

The Program

of

The Eighty-Fourth Annual Meeting

of

**THE AMERICAN
BRONCHO-ESOPHAGOLOGICAL
ASSOCIATION**

**Friday and Saturday
April 30 – May 1, 2004**

**JW Marriott Desert Ridge Resort & Spa
Phoenix, Arizona**



PURPOSE

The purpose of this program is to provide Otolaryngologists–Head and Neck Surgeons, Pulmonologists, Gastroenterologists and other interested physicians, clinicians, and scientists with an opportunity to update their knowledge of diseases involving the upper aerodigestive tract.

EDUCATIONAL OBJECTIVES

- ◆ The aim of these scientific sessions is to provide physicians with up-to-date information pertinent to the clinical evaluation and endoscopic management of laryngeal, tracheobronchial, and esophageal disorders.
- ◆ Basic and clinical studies addressing structure, function, and diseases of the aerodigestive tract, and disorders of swallowing, voice, and airways will be addressed.
- ◆ Special focus will be placed on issues relevant to Pediatric Broncho-Esophagology.
- ◆ A variety of research regarding innovative techniques and instrumentation, as well as discussions of relevant illnesses and disorders associated with broncho-esophagology, will be presented for discussion.

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the American Academy of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNSF) and the American Broncho-Esophagological Association (ABEA). The AAO-HNSF is accredited by the ACCME to provide continuing medical education for physicians.

The AAO-HNS designates this educational activity for a maximum of 6.75 category 1 credits toward AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

EDUCATIONAL OBJECTIVES (cont.)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Disclosure

In accordance with ACCME and AAO-HNSF policies, all faculty members will disclose relevant financial relationships with commercial entities and will disclose their intent to discuss drugs or devices or the uses of drugs or devices that have not been approved by the Food and Drug Administration (FDA)

Notice about Off-Label Use Presentations

AAO-HNSF meetings may include presentations involving drugs or devices, or uses of drugs or devices that have not been approved by the FDA.

The FDA restricts the type of information that may be disseminated by or on behalf of suppliers of drugs and medical devices with respect to regulated products, including information about unapproved uses of approved drugs and devices (off-label uses). The FDA does not regulate the practice of medicine, and therefore does not prevent physicians from independently teaching, describing, performing or prescribing off-label uses of drugs or devices. The FDA has also said that it is the responsibility of the physician to determine the FDA clearance status of each drug or device that he or she wishes to use in clinical practice.

AAO-HNSF is committed to the free exchange of medical education. Inclusion of any presentation in the program, including presentations on off-label uses, does not imply an endorsement of AAO-HNSF of the uses, products, or techniques presented.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

**OFFICERS, COUNCIL MEMBERS, COMMITTEE
CHAIRS, and REPRESENTATIVES
2003–2004**

President:

Charles N. Ford, MD – Madison, WI

President-Elect:

Steven M. Zeitels, MD – Boston, MA

Vice President:

Jonathan E. Aviv, MD – New York, NY

Secretary:

R. Kim Davis, MD – Salt Lake City, UT

Treasurer:

Clarence T. Sasaki, MD – New Haven, CT

Editor:

Gady Har-El, MD – Brooklyn, NY

Chair, Awards and Thesis Committee:

Peak Woo, MD – New York, NY

Chair, Difficult Airway Committee:

Ian Jacobs, M.D. – Philadelphia, PA

Chair, Foreign Body Accidents Committee:

Charles M. Myer, III, MD - Cincinnati, OH

Chair, International Relations Committee:

Robin T. Cotton, MD – Cincinnati, OH

Chair, Oncology Committee:

R. Kim Davis, MD – Salt Lake City, UT

Chair, Pharyngeal Esophageal Committee:

Gregory N. Postma, MD – Winston-Salem, NC

Chair, Research and Education Committee:

Mark S. Courey, MD – Nashville, TN

Chair, Technology Committee:

J. Scott McMurray, MD – Madison, WI

**Representative, The American Academy of
Otolaryngology – Head and Neck Surgery:**

Gregory A. Grillone, MD – Boston, MA

Webmaster:

Michael A. Rothschild, MD - New York, NY

Representatives to the Board of Governors:

Jonathan E. Aviv, MD; Gregory N. Postma, MD; J. Scott McMurray, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

At Large Council Members:

