner developed at UTHSCD
utilizes computer to help clinicians locate and evaluate extent of infarct**

A new nuclear scanning device which enables doctors to see the exact area damaged by a coronary heart attack, holds further promise in monitoring patients after heart surgery.

Announced earlier this year, the new technique developed by Dr. Frederick J. Bonte, dean of The University of Texas Southwestern Medical School, allows physicians to view and take pictures of myocardial infarct. (A myocardial infarct is an area of dead heart muscle caused by the type of heart attack in which a coronary artery is suddenly blocked.)

Armed with this new tool of diagnosis, the doctor can determine, usually within an hour, if a person actually has a heart attack or simply pain from other sources. In the latter case, the patient could be safely moved out of the intensive care unit.

Medical school personnel have assembled a new portable scanning camera and computer to be used at Parkland Memorial Hospital. More than \$100,000 for this equipment was donated to the school by Southwestern Medical Foundation.

"Until now, the only ways cardiologists had to measure damage from heart attacks were indirect," said Dr. Bonte, former chairman of the medical school's Radiology Department. The ways include the well-known electrocardiogram (EKG), enzyme measurements and the angiogram where dye is injected via catheter. All may point to an infarct but none shows the damage directly.

With the new method, a radioactive substance with an affinity for calcium is injected into the patient. Within the hour the damaged area of the heart has collected enough calcium with radioactivity to show up as a bright spot on the screen of a scanner, or scintillation camera. The image

can be enhanced by computer processing and can be stored on videotape for later replay.

"This is going to be extremely important for clinical cardiology and, what's more, will have great importance in research," declared Dr. Jere Mitchell, head of the Pauline and Adolph Weinberger Laboratories for Cardiopulmonary Research at Southwestern. He added that knowledge of the size of an infarct could dictate certain courses of treatment.

One advantage of the new technique is that it is an adaptation of some very well known practices used in nuclear medicine to diagnose thyroid tumors and bone tumors. It is, in fact, practically identical to the method used in bone scanning, and knowledge of this method provided Dr. Bonte with the key to the new technique.

Dr. Bonte recalled that about ten years ago Dr. Anthony D'Agostino, a clinical professor of pathology at Southwestern, became interested in the chemical events of heart cell death.

"Using an electron microscope, he noticed that as the cell died, some funny looking crystals appeared in the mitochondria (one of the cell's parts)," said Dr. Bonte. "Dr. D'Agostino finally identified the crystals as hydroxyapatite — a bone-like substance."

This means a dying heart cell absorbs calcium and makes a bone-like substance.

"When we were sitting around in a meeting this last summer someone brought this fact up and it suddenly struck me that you could tag the calcium with radioactivity," recalled Dr. Bonte.

He asked an associate, Dr. Robert Parkey, to set up an animal experiment in which a heart attack was induced, followed by an injection of Technetium 99m Stannous Pyrophosphate, a well-known

radioactive substance used in bone scanning.

When Parkey pointed a scintillation camera at the animal, "he got a bright picture," said Dr. Bonte.

Since that time a great number of animal experiments have been performed. The researchers found that the dead heart muscle becomes visible on the scan about 12 hours after the heart attack.

More recently, Dr. Bonte and associates have been able to observe the effect in a few humans for whom bone scanning also was indicated. The researchers report the method works as well in the human as in the animal. Findings have been published in the journal, *Radiology*.

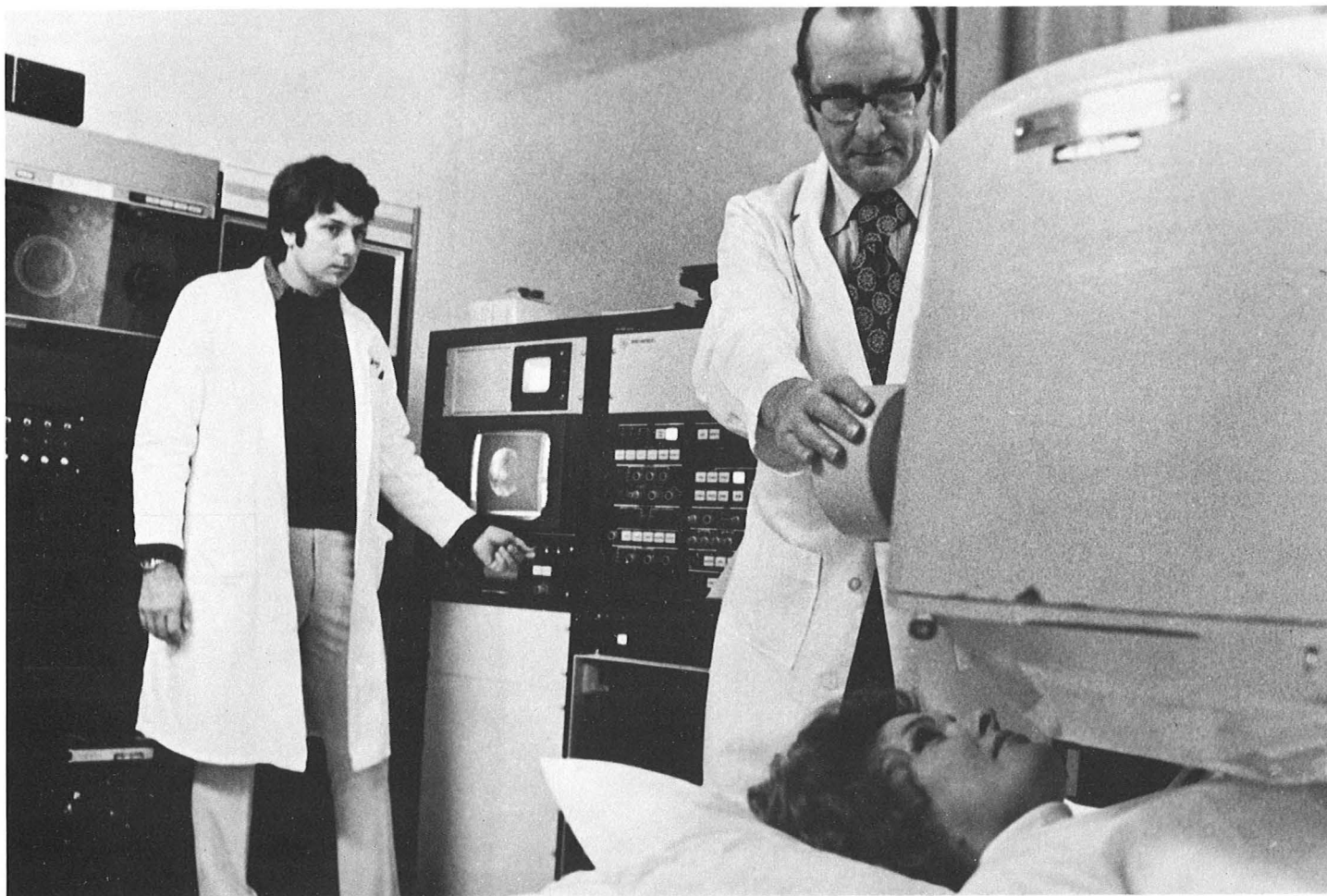
Later work by the research team indicates a further important use for the scanner.

Dr. Parkey confirms that in a dozen and a half patients for which the coronary jump-bypass operations have been performed, the scanner has proved valuable in monitoring post-operative infarctions.

"The scanner will allow us to determine the true incidence of myocardial infarction at surgery," noted Dr. Parkey. Electrocardiograms have proved difficult and deceptive in these cases.

Drs. Bonte, Parkey and Ernest M. Stokely were scheduled to present the new scanning technique before the Society of Nuclear Medicine in San Diego in June. Dr. James Willerson, Dr. James M. Atkins and Dr. Steven L. Meyer collaborated in a presentation before the Federation for Clinical Investigation; and all are listed as authors in an article to be published in the journal, *"Circulation."*

—BOB FENLEY



Photograph by Bob Pointer

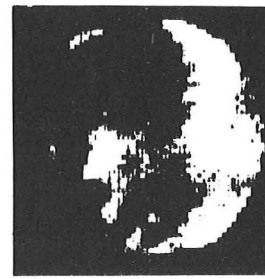
Dr. Bonte demonstrates scanner with lab assistant as Dr. Parkey adjusts equipment



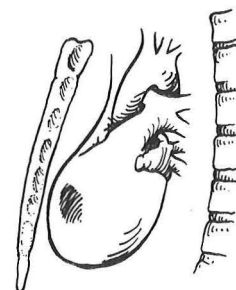
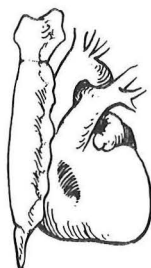
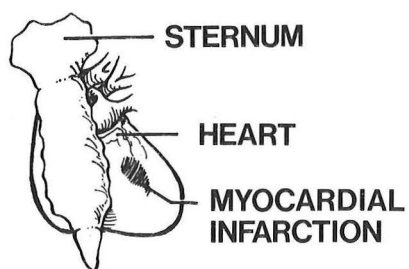
ANTERIOR VIEW



OBLIQUE VIEW



LATERAL VIEW



What the scanner is seeing: Bone and damaged heart tissue



Dental assistant Mary Anne Wallace checks teeth of child entering clinic's comprehensive program

Carver Clinic: Community Prescription for Healthier Kids

**Medical school, DISD cooperate
to provide care that's both curative
and preventive in poor area**

By ANN HARRELL

Photography by BILL GRAMLEY

Fewer deaths, less disability, reduced need for hospital care, decrease in school absences and improved school performance. These are the aims of a unique partnership between The University of Texas Southwestern Medical School at Dallas and the Dallas Independent School System.

