

ENT UPDATE

Department of Otolaryngology - Head and Neck Surgery at the University of Mississippi Medical Center

New bone conduction implant provides maximum comfort



For many years, patients with conductive or mixed hearing loss had limited options for auditory improvement. Recent technological breakthroughs paved the way for implantable devices to treat these conditions. While these devices reduce a patient's struggle to hear, they have several drawbacks such as poor sound wave transmission through scalp tissue and dampened vibration over time. They also bear increased risk of injury and infection due to the very nature of their design.

Such was the case with Jocelyn DeZutter, an energetic eleven-year-old who was born with bilateral microtia and ear canal atresia. Her desire for improved hearing ability led the sixth-grader to suffer through irritation and infection caused by a tightly worn hearing device.

"Jocelyn liked the volume so much that she was wearing the headband very tightly, and it was causing a major breakdown of the skin on her head," said audiologist Dr. Beth King.

Jocelyn DeZutter visits with audiologist Dr. Beth King

Jocelyn needed technology that would increase her ability to hear and minimize her risk of injury and infection. Dr. Jeffrey Carron, pediatric otolaryngologist at the University of Mississippi Medical Center thought she was the perfect candidate for a new bone conduction implant positioned just under the scalp.

"The processor takes the sound from the environment and turns it into a digital signal. It overcomes the obstacle of the loss of the ear canal and outer ears," said Carron who performed the surgery during an hour-long outpatient procedure under general anesthesia.

The technology consists of an externally worn audio processor the size of a quarter and an implant. No part of the bone conduction implant protrudes from the skin eliminating the infection and irritation issues found in other hearing devices. The external audio processor lies on top of the implant and connects to it using a magnet.

Microphones on the audio processor pick up sound waves. The processor converts the sounds into electrical signals that are transmitted into the implant. The implant converts those signals into vibrations, and the bone conducts the vibrations to the inner ear.

UMMC, through its pediatric arm, Children's of Mississippi, is the only hospital in the state offering this technology to children. "There was an immediate difference in her hearing," King said. "We were able to give her great access to sound."

The bone conduction implant, Carron said, has been available in the United States for almost two years. "It's the best tool available for what we call conductive hearing loss, in which a child is born without an ear canal, or someone is born with hearing bones that didn't form right. A typical hearing aid often isn't going to work for them."

The implant is indicated for children ages 12 and up in the U.S., Dr. Carron noted, though available as young as age 5 in several other countries. "In the future I expect the technology will be made even smaller in size, and that it will be approved for use in younger ages".



Chairman's Message

"Act as if what you do makes a difference, it does." – William James

This edition highlights many notable examples of our alumni, learners, staff, and faculty members making a positive difference by offering cutting edge services, bringing new ideas to our department, leading regional and national organizations, excelling on examinations, providing innovative educational programs, and making new discoveries.

Our department has a variety of touchstone phrases such as "Make things better than they were when you found them, "Don't ignore things that need to be improved", and "Constant pursuit of excellence through constant learning." Among these admonitions is a key aspect of our mission and vision statements recognizing that we make a difference in people's lives.

As caregivers, educators, and researchers we are uniquely positioned to make a positive difference in the lives of our patients, learners, referring providers, and the greater citizenry of the state and nation. We hope that our efforts not only make a difference today, but that they will make a difference in future generations via the caregivers we train, the discoveries we make, and by giving our patients healthier lives so that they can enrich those of their family and friends.

No matter how trying the times such as in the current pandemic, we should remember that we are constantly making a difference even with our smallest actions. This can be difficult to feel especially when recognition is not given. We must remain grateful for the opportunity to improve the lives of others in such a tangible way. This gratitude in turn enriches our lives and refuels us so that we may continue to give despite the many obstacles we face in our personal and professional lives.

We invite you as always to let us know how we can best make a positive difference in your lives.

"To know even one life has breathed easier because you have lived. This is to have succeeded." – Ralph Waldo Emerson

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NEW FACULTY

Anne C. Kane, M.D.

We are thrilled to welcome Dr. Anne Kane to our team! Dr. Kane grew up in Alexandria, VA after her father retired from the Navy. She completed her bachelor's at Tulane University in New Orleans and went on to complete her Medical Degree and Residency in Otolaryngology - Head and Neck Surgery at Louisiana State University Health Sciences Center in New Orleans.



Following residency, Dr. Kane completed a surgical fellowship in Advanced Head and Neck Oncologic Surgery and Microvascular Reconstruction at Thomas Jefferson University in Philadelphia. She has several peer-reviewed publications and has presented at numerous national meetings.

In her spare time, Dr. Kane enjoys cheering on the New Orleans Saints, running and yoga.

Dr. Kane joins Dr. Lana Jackson and Dr. Gina Jefferson to complete our Head and Neck Oncology Team.

Department News and Highlights

- Drs. Hong Zhu and Wu Zhou were awarded a \$2.6 Million NIH R01 award for their research mechanism of blast-induced vestibular injury.
- Dr. Brad Walters was awarded \$100,000 by the Joe and Dorothy Dorsett Brown Foundation's 2020 Healthy Aging Program.
- Dr. Christopher Spankovich was elected to the Board of Directors for the American Academy of Audiology.
- Speech-Language Pathologists Jessica May, Leisa McCullough and Susan Stringer completed specialty certification/training to assess Modium Barium Swallow results using evidence-based and standardized protocols.
- Dr. Gina Jefferson, MD, MPH, FACS and Tristen Harris, PA-C were nominated for the 2021 UMMC Pillars. These annual awards recognize those who have shown an outstanding commitment to advancing diversity, equity and inclusion at the medical center and beyond.