Ellen S. Deutsch, MD; Peter J. Koltai, MD; James A. Koufman, MD

12:30 PM

Friday, 30 April 2004

**BUSINESS MEETING
ABEA MEMBERS ONLY**

Announcements

Election of New Members

Active Members

Senior Members

Corresponding Members

Honorary Members

Introduction of New Members

Comments by Proposer

**Presentation of ABEA Pins and
Certificates**

Granting of Senior Membership Status

Noel Cohen

George Conner

Charles W. Cummings

Charles W. Gross

Leonard Hays

In Memoriam –

James Ryan Chandler 3/10/04

George Ferguson 2003

Thomas W. Johnson 10/26/2000

Peter Latella 2003

William W. Montgomery 11/7/03

Irving L. White 2/1/03

Election of Nominating Committee

Appointment of Auditing Committee

New Business

Old Business

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

**PRESIDENTS
1917–2004**

1917	Chevalier L. Jackson, MD
1918	Hubert Arrowsmith, MD
1919	John W. Murphy, MD
1920	Henry L. Lynah, MD
1921	Harris P. Mosher, MD
1922	Samuel Iglauer, MD
1923	Robert C. Lynch, MD
1924	Ellen. J. Patterson, MD
1925	William B. Chamberlin, MD
1926	D. Crosby Greene, MD
1927	Sidney Yankauer, MD
1928	Charles J. Imperatori, MD
1929	Thomas E. Carmody, MD
1930	Henry B. Orton, MD
1931	Louis H. Clerf, MD
1932	Richard McKinney, MD
1933	Waitmam F. Zinn, MD
1934	Henry Hall Forbes, MD
1935	H. Marshall Taylor, MD
1936	Joseph C. Beck, MD
1937	Gordon Berry, MD
1938	John Kernan, MD
1939	Lyman Richards, MD
1940	Gabriel Tucker, MD
1941	W. Likely Simpson, MD
1942	Robert L. Morehead, MD
1943	Robert L. Morehead, MD
1944	Carlos E. Pitkin, MD
1945	Carlos E. Pitkin, MD
1946	Robert M. Lukens, MD
1947	Millard F. Arbuckle, MD
1948	Paul H. Holinger, MD
1949	Leroy A. Schall, MD
1950	Chevalier L. Jackson, MD
1951	Herman J. Moersch, MD
1952	Fred W. Dixon, MD
1953	Edwin N. Broyles, MD
1954	Clyde A. Heatly, MD
1955	Daniel S. Cunning, MD
1956	Clarence W. Engler, MD
1957	Walter B. Hoover, MD
1958	Francis W. Davidson, MD
1959	Verling K. Hart, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

PRESIDENTS (Continued)

1960	F. Johnson Putney, MD
1961	Alden H. Miller, MD
1962	Joseph P. Atkins, MD
1963	Stanton A. Friedberg, MD
1964	Charles N. Norris, MD
1965	Daniel C. Baker, Jr., MD
1966	Blair W. Fearon, MD
1967	Francis E. LeJeune, MD
1968	Charles F. Ferguson, MD
1969	Arthur M. Olsen, MD
1970	Richard W. Hanckel, MD
1971	John R. Ausband, MD
1972	John S. Knight, MD
	Richard A. Rassmussen, MD
1973	Gabriel F. Tucker, Jr., MD
1974	Howard A. Andersen, MD
1975	Walter H. Maloney, MD
1976	Seymour R. Cohen, MD
1977	Paul H. Ward, MD
1978	James B. Snow, Jr., MD
1979	Joyce A. Schild, MD
1980	Loring W. Pratt, MD
1981	M. Stuart Strong, MD
1982	Bernard R. Marsh, MD
1983	John A. Tucker, MD
1984	Frank N. Ritter, MD
1985	William R. Hudson, MD
1986	David R. Sanderson, MD
1987	C. Thomas Yarrington, Jr., MD
1988	Robert W. Cantrell, MD
1989	H. Bryan Neel, III, MD
1990	Gerald B. Healy, MD
1991	Charles W. Cummings, MD
1992	Lauren D. Holinger, MD
1993	Haskins K. Kashima, MD
1994	Eiji Yanagisawa, MD
1995	Robert H. Ossoff, DMD, MD
1996	Stanley M. Shapshay, MD
1997	Rodney P. Lusk, MD
1998	W. Frederick McGuirt, Sr., MD
1999	Paul A. Levine, MD
2000	Ellen M. Friedman, MD
2001	Robin T. Cotton, MD
2002	Peak Woo, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