Dr. Thomas D. Moore, director of the federally-funded Children and Youth Project and associate professor of pediatrics at Southwestern, and Dr. Nolan Estes, superintendent of schools, jointly announced the unique opening of Carver Children's Clinic. The comprehensive health clinic, located on the grounds of George Washington Carver Elementary School, situated in an area of low-cost housing units, is in West Dallas — the most economically depressed section of the city.

According to Dr. Estes, Dallas is the only independent school district in the country to build a clinic for children in cooperation with a program for their comprehensive health care. The beautiful \$115,000 portable building with the finest in equipment and facilities is leased from the DISD by Children and Youth. Services are provided through the Department of Pediatrics at Southwestern. Funding comes from Maternal and Child Health Service, of the Department of Health, Education and Welfare. All services — including medicine — are free to the patient population.

"This clinic is positively doing a fine job for the community . . . at no cost to us," commented school board president Farrell Ray after a tour of the new clinic building, which opened last summer.

Dr. Estes commented that he believes that not only will this clinic — and the others in the program — cut absenteeism, but they will help the children to learn. A healthy child will naturally do better in school, he said.

Dr. Heinz Eichenwald, chairman of the Department of Pediatrics at the medical school, agreed. "We're trying to produce a generation of healthy children whose school absences are reduced and who won't be crowding Parkland Hospital (Dallas County's charity hospital) with ailments as adults that stem from childhood diseases."

Fortunately, he continued, "Dr. Estes and the board understand what we are doing. They know a child can't learn in school unless he's healthy."

Carver Clinic is one of the four operating neighborhood health clinics providing free comprehensive health care to children in certain census tracts in West Dallas where the infant mortality rate has been high. Until July 1, the Carver Clinic operated in the community center of the housing project in which the clinic had its temporary home for three years. The other clinics are still borrowing space from housing projects, a church and, in the case of Pinkston Clinic which serves adolescents only, in classrooms in Pinkston High School.

As of Feb. 28, 10,200 children under 19 years of age were registered with the health care project. This number includes the 4,060 who are enrolled at the Carver Clinic.

Dr. Moore said the partnership between the project and the local school system "is a continuing effort to look for more effective ways to provide health care for low-income children."

Naturally, Dr. Moore is hoping that Carver Clinic is only the first of several born of the new and unusual partnership. School



A hearing test is part of the complete physical exam

board resources (buildings) committee member James Jennings said that the board is eager to build more such clinics in areas of greatest need. "I'm sure we will approve . . . as soon as the medical school can fund the staffing," he said.

Dramatic proof that Children and Youth has drastically cut the mortality rate in the patient population in contrast to other children and young people living in the same geographical area has been found by Dr. Moore.

The Dallas project has compiled statistics for infants and children cared for by the project as well as statistics on non-patients in the same age groups living in the same areas. The comparisons of this data strongly shows the success of this program. Also a strong "plus" is the similar data on hospitalizations.

Included among the "successes" are:

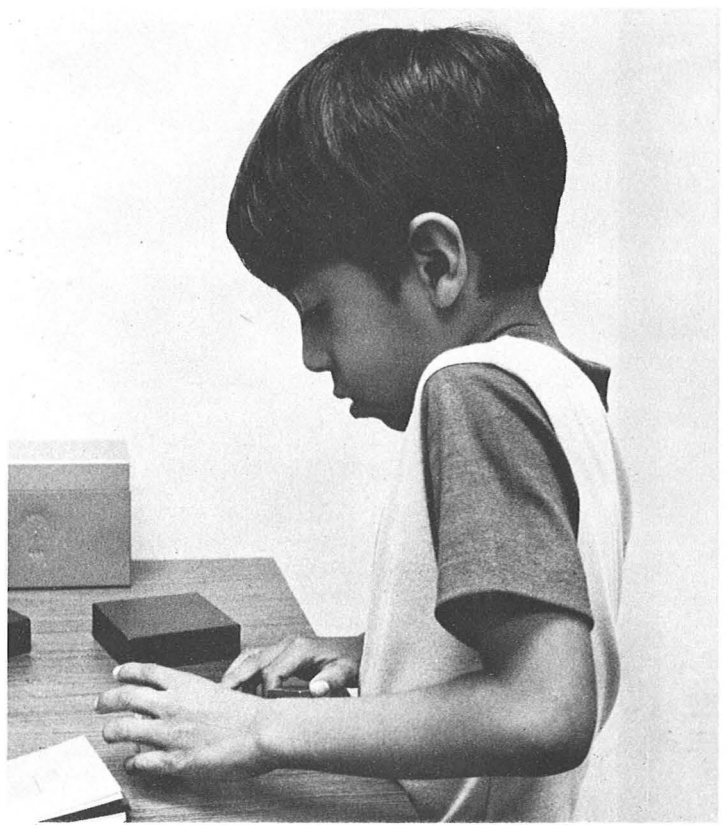
1. Mortality rate in C & Y registrants, age 8 days through 18 years, was 0.29 per 1,000 registrants in 1972. Mortality in non-C & Y infants and children in the target area in the same age range was 2.02 per 1,000 non-registrants.

2. Infant mortality in Project registrants, age 8 days through 12 months was 0 per 1,000 registrants under 1 year in 1972 (no deaths/585 project infants). Infant mortality in other infants, age 8 days through 12 months, was 19.6/1,000 non-registrants (11 deaths/561 non-registrants less than 1 year).

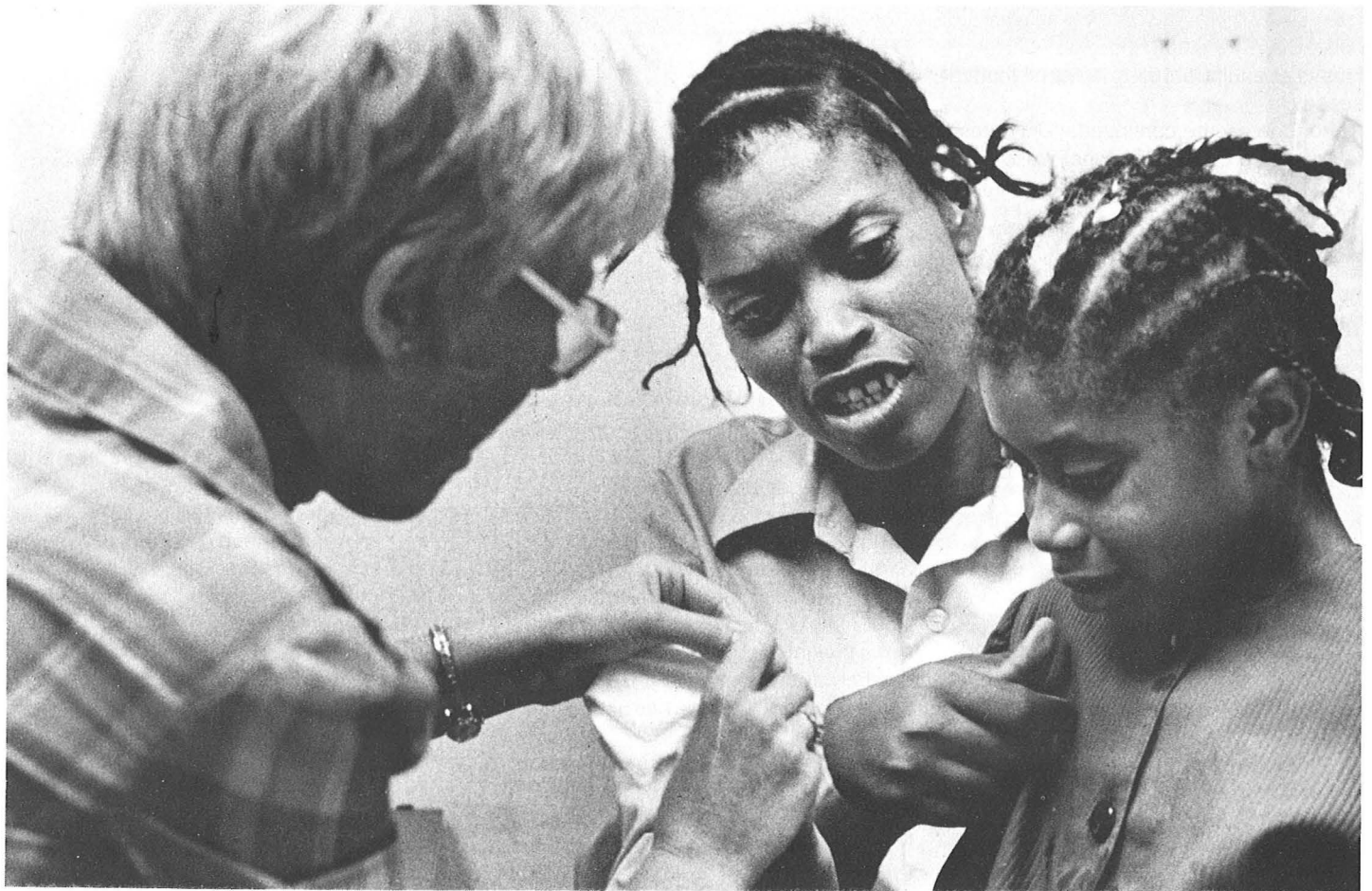
3. Hospitalization rate in project infants and children after newborn discharge through 18 years was 20 per 1,000 registrants during the 1971-72 fiscal year. Hospitalization rate in other infants and



Carver pediatrician, Dr. Paul A. La Porte, examines a sick baby



Psychological tests are used to spot learning and other special problems



A bandage and a smile from friendly nurse Sandra Stevenson makes a blood test bearable

children after newborn discharge through 18 years was 74 /1,000 non-registrants for the same period.

