



Skull Base Surgery – A Look at Current Trends and Benefits of New Developments

an Interview with Bruce J. Gantz, M.D.

The Department of Otolaryngology at the University of Iowa, founded in 1922, is among the oldest in the United States, and is recognized as one of the most comprehensive in the world. US News and World Report magazine has ranked this department among the top otolaryngology programs in the U.S. for the past 10 years.

INFORMED met with Bruce Gantz, M.D., Professor and Head, The Brian F. McCabe Distinguished Chair in Otolaryngology – Head and Neck Surgery at the University of Iowa College of Medicine and the University of Iowa Hospital and Clinics.

Dr. Gantz specializes in the management of neurosensory or inner ear hearing loss, chronic ear disease, conductive hearing loss, balance disorders, facial nerve disorders and tumors of the cranial nerves. He has taken major leadership roles in the establishment of the National

Institute for Deafness and other communications disorders. Dr. Gantz's current research interests include: cochlear implant clinical research, management of facial paralysis, hearing preservation in acoustic tumor surgery and management of chronic otitis media with cholesteatoma. In addition, Dr. Gantz has made major clinical contributions in skull base surgery. His publications include over 170 papers, and he has contributed to 50 books and chapters.

INFORMED: What are some of the new developments you are seeing in ENT surgery?

Gantz: There is a trend to advance endoscopic approaches to the skull base, yet it is not known if reducing access will provide improved outcomes. The microscopic approach to tumor removal in the skull base is the gold standard today, and growth and development of multidisciplinary teams to manage tumors of the skull base will continue.

INFORMED: Would you please describe the advantages of skull base surgery?

Gantz: Microscopic access to benign tumors that are intimately associated with vital neural and vascular structures reduces morbidity and mortality for the patient. The main indication for skull

standing of both the skull base anatomy and behavior of disease processes, as well as improvements in neuroimaging have allowed tumors to be successfully treated.

INFORMED: What is the connection between neurosurgery and ENT surgery?

Gantz: An interactive team of surgeons with different training and expertise has expanded the surgical approaches to remove tumors of the skull base that were thought to be inoperable 25 years ago. Because skull base or cranial base surgery is one of the most complex areas of anatomy, it requires the closest cooperation between different services to ensure a positive outcome for the patient.

A skull base team consisting of neurotologists, neurosurgeons, head and neck surgeons, neuroophthamologists, neuroradiologists and interventional radiologists manage large skull base disorders. The skull base approaches developed by neurotology and head and neck surgeons have assisted neurosurgery in reducing morbidity and mortality for tumors of the anterior skull base, orbits, clivus, petrous ridge, petrous apex, jugular foramen and cranial nerves. Our team of neurotologists, head and neck surgeons and neurosurgeons perform more than 75 skull base cases per year.

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base surgery is the removal of various benign skull base and brain tumors. The occurrence of tumors varies with the age of the patient, his or her medical history and family history. Advances in microsurgical techniques, an increased under-

INFORMED: What impact has Carl Zeiss Meditec had on ENT surgery?

Gantz: The ZEISS microscope has been instrumental in providing us access to the ear and skull base

for more than 50 years now. Recent advances in otology and neurotology have been possible because of the microscopic precision afforded by ever-improving optics and illumination. In skull

Gantz: The ZEISS microscope is critical to providing access to previously unresectable tumors. We could not provide the level of patient care and outcomes if the microscope was not available. It

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base surgery, the mobility of the microscope is essential, as well as critical, and changes in position, magnification and focus are occurring every few minutes as the surgeon works around multiple areas, including vital neural and vascular structures. As a result, it is extremely easy to make numerous adjustments hundreds of times during each procedure. The use of the microscope is essential to what we do, and its impact on mortality rates is significant. Very rarely do we have a problem with patient survival.

INFORMED: How has OPMI Pentero improved surgical procedures, and what are its benefits to you and your department?

Gantz: We find the OPMI Pentero microscope to be more surgeon-friendly and mobile than previous microscopes. The expanded imaging and video capabilities have added to our educational mission as well as helped to improve documentation. The new video touch screen is intuitive for all users, and it eliminates the need for an additional video monitor. Additionally, the digital patient files allow for instant access to all patient files during surgery.

INFORMED: Please describe the role of the surgical microscope during skull base surgery.

truly is the gold standard in imaging, and much of what we do today wouldn't be possible without it. For example, we are able to use micro dissection techniques to safely remove tumors, while preserving adjacent structures such as facial nerves and auditory nerves. Additionally, the microscope has enabled us to significantly reduce mortality and improve the success rate of skull base surgery outcomes. Survival rate for benign tumors is extremely high, and reduction of the morbidity associated with the damage of neural and vascular structures also continues to improve.

INFORMED: It was a pleasure to meet you. Thank you very much for this informative interview.

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