2003 Charles N. Ford, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

1:00 PM

Friday, 30 April 2004

PRESIDENTIAL ADDRESS:

Charles N. Ford, MD – Madison, WI

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

1:05 PM

Friday, 30 April 2004

INTRODUCTION OF GUEST OF HONOR

Charles N. Ford, MD

GUEST OF HONOR:

MINORU HIRANO, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

GUESTS OF HONOR
1951–2004

1951	Fernand Eeman, MD – Ghent, Belgium
1959	Louis Clerf, MD – Saint Petersburg, FL
1961	W. Likely Simpson, MD – Memphis, TN
1962	Edwin N. Broyles, MD – Baltimore, MD
1963	Sam E. Roberts, MD – Kansas City, MO
1964	Lyman Richards, MD – Wellesley Hills, MA
1965	Berling K. Hart, MD – Charlotte, NC
1966	Julius W. McCall, MD – Cleveland, OH
1967	Francis W. Davidson, MD – Danville, PA
1968	Dean M. Lierle, MD – Iowa City, IA
1969	Leroy A. Schall, MD – Barnstable, MA
1970	Herman J. Moersch, MD – Rochester, MD
1971	Louis Clerf, MD – Saint Petersburg, FL
1972	Joseph P. Atkins, MD – Philadelphia, PA
1973	Ricardo T. Acuna – Mexico City, Mexico
1974	Paul H. Holinger, MD – Chicago, IL
1975	Arthur M. Olsen, MD – Rochester, MN
1976	Francis LeJeune, MD – New Orleans, LA
1977	Alden H. Miller, MD – Los Angeles, CA
1978	Charles Norris, MD – Philadelphia, PA
1979	Charles F. Ferguson, MD – Osterville, OH
1980	Emily Lois Van Loon, MD – Philadelphia, PA
1981	Donald Proctor, MD – Baltimore, MD
1982	Frank D. Lathrop, MD – Pittsford, VT
1983	John E. Bordley, MD – Baltimore, MD
1984	Gabriel F. Tucker, MD – Chicago, IL
1985	Stanton A. Friedburg, MD – Chicago, IL
1986	F. Johnson Putney, MD – Charleston, SC
1987	Howard A. Anderson, MD – Rochester, MN
1988	John Paul Frazer, MD – Rochester, MN
1989	Paul H. Ward, MD – Los Angeles, CA
1990	D. Thane R. Cody, MD – Jacksonville, FL
1991	M. Stuart Strong, MD – Boston, MA
1992	Bruce Benjamin, MD – Sydney, Australia
1993	David R. Sanderson, MD – Scottsdale, AZ
1994	Michael E. Johns, MD – Baltimore, MD
1995	John A. Kirchner, MD – Woodbridge, CT
1996	Robert W. Cantrell, MD – Charlottesville, VA
1997	Eiji Yanagisawa, MD – New Haven, CT
1998	Lauren Holinger, MD – Chicago, IL
1999	William R. Hudson, MD – Durham, NC
2000	Robert H. Ossoff, DMD, MD – Nashville, TN
2001	Trevor J. I. McGill, MD – Boston, MA
2002	Flavio Aprigliano, MD – Rio de Janeiro, Brazil
2003	Stanley M. Shapshay, MD – Boston, MA
2004	Minoru Hirano, M.D. – Kurume, Japan

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

*** Indicates non-member**

Friday 30 April 2004

SESSION #1: TRACHEA

Moderator: Dana Thompson, MD

Rochester, MN

1:10PM

Friday, 30 April 2004

**Response of Laryngeal Motor Neurons to
Hyperventilation Induced Apnea**

Robert Berkowitz, MD, FRACS

*Qi-Jian Sun, PhD **

*Paul M. Pilowsky, MBBS, PhD **

Victoria, Australia

OBJECTIVES: Determine the response of laryngeal motoneurons to hyperventilation-induced apnea.

STUDY DESIGN: Animal experimental

METHODS: Posterior cricoarytenoid (PCA), cricothyroid (CT), and laryngeal constrictor (LCon) motoneurons were studied extracellularly during mechanical hyperventilation in anesthetized rats.