4. Project children used 86 days of hospital care per 1,000 registrants during the 1971-72 fiscal year. Other children used 402 days of hospital care per 1,000 during the same period.

Dr. Moore and school officials agree that they believe the C & Y project is cutting absenteeism in the schools in the target area. However, it will be at least another year before the statistical data on this subject is complete.

Further proof of the success for C&Y is that the project has brought the average health care cost for enrolled children down to only \$102 per year. And that's hospitalization, dental work, doctor bills, medication and any specialty referrals.

According to the physician, the comprehensive health care clinics see all kinds of physical complaints that other pediatricians see — and many that are usually referred to other specialists. However, infant mortality rate in West Dallas has been high. Also, the doctors in the clinics see a higher incidence of anemia, nutritional deficiencies and respiratory and skin infections. There are also a number of emotional problems that are dealt with by the clinic psychologist and social worker.

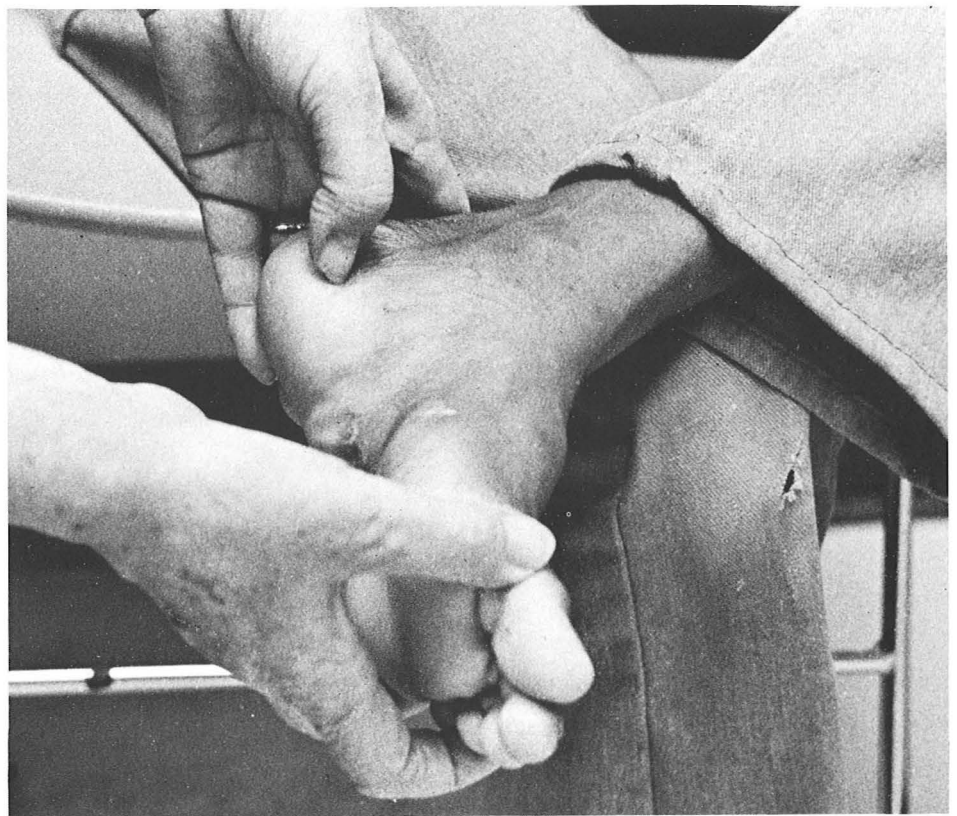
The census tract areas served by the project show a population of 38,907, including 20,695 children and youth under 21 years of age. The median income for a family of five is \$5,000. And many — hundreds even — of the families make less than \$1,000 annually.

Project organizers attribute their successes to highly trained health teams which are easily accessible to the low income families. Also, it is especially helpful in this type area to have all health services located in the neighborhood.

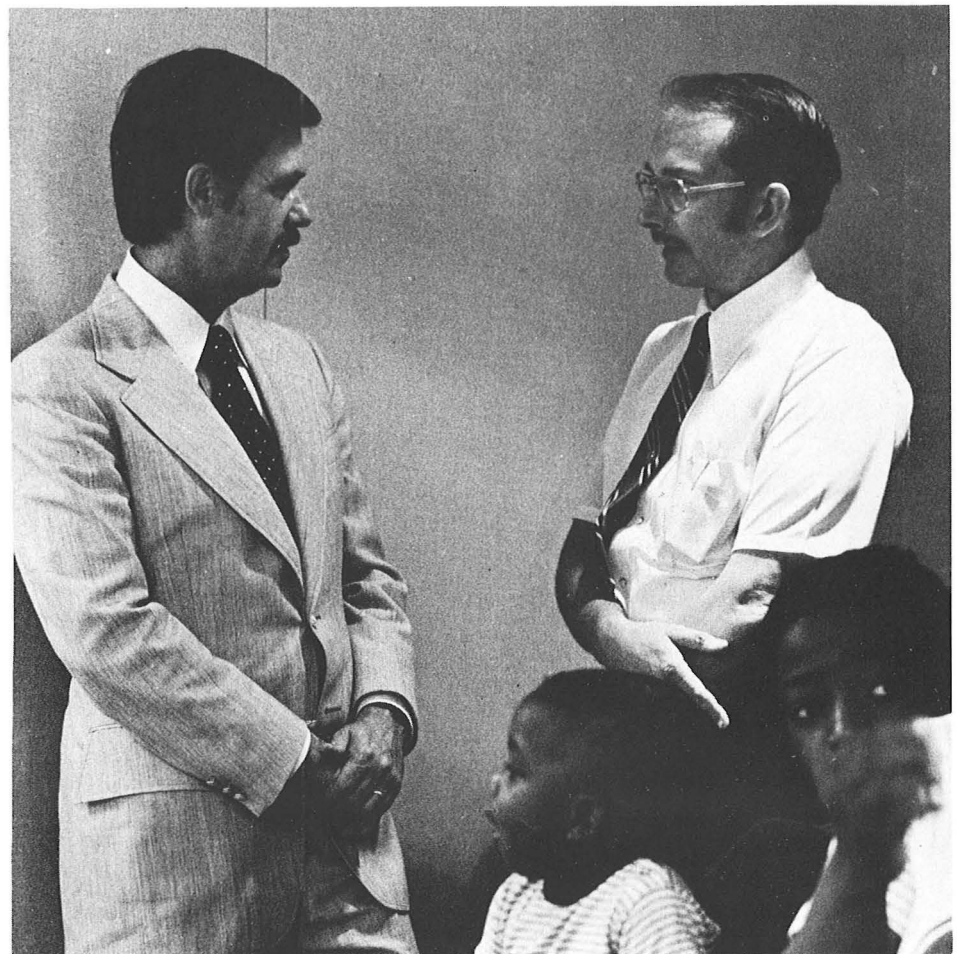
Community cooperation also is a plus. And C&Y has the support of both the Dallas County Medical Society and the Dallas Pediatric Society.

At present there are no M.D.'s and only three osteopathic physicians in West Dallas — an area of about 30 square miles. Most of the health care for the people there who are not patient populations comes from the Parkland emergency room and the clinic at Children's Medical Center. According to Dr. Moore, neglected health problems often are a way of life and serious illnesses and physical and mental disabilities often develop needlessly.

Actually, C&Y has removed some of the patient burden from Parkland, the county hospital, and Children's Medical Center, which also sees patients on a sliding pay scale. A money burden has



Puncture wounds like this are common among barefooted West Dallas kids



Dr. Thomas D. Moore, left, C&Y project director, and Dr. La Porte keep in daily contact about the care given at Carver Clinic



The Clinic, on the Carver playground, is handy for children who become ill while attending school



Carver Clinic, considered a showplace by Dallas school officials, who believe comprehensive health care such as Carver provides cuts school absenteeism

been lifted from the taxpayers by the project, too, as days and numbers of hospitalizations have been cut drastically.

As to receptivity to their clients, figures show C&Y loses very few patients once they're enrolled. "Moving out of the area is the main reason," said the physician.

As to the attitudes of the non-patient population, Dr. Moore said "I only know that the project has a long waiting list for registration."

Many of the referrals, as a matter of fact, come from neighbors or family members who have their children enrolled in the program. Other sources are the public health nurse and the area schools.

No charge is made to the patient or their families. And if the clinic sends a child to the hospital or to see a specialist, C&Y picks up that part of the bill ordinarily charged to the parent. It also pays for all medication.

"We believe this is the best way to handle health care in a lower economic area," Dr. Moore stressed. "And our data seems to be proving it."

Not only is the C&Y project acting as a model in health delivery for this type of community, said Dr. Eichenwald, but the Carver Clinic itself could well serve as a model building for this purpose.