• • In Memoriam: Fred C. Bordelon, MD • •

It is with sadness that we note the passing of Dr. Fred C. Bordelon. Dr. Bordelon earned his medical degree from University of Mississippi Medical Center before joining the United States Air Force where he served as a Captain and Flight Surgeon. After his service, Dr. Bordelon went on to complete a general surgery residency at the Memphis VA Hospital before completing an otolaryngology residency at the University of Mississippi Medical Center. Dr. Bordelon returned to his hometown of Greenville, Mississippi where he served the ENT needs of his community for 34 years. Our condolences are with the Bordelon family during this time.

Dr. Pearson Windham

Dr. Pearson Windham was born and raised in Rolling Fork, Mississippi. He graduated from Sharkey Issaquena Academy and attended the University of Mississippi. He received his medical degree from UMMC School of Medicine in 2003 and completed his Otolaryngology residency in 2008. Upon completion of his residency program, Pearson joined ENT Consultants of North Mississippi, a private practice with primary offices in Oxford. Pearson’s practice covers general otolaryngology with special emphasis and interest in sinus surgery, thyroid and cancer-related surgeries as well as a newly developed allergy practice. Pearson and his wife, Ashley, have three children: Pearson (15), John Colvin (13) and Anna Carlisle (10). In his free time, Pearson enjoys spending time in the Mississippi Delta hunting.



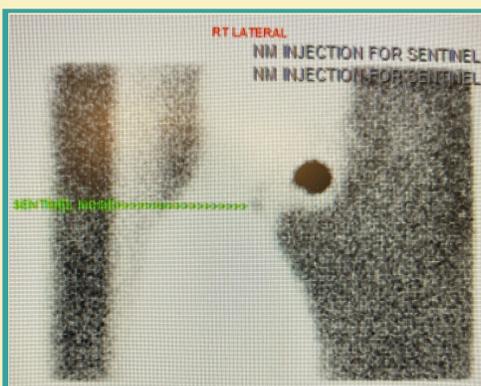
“My otolaryngology residency experience at UMMC provided me with well rounded training and strong professional relationships, both of which have carried me into a successful private practice.”

Interesting Case: Sentinel Lymph Node Biopsy

68 year-old male presented with superficial right lateral tongue ulceration measuring 1.5cm biopsy proven squamous cell carcinoma. Imaging was obtained leading to stage T1N0M0 SCC of the oral tongue.

When treating oral cavity cancer, evaluation and treatment of the neck even in early stages is very important because lymph node disease decreases survival by 50% and is worse when detected later in disease. Studies have shown that patients with tumor depth of 4mm or greater have >20% risk of occult (subclinical) nodal metastasis indicating the need for elective neck dissection in these patients. However, 70-80% of these patients are over treated because their pathology returns negative for nodal metastatic disease. When performing elective neck dissection even in experienced hands, morbidity including temporary marginal mandibular nerve weakness, spinal accessory weakness, hematoma, seroma or infection can occur.

In recent years, there is increasing evidence that sentinel lymph node biopsy for evaluation of clinically negative neck in early oral cavity cancer is a safe and effective staging method. It is shown to have a high negative predictive value and disease specific survival.



Additionally, sentinel lymph node biopsy is performed through a small incision with less morbidity than elective neck dissection. Currently, there are multi-institutional trials underway to demonstrate sentinel lymph node biopsy non-inferiority compared to elective neck dissection.

This patient underwent partial glossectomy and sentinel lymph node biopsy same day. He was seen in nuclear medicine and injected in 4 quadrants by the otolaryngologist around his tumor with radioactive agent pre-operatively. He then underwent SPECT imaging which identified lymph nodes in level 2A/3 (Image 1). These were localized intra-operatively with neoprobe and sent for routine pathology (Image 2). Sentinel node biopsy was performed through a 3cm incision placed in a neck skin crease which could be utilized later if completion neck dissection was indicated (Image 3). His partial glossectomy returned as T1 with margins all >5mm. His sentinel lymph nodes both returned negative. Tumor board recommendations were for close clinical observation. He healed well from his surgery and has returned to normal activity. ■

ACADEMIC HIGHLIGHTS

- Kudos to our outstanding residents for scoring in the 94th percentile across all otolaryngology residency programs nationwide on the 2020 annual training examination!
- Our annual ENT for the APP CME event was held virtually on July 10th. This 4-hour course featured a variety of presentations for advanced practice providers across the State.
- Our 6th Annual Regional Southern ORL Emergency Simulation Bootcamp took place August 15th. This annual event provided junior ORL residents from UMMC, University of Tennessee and University of Alabama Birmingham with emergency “on-call” and basic surgical skills.
- Dr. Stringer held a balloon sinus lab for residents and students on September 11th.
- Drs. Gina Jefferson and Anne Kane held a mandibulectomy/fibula anatomy lab and microvascular anastomosis lab on December 5th.
- We virtually welcomed Dr. Daniel Nuss, Professor and Chairman of the Department of Otorhinolaryngology at LSU New Orleans as a guest lecturer on January 28th. Dr. Nuss presentation “Infratemporal Fossa Surgery: Facial Nerve and Reconstructive Considerations” was followed by case discussions with residents.

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Save the Date

The Department of Otolaryngology - Head and Neck Surgery

Twentieth Annual Lectureship and Resident Graduation

June 25, 2021

To consult with a physician or to schedule a patient appointment, call 601-984-5160.

Visit our department website at www.umcent.com for the latest news, physician listings, and email links.



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