

SOUTHWESTERN NEWS

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EMILY HEARS SOUNDS OF JOY AFTER SURGERY AT UT SOUTHWESTERN

DALLAS – December 8, 1997 – Baby's first smile. First step. First word. These moments are gifts engraved in a parent's memory. For Dr. Sara and Mark Tranchina, there always will be that moment when their little girl, at 21 months, emerged from her silent world.

In a clinical trial at UT Southwestern Medical Center at Dallas, Emily Tranchina, born deaf Jan. 16, 1996, received the latest, most sensitive of cochlear implants, which offer patients who are deaf or severely hard-of-hearing the potential to hear and understand speech.

Dr. Peter Roland, UT Southwestern's vice chairman of otorhinolaryngology, performs the surgery about 30 times a year, placing a magnet under a patient's ear and threading electrodes from it into the cochlea in the inner ear. On Oct. 13, a month after Roland placed an implant behind Emily's left ear, she had her implant turned on as she sat on her mother's lap at the UT Dallas Callier Center for Communications Disorders.

Beep by beep, audiologists Jennifer Basham and Melissa Waller delivered electrical signals through the implant to stimulate areas in Emily's cochlea until they found one that startled her quiet. Her eyes widened, as did the smiles of those watching her.

Emily heard for the first time.

A week later, she sipped all the milk from her plastic cup, held it up and said her first word, "more." Now she dances when she hears music and stops when the music stops. Ask her where her eyes are, and she'll point to her big blue eyes and her doll's.

"I'm in tears every time she does something like that," Sara Tranchina said.

Cochlear implants use two devices -- the implant and an external headset that includes a microphone, transmitter and speech processor -- to do the ear's job. The speech processor, about the size of an audio cassette, usually is worn on a belt or in a pocket. With a wire connecting the speech processor and the microphone, sound waves are translated into nerve impulses that are transmitted to the brain. Emily's implant is Cochlear Corp.'s Nucleus 24, which — with more

(MORE)

COCHLEAR IMPLANT – 2

electrodes than other models — is capable of handling different mapping strategies to enable users to hear more sounds better.

“I’ve been performing cochlear- implant surgery for a decade now, and you never know beforehand how well the patient will be able to hear,” Roland said. “But it is always amazing and rewarding to see the difference they make in patients' lives.”

Cochlear implants have been used about 20,000 times since their introduction 20 years ago. Roland said the Nucleus 24 is evolutionary, not revolutionary, and UT Southwestern is participating in the clinical trial that will determine whether the Food and Drug Administration approves it for general use. A Houston hospital is the only other Texas site where the new implant is available.

“We decided to go with Dr. Roland and his team because of their excellent reputation and because they could offer us the most medically advanced device available to Emily through participation in the clinical trial,” said Sara Davis Tranchina, a 1990 graduate of Southwestern Medical School and now a clinical assistant professor of family practice and community medicine at UT Southwestern.

Audiology tests conducted at the Callier Center — UT Southwestern’s partner in this clinical trial — show that Emily has some hearing loss with the implant but that should improve as she learns to interpret the sounds. Among those helping her are her audiologists, her speech pathologist and her big brother, 4-year-old Jordan.

“He’s so proud of her,” Mark Tranchina said. “He helps her with words and tells everyone, ‘Emily can hear now.’ ”

The news is so good that the Tranchinas couldn’t wait for their traditional Christmas letter to tell relatives and friends about Emily’s successful implant.

“This year I made it a Thanksgiving letter because we have so much to be grateful for,” Sara Tranchina said. “This is such a miracle. This is such a gift.”

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