The clinic building, which is of attractive slab concrete construction built to blend with the architecture of the modern school on the same grounds, is impressive. Included in the facilities are a large comfortable waiting room, an adjoining play room for the children — equipped with toys, books and a two-way mirror for psychological observation, offices for



Mother waits with two sick youngsters to see physician

social workers and a nutritionist and examination rooms. Dental services are provided in three fully equipped dental operatories. There is also a conference room for staff meetings around multi-problem patients.

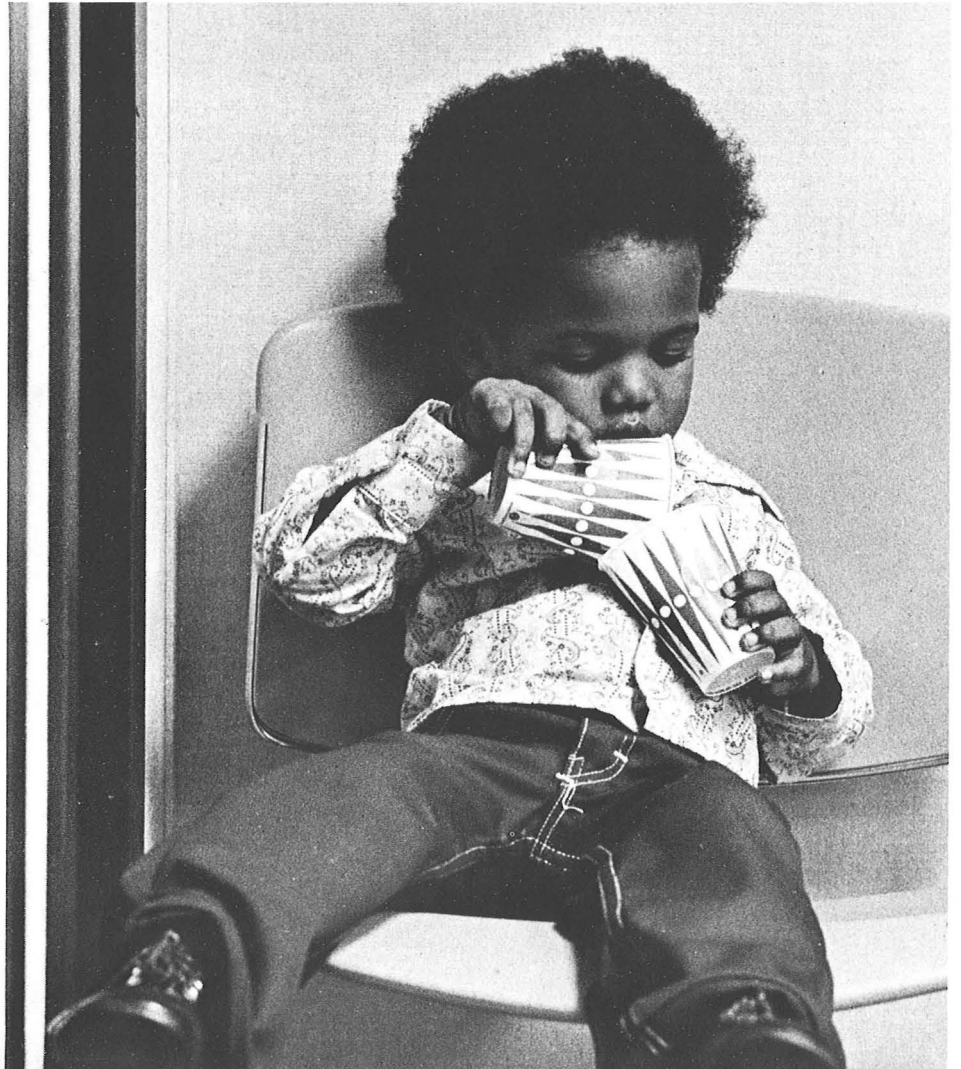
Staff at Carver includes a full-time pediatrician, two registered nurses, a dentist, a dental hygienist, a dental assistant, two social workers, a clinical psychologist, a clinical nutritionist, a dental hygienist, a nurses' aide and two clerical workers. A physical therapist provides rehabilitation services for children with physical handicaps on a weekly basis and an orthopedic surgeon sees referrals at the clinic one day each month.

Enrollment in the clinic for eligible children (anyone within these census tracts and in the right age groups whose parents will give permission for comprehensive health care) includes a complete physical exam, a nutritional evaluation, and social work evaluation to assure the families ability to cope with the physical and mental health problems, to provide adequately for basic needs such as food and clothing and identify early behavioral or psychological problems.

After enrollment, the mothers may bring their youngsters in to the clinic when they are ill or set appointments in advance. Sick children enrolled in the program can be sent to the clinic to see a doctor directly from Carver classrooms next door, and clinic personnel will notify their parents about the illnesses.



Boy plays on stairs used for developmental testing.



The clinic has a playroom, but sometimes a handy item like a pair of drinking cups make the best playthings

Sherry



A medical miracle,
one year later

Summertime 1974 finds 9-year-old Sherry White happily splashing in her backyard pool every day with her little sister and baby brother. A year ago, not many people would have given Sherry any chance to enjoy another summer.

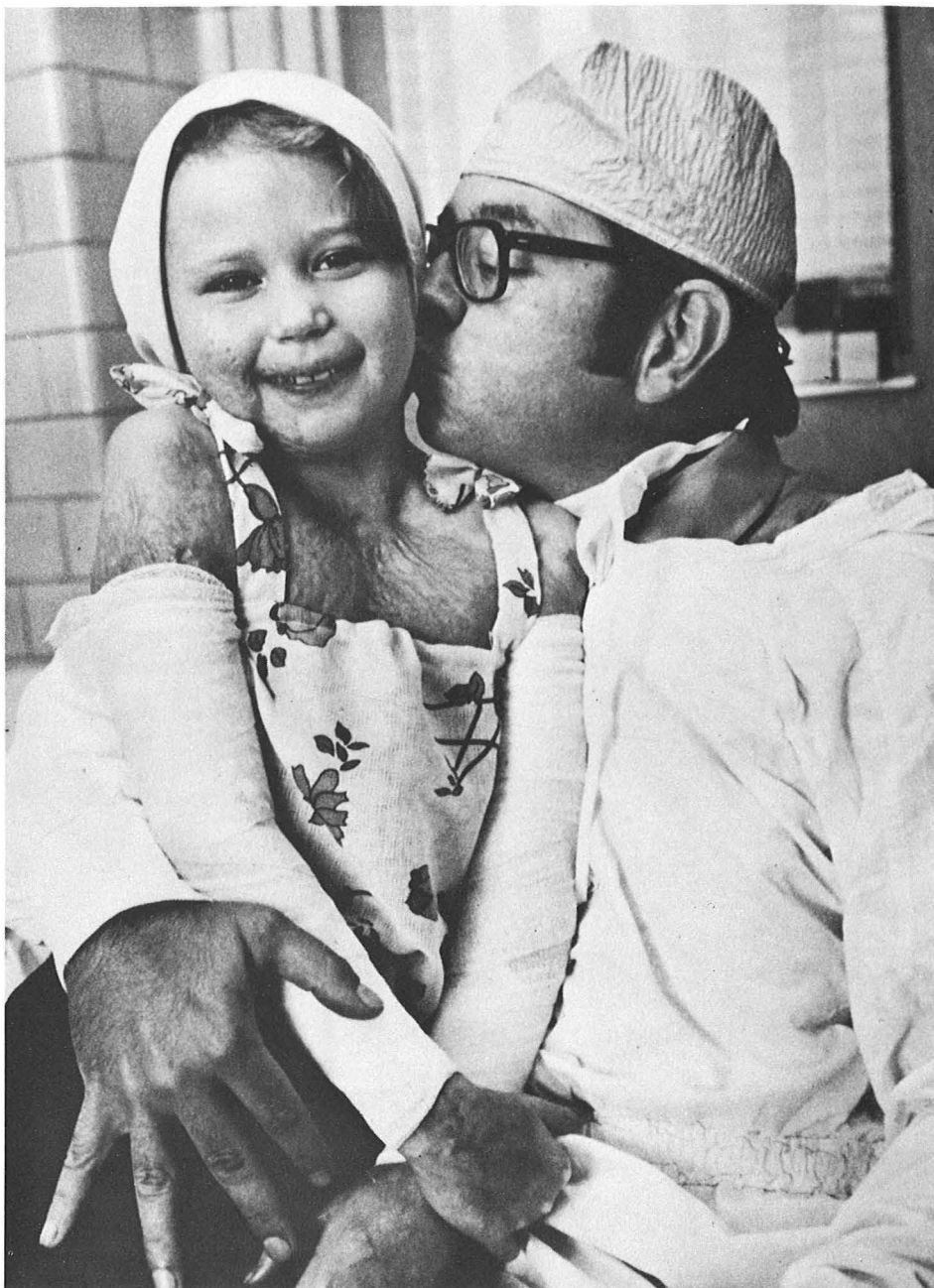
Exceptions were Sherry's family, the William Alton Whites of Dallas; Dr. Charles R. Baxter, professor of surgery and chief of Southwestern Medical School's burn unit, located in Parkland Memorial Hospital; and his pediatric unit team. Fortunately for Sherry, she lived in Dallas, where one of only 20 burn units in the entire nation is located, on the catastrophic day she was in a home accident leaving her with second and third degree burns that covered over 92 per cent of her body.

