

news THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS

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APRIL 28, 1977

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******UT Southwestern researchers
developing new surgical techni-
que to treat paralyzed palates.*

DALLAS-- Surgeons at The University of Texas Southwestern Medical School at Dallas are developing a new surgical procedure to treat victims of strokes and severe head injuries who suffer from a paralyzed speech mechanism.

Proper function of the soft palate--the fleshy part at the back of the roof of the mouth--is essential to clear, articulate speech. After a stroke or severe facial injury there often is a loss of coordinated movement in the soft palate. Victims speak through their nose instead of their mouth. The result is very nasal, unpleasant, often unintelligible speech.

"These people are not only hard to understand, they get exhausted from the tremendous effort that it takes for them to talk," says Dr. Donnell Johns, associate professor of surgery and Director of Clinical Research in plastic surgery at UT Southwestern. "Our goal is to restore these individuals to communicative efficiency."

Mary Beth Niver is one of those who have benefited from the expertise of Dr. Johns and his colleague Dr. Kenneth Salyer, associate professor and chairman of plastic surgery at UT Southwestern.

In early 1972 Ms. Niver, then a Fort Worth high school student, was critically injured in an automobile accident. She received multiple facial injuries including the loss of an eye and partial paralysis of the soft palate.

As a result of the accident, Ms. Niver had to quit her job as a part-time secretary because of her inability to communicate over the telephone. Patients with paralyzed palates are unable to control the flow of air through their mouth and nasal passages and on the telephone it sounds as if they are blowing air on the receiver.

"I had been talking all my life and doing plenty of it," she says, "and all of a sudden I couldn't.

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first add paralyzed palates

"The worst part about it was the frustration of not being able to make myself understood. All I could do was talk louder and louder, but I was just wasting my breath."

With speech therapy and the aid of a device that attached to the top of her mouth, her speech improved a little, but she still "sounded like I was holding my nose when I talked," she recalls.

"I had gotten used to the idea that I would be talking like that for the rest of my life."

Three years after the accident, she was referred to Dr. Salyer at UT Southwestern. She had been sent to him about problems she was having with her artificial eye, but Dr. Salyer also offered to correct her speech.

He and Dr. Johns successfully used the new surgical procedure to almost completely restore Ms. Niver's normal voice.

Two weeks after surgery she was able to resume work as a secretary. Less than a year later she was hired as a telephone clerk at the City of Dallas Police Department, a job that requires "pleasant, clear and articulate speech."

Ms. Niver says "I've been running my mouth full-speed ever since my operation. Now it makes me feel so happy when people tell me to shut up."

Drs. Johns and Salyer have used the surgical procedure on 24 patients so far. They caution that although the technique shows great promise, long-term studies must be done before it can be used widely.

A surgical procedure similar to this one has been used on cleft palate victims for some time. But the Dallas researchers are the first to extensively study its use in treating loss or impairment of neuromuscular control of the soft palate.

Johns and Salyer stress that this procedure is not a cure for all speech problems caused by stroke. Many stroke victims experience a loss of language recall due to damage to the speech centers of the brain, for which there is no surgical therapy.

Dr. Johns says that each of their patients undergoes pre-operative testing using "multi-view cineradiography," which is the making of a motion picture of the movement of--in this case--the soft palate. A sound spectrograph, which produces a "voice-print," and before-and-after tape recordings of the patient's voice are also made in order to identify the precise nature of any post-operative improvements.

second add paralyzed palates

Most of the patients have shown varying degrees of improved clarity, decreased nasality and more precise articulation, Dr. Johns says. "Many times we have not been able to give them what they had before their accident or stroke, but we have been able to provide them with a mechanism for functional speech."

The surgical procedure, termed "pharyngeal flap surgery," involves creating a flap of tissue from the back wall of the throat and attaching it to the soft palate, thus blocking the nasal passage and causing the patient to speak through his mouth again. Tubes are implanted that allow the patient to continue breathing through his nose.

"Proper design and outlining of the flap are critical," Dr. Johns says. In the operating room before the patient is put under a general anesthesia, he is asked to say "ahh" while in a seated position. The surgeons are then able to correctly outline the flap with a blue marking pen or surgical clips.

"Based on our experience, we strongly advocate this presurgical marking while the patient is alert and, more importantly, phonating," Dr. Johns says.

The number of patients that could be helped by this surgery is unknown, he adds. "While paralysis of the soft palate has been recognized for many years, until recently this condition has received little attention.

"We are encouraged by our results to date, but we recognize the need for more detailed information regarding the long-term results."

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