Publications by Section

Cardiothoracic

Lawrence J. Dacey, MD

Circulation 2003;108 Suppl I:1259-61

Robert E. Dutton, MD

J Thorac Cardiovasc Surg 2003;126:1114-8

William C. Nugent, Jr., MD

J Thorac Cardiovasc Surg 2003;126:1008-12

Abstracts


Otolaryngology & Audiology

J. Oliver Donegan, MB, BCh, Section Chief

Introduction

Otolaryngology enjoyed another busy and successful year in 2003. Our medical staff has now expanded to six surgeons, and one physician assistant. We also have plans to add another associate provider to our Section this coming year, to help support our growing outpatient practice. Our primary scope of care includes the management of tumors, infections, congenital anomalies and the effects of the aging process in the head and neck region, excluding the eye and the brain.

Patient Care

Our outpatient practice continues to grow with our expanding staff. This past fiscal year, we served approximately 17,947 patients in our outpatient clinic. This was about 4% more in the prior year. As we keep up with new technology coming into the health care market, we are able to improve our diagnostic services within the office setting, which can save a great deal of time in determining a final diagnosis and treatment plan for our patients.

Surgical care for the Section increased this past year to 1,191, a 9.6% increase over the past year. OR, hours for the Section increase 12.2 to 20.0 hours. The OR purchased a new Image Guidance System, which we utilize for complex sinus surgeries. Each year we evaluate new surgical technology that fosters advancements in the way we perform surgery and improve the recovery time for our patients. We expect the Image Guidance System to have a positive impact on the outcome of many of our complicated sinus surgeries. Our hospitalized patient days increased 15.3% to 1,307 days in 2003. We had 456 inpatient discharges, a 6.3% increase. The average length of stay for our patients increased 3.8% to 2.7 days. We attribute these increases to the change in our inpatient care mix index, up 14.2% to 1.22, which is an indication our patient mix is more complex.

Our outreach programs continue to serve the needs of our patients in a variety of communities in New Hampshire and Vermont. We maintain our outreach practices in Randolph, VT, Windsor, VT, and Alice Peak Day Hospital in Lebanon, NH. This year we discontinued our outreach practice in New London, NH, and are now seeing patients from that community in our main office in Lebanon.

Education

Our Section provides training for residents from the University of Vermont residency program at Fletcher Allen Health Care, Burlington, Vermont. Our resident rotates through Otolaryngology at DHMC, training in clinical and operative experiences under the supervision of Section Chief, Dr. J. Oliver Donegan.

Otolaryngology also offers a rotation to senior residents in primary care specialties. These residents spend a two-week rotation with our Section both in the clinic and operating room. The Section of Otolaryngology also participates in the training of surgical interns as they work with the Section for one-month rotations.

We continue to work with Dartmouth Medical School, providing two-week electives for medical students. These students are involved as part of our medical team, and they spend time with each physician in the clinic and operating room, making rounds and attending conferences.

Research

Dr. Dudley Weider wrapped-up his SoundTec clinical study, which involved implanting a small magnet inside the inner ear. The patient wears a processor (hearing aid) which accepts acoustic information and transmits it to the implanted magnet as electromagnetic waves, causing the magnet to vibrate. These vibrations drive the small bones of the middle ear, providing clear, familiar, and full-fidelity sound. The goals of the implanted magnet and in the ear or behind the ear processors are to eliminate acoustic feedback, improve sound quality, reduce occlusion effect, and to reduce distortion.

Dr. Weider has recently applied for a clinical study on the use of a cerebral and cochlear fluid pressure analyzer to measure inner ear and intra-cerebral pressure. If successful, this diagnostic test could reduce the need of performing lumbar puncture to measure intracranial pressure. He
hopes to learn how the device can best be used in the evaluation of inner ear disease and intracranial hyperten-
sion.

Other Activities/Physician Highlights

The Section of Otolaryngology continues to work with other disciplines at DHMC in the ongoing development of several multidisciplinary clinical programs. We contin-
ue to participate in multidisciplinary programs in skull base surgery, surgery for acoustic neuromas, and a pro-
gram in collaboration with Norris Cotton Cancer Center for the management of patients with head and neck can-
cer. This program includes a multidisciplinary outpatient clinic, Head and Neck Tumor Conference and Tumor
Board. We also participate in the Cosmetic Surgery Center for facial cosmetic and reconstructive surgery. Lastly,
we continue our close collaboration with CHaD (Children’s Hospital at Dartmouth) in the management of children with ENT problems including congenital airway anomalies, tumors and otologic disease.

Audiology programs for adult patients

In our audiological program for adults, we have been pleased to see our hearing aid dispensing program grow.
In 2003, we fit 245 patients with hearing aids through a management program that offers a full range of the latest amplification technology, including advanced digital devices, and a hearing aid repair lab for minor in-office repairs. We are also actively developing our assistive listening and alerting device program to complement hearing aid use.