According to Dr. Baxter, he had "not been able to find any record of any other person who has survived burns as extensive as Sherry's." And none has been brought to his attention during the year following Sherry's survival, although her story has been told widely in both the popular and the medical press. Truly, Sherry's story is a leader in listings of modern medical miracles.

The accident occurred in May, 1973, after Sherry, her sister Loretta and friends had been playing in the freshly tarred street in front of their home. When it was time to come in from play, her father put Sherry in the bathtub to scrub the sticky asphalt off her feet and legs with gasoline. According to the Dallas fire department's accident report, the gasoline ignited, probably touched off by fumes reaching a nearby water heater pilot. Only the back of Sherry's head, covered by her thick strawberry blonde hair and the sole of one foot were spared in the searing flash, Mr. White also suffered severe burns on both arms.

Why did Sherry make it when most burn cases with over 50 per cent involvement don't? A combination of techniques including new concepts in nutrition, new ways of administering antibiotics, isolation in the pediatric burn unit, monitoring of tissue for bacteria, use of human skin as protective covering for wounds and early surgical removal of burn tissue all contributed to the medical victory. Dr. Baxter also stressed that "without good nursing care, the human skin bank and the latest advancements in research," the battle for Sherry's life would not have been won.

"In the past couple of years, we've been able to bring four or five patients to this point, but we couldn't get the human skin covering we needed so we lost them," he said. The Dallas Skin Bank was in existence only two months before Sherry's accident.



Photograph by Ed Miley

After surgical battle was won, SMS burns expert Dr. Charles Baxter gives Sherry an affectionate smooch



Photograph by Bill Gramley

In twice-weekly therapy sessions, Sherry is covered with hot paraffin to soften skin before half-hour of exercise



Photograph by Bill Gramley

Charley, a dog given to Sherry by Dr. Baxter, had to have a bath before he could visit the young burns victim in the hospital



Photograph by Bill Gramley

Therapy began almost immediately. In July, 1973, she painfully walks with nurse in pediatric burn unit

Too, Sherry's own spirit played an important role in her recovery. It is unconquerable. And her desire to return to the normal life of a happy, healthy child has made her a model patient for both her doctors and the physical therapists who spend hours working with her on exercises designed to stretch the scar tissue and keep the contracted joints loose.

This important area of Sherry's treatment is under the direction of Dr. Phala Helm, acting chairman of physical medicine and rehabilitation. Sherry still goes for intensive sessions at the medical school twice a week, exercises in her home and has been encouraged to engage in all the playtime she could spare while keeping up with her studies after she went back to public school. Now that it's summer, she can swing, bicycle and romp with her brother and sister for hours every day. Hard playtime activity is excellent therapy, explained Dr. Baxter.

A gift to Sherry, which has been and will continue to be invaluable therapeutically, Dr. Baxter pointed out, is the heated swimming pool with whirlpool bath in the backyard of the White's home in a modest section of the city. The North Texas chapter of National Swimming Pool Institute built the pool for Sherry after learning of her plight in newspaper articles and on television. "The pool is great for Sherry and will help her keep her skin supple and her joints limber," the surgeon said.

Dr. Baxter also recommends Sherry's riding her bicycle as much as possible, which was a major challenge for the little girl to try. A fall from a bike can be painful for



Photograph by Bill Gramley

Although she had a visiting teacher for a while, Sherry was able to rejoin her regular classes in the spring

any child, but in Sherry's case, it would be an excruciating experience.

Beneath her clothing, Sherry wears her "Jobes," two-piece elastic tights with long sleeves and matching mittens and "footies." This special clothing is for flattening the scar tissue. Since Sherry loves pretty clothes, today's "layered look" style fits right in. For swimming she tops her flesh-colored Jobes with a red-and-white checked bikini.

Sherry's fight to return to a normal life, which has already involved six months in the hospital, 18 surgical operations and subsequent months of therapy, is still far from over. She faces years of plastic surgery, perhaps as many as 20 more procedures, some of which Dr. Baxter says will be performed on areas that will enhance her appearance.

Controlled exercises — she does 50 pushups, 50 situps and other strenuous activities daily to stretch her scar tissue — will continue to be a part of Sherry's regimen for at least the next 10 years, Dr. Baxter adds.

The surgeon views her potential for recovery as anywhere from 85 to 90 per cent normal in her functions.

The repeated plastic surgery — each requiring three days to a week in the hospital — will amount to a "big hunk out of her life," Dr. Baxter noted. "But then again, Sherry is an amazing child."

Knowing her, nobody doubts she can do it. And just over a year ago, only a faithful, dedicated few thought she could have made it this far.



Photograph by David Hills

In between swims, Sherry swings, keeping up exercise that is vital to continuing recovery process



Photograph by Bob Pointer

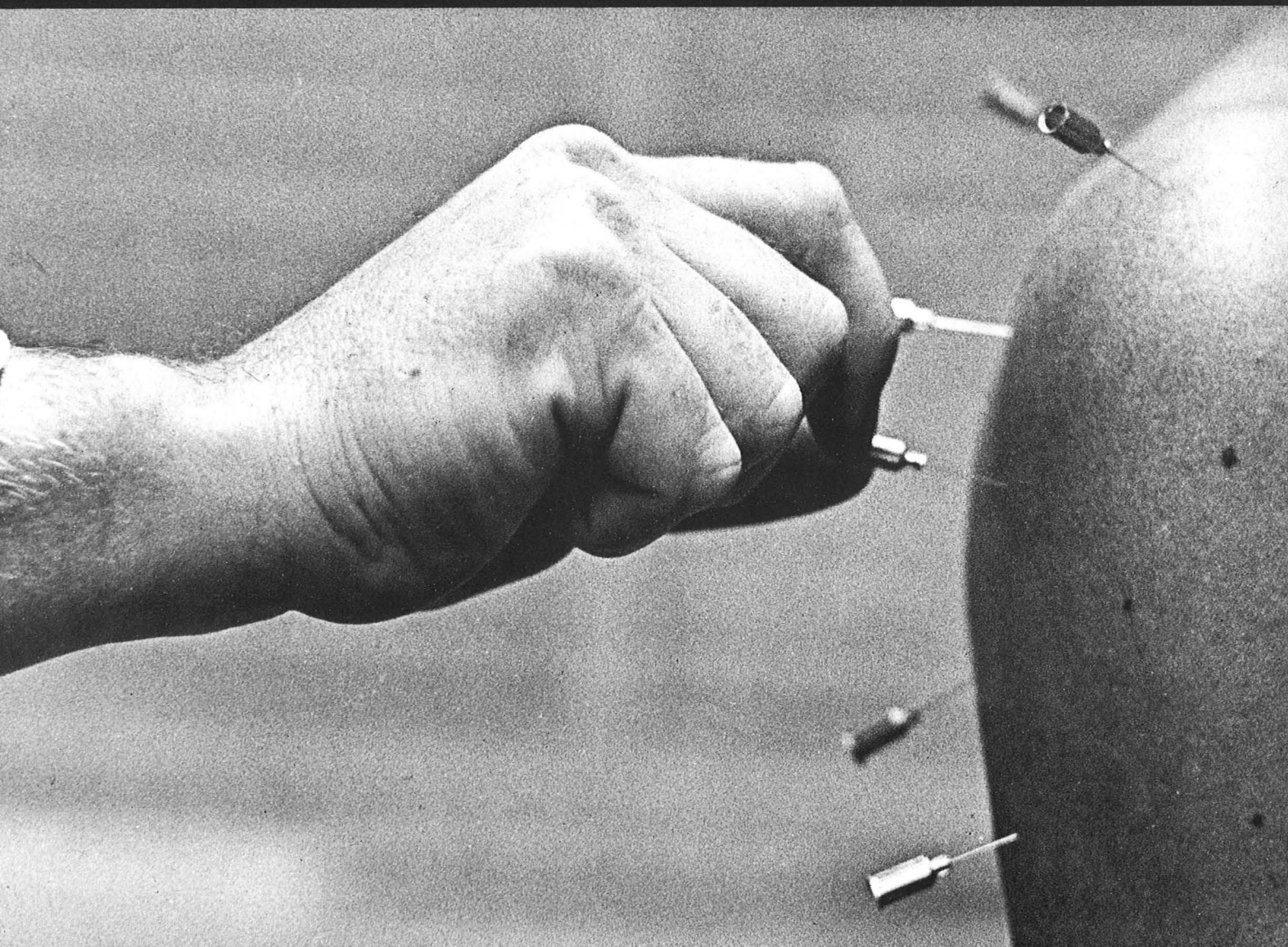
—ANN HARRELL

Riding her bike again was a major triumph for Sherry

WAGING WAR ON PAIN

Acupuncture, ultrasound waves among new array of weapons
UTSWMS clinicians are utilizing against mankind's age-old enemy

By BOB FENLEY



Elusive, mysterious, fleeting or maddening, pain is a reality of human existence that scientists at The University of Texas Southwestern Medical School are attacking with a battery of methods, ranging from ultrasound to acupuncture.

Chemical anesthetics, including gases, continue to be used widely in operations and in relief of recurrent pain. However, some new methods, notably acupuncture, are being brought into play today.

Some intriguing successes, some less than positive results and some downright failures in the use of acupuncture have been tallied by Dr. Samuel J. Montgomery and Dr. Phulchand P. Raj, both members of the academic faculty in anesthesiology at the medical school

"My impression is that about 60 per cent of patients we have done have had good symptomatic relief and about 20 per cent have had no relief whatsoever," commented Dr. Montgomery. Mixed results were noted in the final 20 percent.

Use of acupuncture is considered only after conventional methods fail. Actually, both Montgomery and Raj have been successful in perfecting the use of electronic stimulation of nerves to locate precise points for injection of chemical blocks. This is a new technique which has received considerable acclaim following its publication in a leading anesthesiology journal.

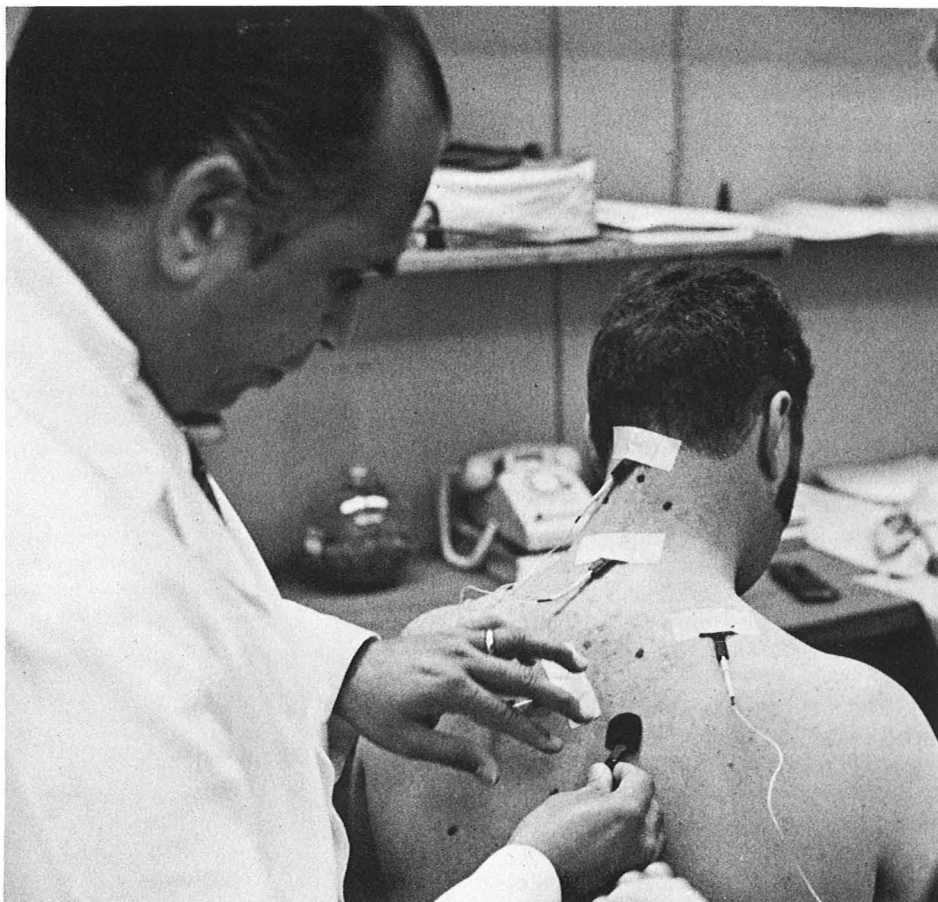
A whole battery of methods to alleviate suffering has been used by medical school faculty, including implantation of electrodes which suppress pain when controlled electrical current is induced in the system. This method has been used several years by Dr. Kemp Clark, professor and chairman of the Division of Neurosurgery.

Chemical anesthetics, including gases, continue to be used widely in operations and in relief of recurrent pain, and a variety of methods under the realm of physical therapy at the medical school bring relief.

Main thrust of the pain clinics at Parkland Memorial Hospital, Veterans Administration Hospital and the medical school is away from drugs which involve the whole system. Location of specific nerves and injection of deadening drugs at precise sites form the most regularly-used sequence in pain treatment.

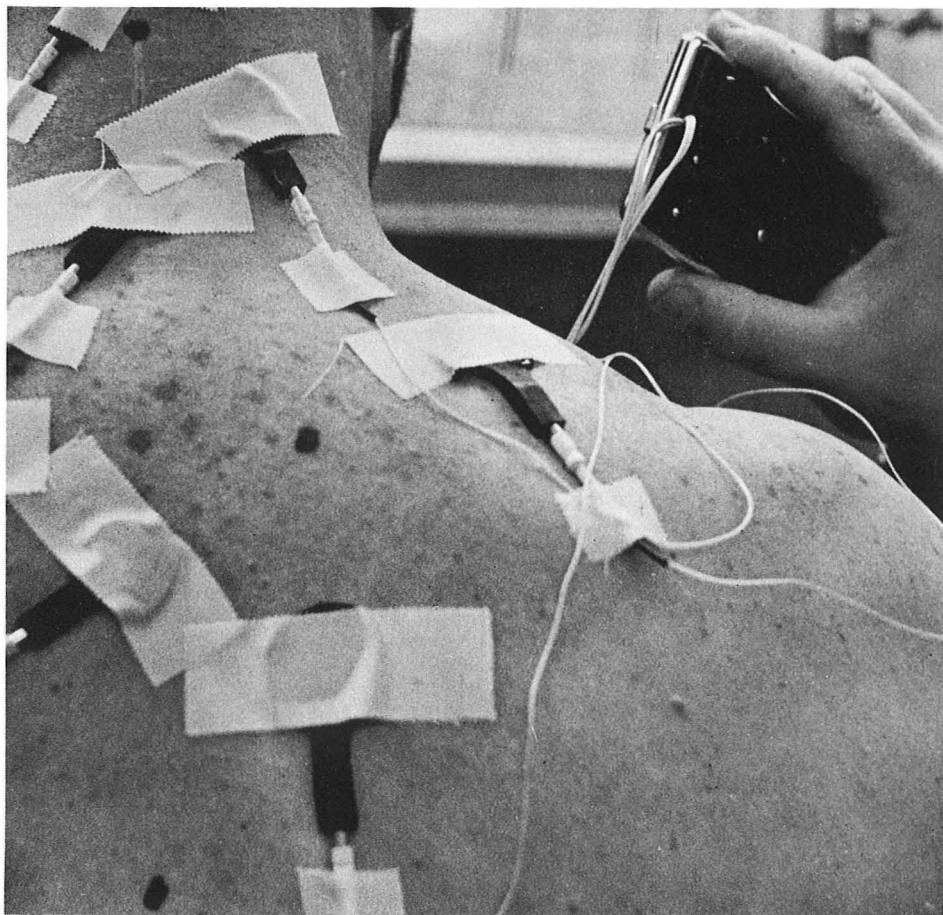
Still, there are people on whom nothing seems to work and this is where Drs. Montgomery and Raj consider acupuncture. Instead of traditional Oriental needle sets, the two doctors use hair-fine No. 30 hypodermic needles.

"My fingers used to explode," recalls a 67-year-old man who was referred to the clinic after he had had extensive



Dr. Raj adjusts paste-on electrode at acupuncture point

Photograph by Bob Pointer



Patient then can dial relief as needed

Photograph by Bob Pointer

neurosurgery for pain. For two years, numbness had been progressing in his arms and hands to the point he sometimes burned his fingertips with forgotten cigarettes.

One treatment with acupuncture freed him of pain in his right arm "and helped the pain in my left hand for two or three hours." He also felt that the acupuncture treatments aided the facility of the fingers in one hand.

Although it hasn't been completely successful, "it's done more to help than anything," said the patient.

A 35-year-old man of athletic bent who had suffered numbness and pain in the left leg and lower back decided to undergo acupuncture treatment as a "shot in the dark." The six-foot, five inch, 210 pound skier, swimmer and bike racer described an immediate effect of pain alleviation the first time the needles were placed in the small of his back and in the back of his knees.

"The first one was wonderful — the second wasn't so good," says a woman who drives to Dallas from Nacogdoches for the treatments. But before the treatments, "I could have climbed the walls."

By far the most interesting result of acupuncture treatment is given by one of Southwestern's own faculty members — an anesthesiologist who had been driven to bed by low back pain and muscle spasms. He agreed to let Drs. Montgomery and Raj try acupuncture.

Before a group of interested medical observers, the two doctors placed 36 needles in their fellow faculty member.

The result?

"It's frightening," muses the doctor. "When I got up I was totally pain free. I was sure having a lot of pain and a lot of muscle spasms, and I got complete relief in only one treatment. It was an interesting experience and, of course, I am still attempting to make a professional assessment of it."

More recently, Dr. Raj has been experiencing success with application of electrodes to various acupuncture points on the body — with electrical current to each controlled by the patient.

This form of "do-it-yourself" acupuncture allows the patient to dial his own dose. Another advantage is that it does not actually pierce the skin.

Acupuncture remains a phenomenon in search of a theory.

"I think there is some hypnotic and/or cultural effect involved," says Dr. M. T. Jenkins, professor and chairman of the Department of Anesthesiology at Southwestern. He points out that situations affect pain — soldiers who get whole limbs shot away on the battlefield may not feel

pain until much later. Most persons have had injuries and not felt pain till later.