In addition, we are developing a transition program for teenagers and young adults with hearing loss who are ready to transition from our pediatric program to our pro-
gram for adult patients but yet have diagnostic and inter-
vention needs uniquely different from the young child or older adult patient.

Research

The Audiology faculty has made presentations at the national level during the past year. We have also been
involved in two funded research projects. Dr. Michael Norris has collaborated with Dr. Dudley Weider in Otolaryngology on a research study on implantable hear-
ing aids and Mrs. Stella McHugh has collaborated with Dr. Jack Band in Clinical Psychology on a research study on a software program designed to evaluate patient satis-
factions with hearing aids. Also, our former director, Dr. Frank Musiek, a world-renowned researcher on central auditory processing (CAP) and now with the University of Connecticut, continues to see patients on a per diem basis for CAP evaluations and continues to publish and present extensively in this area.

Sponsored Research: Federal & Corporate

<table>
<thead>
<tr>
<th>General Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard J. Barth, Jr., MD</td>
</tr>
<tr>
<td>ACOSOG Studies Z10 and Z11 (DGKE)</td>
</tr>
<tr>
<td>Mechanisms Underlying CD40L’s Role in Tumor Immunology (NCI)</td>
</tr>
<tr>
<td>COBRE</td>
</tr>
<tr>
<td>John D. Birklmeier, MD</td>
</tr>
<tr>
<td>Vertebroplasty (NHI)</td>
</tr>
<tr>
<td>Surgical Volume Matters: Helping Patients Pick Hospitals (HRQI)</td>
</tr>
<tr>
<td>Burton L. Eichenberg, MD</td>
</tr>
<tr>
<td>ITOG Committee Chair Agreement (ACR)</td>
</tr>
<tr>
<td>Samuel R. G. Finlayson, MD</td>
</tr>
</tbody>
</table>
| Utilization and Outcomes of Liposcopy 
Surgery: A Population-based Assessment (SAGE) |
| Medical and Surgical Treatment of 
Exophthalmic Refract (NHI) |
| Ophthalmology |
| Michael E. Ziegler, MD |
| Biofilm Formation Associated with 
P. aeruginosa Infection of the Eye (NEI) |
| Pediatric Surgery |
| Ann-Christian Duthuaine, MD |
| Trauma to the Developing Brain: 
Response and Treatment (NHI) |
| Biomechanics of Pediatric Heart Trauma (U/Penn) |
| Trauma to the Immature Brain: 
Response, Repair, & Treatment (NHI) |
| Surgical Research Lab |
| Jeffrey Bergeron, IVM |
| Teaching and Development of Endoscopic 
Therapeutic Techniques (Bant) |
| Evaluation of Prototype Electromechanical Instruments (Toamslink) |
| Nancy J.O. Birklmeier, PhD |
| Pulmonary Reporting on Hospital Volumes (HCFA) |
| Assessing and Improving the Quality of 
Care for Low Back Pain (HRQI) |
| P. Jack Hooper, IVM, PhD |
| Commercialization of Microwave Thermo 
Ketoplasty Safety Study |

[Thermal Vision Incorporated]: 
Baservical Nerve (StePain, Inc.) 
Heat Sensitive Liposome for Treatment of Prostate Cancer (Cebion Corp.) 
Fluorescence Fluorescence Detector for 
Photomimetic Quantiation (Anura) 
Hormone Survival in a Porcine Model (Ozana) 
The Effect of Mammation, Hypoxia and 
Afferent Feedback (NLHIB) 
Impedence Spectrometry Monitoring of 
Infarcted Tissue (NCI) 
Kathleen Martin, PhD 
Induction of Vascular Smooth Muscle Cell 
Differentiation by Rapamycin (MHA) 
Mary Jo Mulligan-Kelso, PhD 
Mechanisms of FXI-Induced Anti-
Angiogenesis (NLHIB) 
Angiogenesis and Myocardial Ischemia 
(NLHIB) 
Sujatha Sundaram, PhD 
Promotion of Apoptosis by Vitamin D 
Analogy EB 1099 in Infarcted Breast 
Tumor Cells (NCI) 
Urology |
| John A. Hranst, MB, BC |
| The Prostate Cancer Prevention Trial 
(SWOG) |
| Selenium and Vitamin E Cancer 
Prevention Trial (SELECT) |

Vascular

Jack L. Cronenwett, MD 
Northeast New England Vascular Surgery 
Quality Improvement Initiative (NHE)

Mark F. Fillingham, MD 
Aortic Aneurysm Wall Stress and Rupture 
Risk (NLHIB) 
Richard J. Powell, MD 
Endothelial Cell Control of Smooth 
Muscle Cell Matrix (NLHIB) 
Marc Scherrehorne, MD 
Ultrasound Screening for Abdominal 
Aortic Aneurysm (CAAMS)