More direct is neurosurgeon Kemp Clark: "I've often said that when the Chinese discover Halothane, they'll give up acupuncture." (Halothane is a modern chemical anesthetic agent)

He and Dr. Jenkins both point out that only a small percentage of operations are done with acupuncture in China — the rest being performed with traditional anesthetics.

Dr. Clark, who is on national and regional study groups for use of dorsal column stimulators and implantable peripheral nerve stimulators, notes, "There is a significant failure rate in all forms of pain therapy."

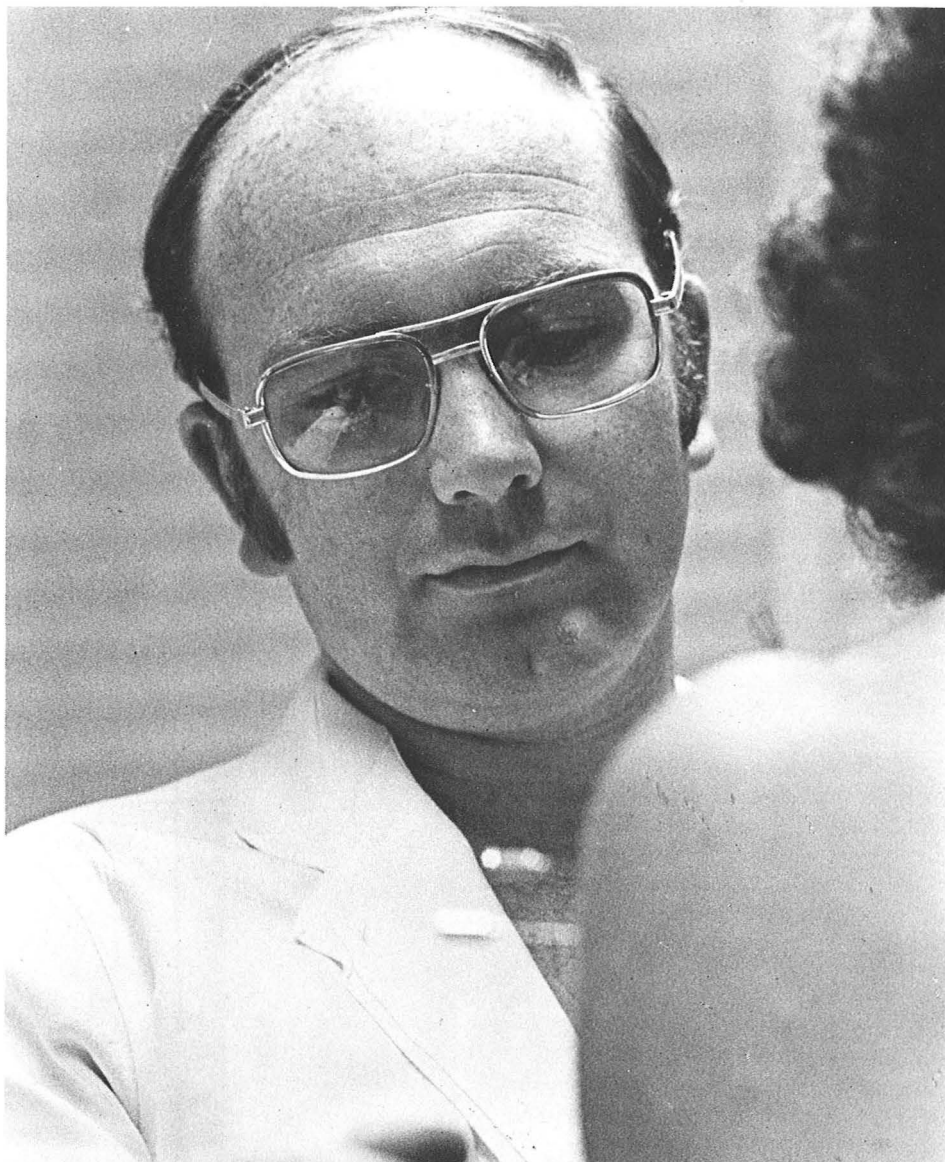
"Pain is such a widespread and so protective a system. It's very difficult to understand. It seems to be defined by the individual on a subjective scale and the only way one can evaluate pain is in the societal

reaction of the individual."

Dr. Dave Daly, professor of neurology, points to what has come to be known as the "Greenback Syndrome." Persons who are paid lump sums as a result of work-related injuries are quicker to return to work than those paid on a continuing basis, and those who are injured at home tend to return to work more quickly than those injured on the job.

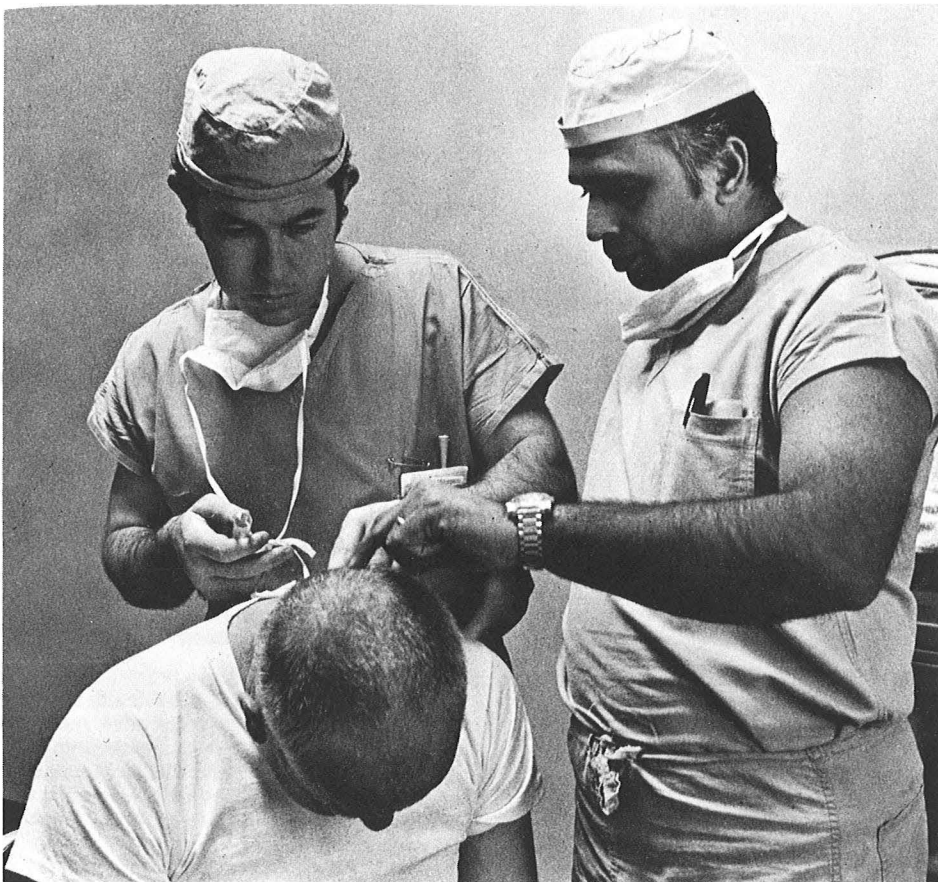
"I think," says Dr. Clark, "there is a great deal of difference between pain and suffering and in the anticipation of these difficulties. It's my impression that in the case of pain from malignancy, behavior is far more related to anxiety and depression."

"The population is becoming far more demanding of a pain-free state of life. They're not willing to put up with the minor aches their grandparents did. And we are dealing with a lot more chronic problems and a lot of conditions because people are living longer and winding up with more



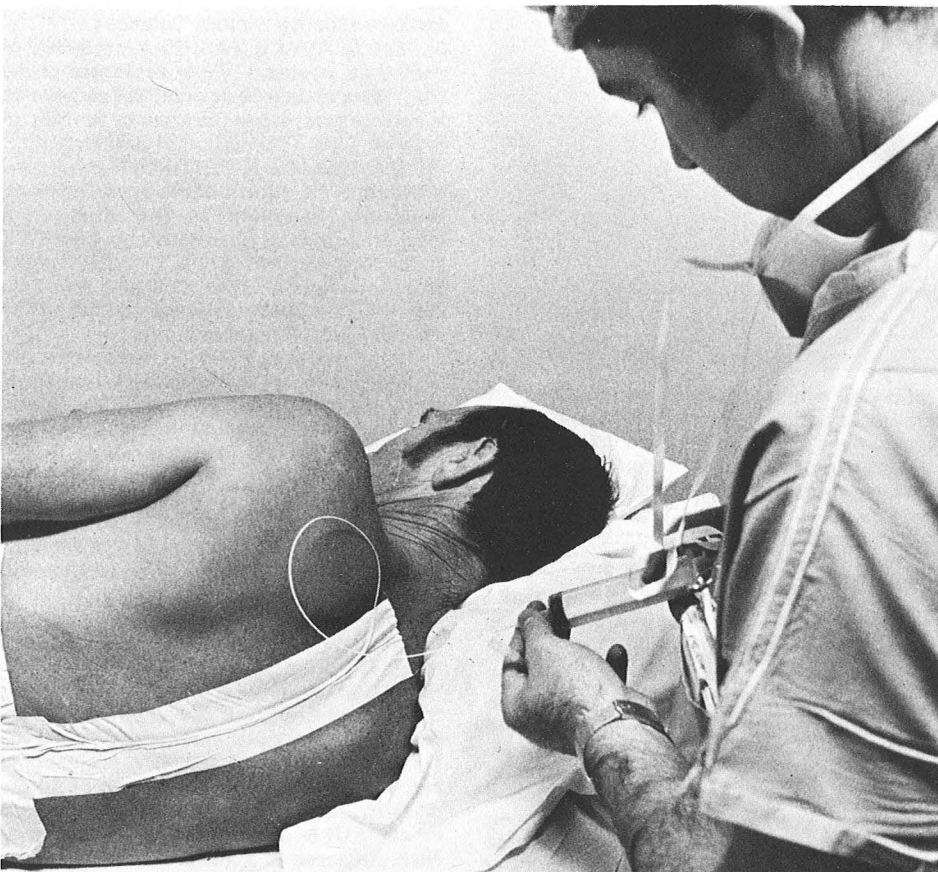
Photograph by Bill Gramley

Dr. Montgomery carefully adjusts acupuncture needle



Photograph by Bill Gramley

Dr. Raj and Dr. Justo Gonzales confer on chemical pain block



Photograph by Bill Gramley

Some of the chemical blocks are used for diagnosis

degenerative processes," Dr. Clark concludes.

Possibly 30 per cent to 50 per cent of the business of the Department of Physical Medicine and Rehabilitation is the alleviation of pain.

"Many different modalities are used to treat pain — from moist heat packs to ultrasound," explained Dr. Phala Helm, acting chairman of that department.

Whirlpool baths are used for persons who cannot tolerate other forms of heat, hot paraffin is painted on or the affected part dipped for a number of things, including burns and muscle and tendon contractures, she said.

Headaches are still treated with heat to the neck and massage. "And exercises can frequently remove the cause," said Dr. Helm.

Sometimes muscles are deliberately fatigued by touching the appropriate nerve with a bi-polar stimulator. This allows the muscle to relax — relieving some forms of back pain.

Ultrasound — a form of deep heat — is successfully used to treat pain from bursitis. And, on the other end of the scale, ice is used to relieve the pain from some forms of spasticity.

In day-to-day clinic work, says Dr. Raj, people are usually classified into four groups: 1. Those with a psychological overlay; 2. Those with an anatomical lesion; 3. Those with a combination of the first two; and 4. Those whose diagnosis is obscure.

Further categorization is done on the basis of the type of nerve fiber involved and the type of pain. There is a type of pain due to visceral organs and even "phantom" pain — the persistent feeling of pain in parts of limbs which have been amputated.

Once the pain is diagnosed, the doctors try to find the location for a good block and then inject a temporary local anesthetic. If this is successful, the doctors think in terms of prolonging it. Some neurolytic solutions can give relief for up to two years. The group has done a number of permanent blocks for pain all over the body.

In rare cases where there is limited life expectancy, as in a malignancy, a cordotomy or nerve-severing operation is sometimes performed by neurosurgeons, says Dr. Clark. Lobotomy, the cutting of nerve pathways in the brain, has been used for pain alleviation.

Recent experimental operations have been done for pain in which electrodes are implanted in the thalamus, which scientists believe is the terminal end of the pain pathway in the brain.

CAMPUS RECAP

A FAR CRY from its creaky plywood-and-tarpaper point of origin, The University of Texas Health Science Center at Dallas has reached culmination of its years-long developmental dream, moving in stages into various completed portions of its vast, \$40 million Phase One building complex. The moves began with occupancy of the 12-story McDermott Academic Administration Building (photo) containing administrative offices, and will end in late summer with final touches applied to the remaining structures including four large lecture halls, library, cafeteria and other facilities to prepare for a first-year medical school class of 200.

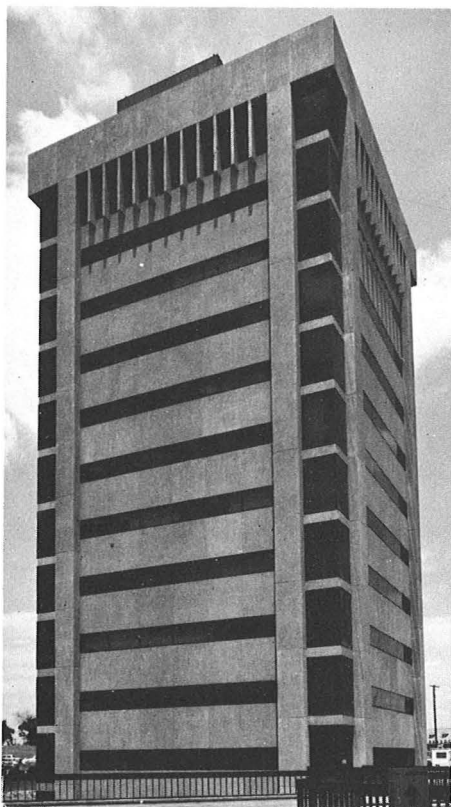
Other major structures getting a last coat of paint and dabs of mortar are the 1,200-seat Tom and Lula Gooch Auditorium, with cafeteria on the lower level; the five-story Fred F. Florence Bioinformation Center, which will contain a 200,000-volume-capacity medical library and other communications departments; the Cecil H. and Ida Green Science Building, a five-story structure housing multipurpose student laboratories and facilities for Cell Biology, Biochemistry, Microbiology, Pharmacology, Physiology, Neurology, Cancer Center, Radiology and Bioengineering. Connecting all the structures and roofing over the pie-shaped four-lecture-hall area is the landscaped elevated plaza.

The total physical worth of the Health Science Center by September is estimated at more than \$100 million, including older buildings and equipment, land and other improvements.

EVEN AS the current construction draws to a close, plans have been announced for yet another major addition to the campus. Construction of the eight-level Harry Moss Clinical Science Building is due to get under way later this year, connecting with the present Hohlitzelle and Basic Science Research Center buildings. This structure will house additional animal care facilities plus space for clinical departments, and is named for the late Dallas oilman whose will provided income from \$6 million for heart research.

A DEDICATION OBSERVANCE for the completed Phase One project has been scheduled for April 27, 1975, with Dr. Lewis Thomas, president of Sloan Kettering Memorial Institute, as principal speaker.

THIS FALL, Southwestern Medical School will begin to realize, a full year ahead of schedule, its goal of doubling its enrollment. It will admit its first entering class of 200, and will re-enroll 150 second-year, 135



third-year and 134 fourth-year students. In May Southwestern graduated 112 new physicians — the last of its "small" classes. Additionally, more than 120 students will be enrolled in the Graduate School of Biomedical Sciences and about 175 in the School of Allied Health Sciences.

a fond farewell to . . .

. . . two important members of the official family of the UTHSCD who are retiring after distinguished service:

MISS ANNE RUCKER, registrar at Southwestern for three decades, ends an unprecedented period of dedicated service upon her retirement Aug. 30. Joining Southwestern in the days of the old "shacks" in April, 1944 (the second year of the school's existence), she has supervised the signing up of every student since, and in the process has endeared herself to literally thousands of alumni, students, faculty and co-workers.

DR. ROBERT M. PIKE, a charter member of Southwestern's faculty who joined that handful of former Baylor teachers in launch-

ing the little medical college in 1943. Dr. Pike thus concludes a notable career of fulltime teaching and research, one marked by warmth and good humor and a devotion to the science of microbiology.

plaudits to . . .

. . . numerous members of the Health Science Center faculty who recently have received recognition for professional leadership:

DR. DONALD W. SELDIN, professor and chairman of Internal Medicine, elected to fellowship in the American Academy of Arts and Sciences.

DR. PAUL C. MacDONALD, professor and chairman of Obstetrics & Gynecology, named to fill the newly endowed academic Chair in Reproductive Biology, which is a part of the new Cecil H. and Ida Green Center for Reproductive Biology Sciences.

DR. GLADYS J. FASHENA, professor of pediatrics, named a "Piper Professor of the Year," one of only 10 selected for excellence in college teaching in the state by the Minnie Stevens Piper Foundation of San Antonio.

DR. WILLIAM A. PETTINGER, associate professor of Pharmacology & Internal Medicine, recipient of the Burroughs Wellcome Clinical Pharmacology Award for 1974, thus becoming the 23rd Burroughs Wellcome Scholar. The \$150,000, five-year award will enable Dr. Pettinger to form a Division of Clinical Pharmacology.

DR. HARRY J. PARKER, associate dean of the School of Allied Health Sciences, newly chosen president-elect of the Southwestern Psychological Association. Dr. Parker holds HSC professorships in Rehabilitation Science, Physical Medicine & Rehabilitation and Psychology.

DR. HAL WEATHERSBY, professor of anatomy in the Department of Cell Biology, re-elected president of the Anatomical Board of the state of Texas.

DR. MARION T. JENKINS, Margaret Milam McDermott professor and chairman of anesthesiology, recipient of the Ashbel Smith Distinguished Alumni Award from the UT Medical Branch at Galveston during annual commencement ceremonies.

DR. P.O'B. MONTGOMERY, professor of pathology, former associate dean of Southwestern and special assistant to the Chancellor of the UT System, nominated by President Nixon to serve as a member of the Board of Regents of the new Uniformed Services University of the Health Sciences in Bethesda, Md.

—John Weeks

The University of Texas
Health Science Center at Dallas
5323 Harry Hines, Dallas, Texas 75235
Address Correction Requested

Nonprofit Org.
U. S. POSTAGE
PAID
Dallas, Texas
Permit No. 2683