RESULTS: PCA and CT motoneurons displayed an inspiratory firing pattern that remained synchronous with phrenic nerve discharge (PND) during both normal- and hyperventilation. LCon motoneurons displayed post-inspiratory phasic activity that disappeared before loss of PND during hyperventilation, and recovered after return of PND following resumption of normal ventilation. Some LCon motoneurons developed tonic activity during phrenic apnea that was inhibited during the early phase of return of PND.

CONCLUSIONS: Inspiratory laryngeal and phrenic motoneurons appear to receive a common respiratory input. In comparison, LCon motoneurons display increased sensitivity to hypocapnea. Tonic activity of Lcon motoneurons during phrenic apnea supports the observation that the glottis is closed during apnea. Inspiratory inhibition of this tonic activity is essential for recovery following a period of apnea, and failure of this to occur could explain certain clinical situations where obstructive apnea supervenes following a period of central apnea, particularly in sudden infant death syndrome.

1:18 PM

Friday, 30 April 2004

**Correlation of Pneumonia Score with Electronic
Nose Signature: A Prospective Study**

*Neil G. Hockstein, MD **

*Erica R. Thaler, MD **

*Daniel D. Lee, PhD **

*C. William Hanson, III, MD **

Philadelphia, PA

PURPOSE: To demonstrate the use of an electronic nose to discriminate between patients diagnosed with tracheobronchial or pulmonary infection and those without infection.

DESIGN: Prospect study of twenty-eight mechanically ventilated patients.

METHODS: After approval from the IRB, mechanically ventilated patients in a surgical intensive care unit were identified and enrolled. Clinical data including: temperature, white blood cell count, character and quantity of tracheal secretions, PaO₂/FiO₂ ratio, and chest x-ray readings were collected and an infection score between 0 and 10 was calculated. Exhaled gas was sampled from the expiratory limb of the ventilator circuit. The gases were assayed using a commercially available electronic nose. Linear canonical analysis was used to differentiate between patients based on a breakpoint pneumonia score of 5.

RESULTS: Twenty-eight patients were studied. Thirteen patients had infection scores greater than 5 and fifteen had scores less than five. Using linear canonical projections, the electronic nose was able to discriminate between the two groups.

CONCLUSIONS: Radiographic studies, diagnostic bronchoscopy, and infection scores have been employed in the diagnosis of tracheobronchial and pulmonary infection, but there is currently no gold-standard test. The electronic nose is a new technology that is inexpensive, non-invasive, and portable. We demonstrate its ability to predict infection based on a well-recognized scoring system. This technology promises to serve as diagnostic adjunct in the management of tracheobronchial and pulmonary infection.

1:26 PM

Friday, 30 April 2004

**Flexible Bronchoscopic Removal of a Distal
Bronchial Foreign Body with Cine-Fluoroscopic
Guidance**

Ian N. Jacobs, MD
*Neil G. Hockstein, MD **
Philadelphia, PA

PURPOSE: To report a case of the removal of an aspirated tongue-ring from a right lower lobe distal bronchus using cine-fluoroscopic guidance.

DESIGN: Case report.

METHOD: A 15 year-old female, who reported swallowing her tongue-ring one week prior to presentation, presented to the emergency department with cough and bloody sputum. A chest x-ray demonstrated a radio-opaque foreign body (tongue-ring) in the right lower lobe. Attempts with both rigid and flexible bronchoscopy failed to localize the foreign body. Under fluoroscopic guidance, the foreign body was identified in a right lower lobe distal bronchus; it could be visualized from a distance with a 3.5mm flexible bronchoscope. An endobronchial biopsy forceps was passed through the suction port of the bronchoscope, but the view of the foreign body was obstructed by the biopsy forceps. The bronchoscope could not be advanced closer to the foreign body as its diameter was greater than that of the bronchus. Under cine-fluoroscopic guidance, the endobronchial biopsy forceps was used to grasp the foreign body.

RESULTS: Photodocumentation including bronchoscopic and fluoroscopic images will be presented. The foreign body was successfully removed. Post-removal chest x-ray was normal; there was no pneumothorax or significant atelectasis. The patient was discharged to home the following day.

CONCLUSION: Removal of distal bronchial foreign bodies can be challenging as the bronchial diameter may preclude the advancement of the bronchoscope. Cine-fluoroscopy is a safe therapeutic adjunct which may avert the need for thoracotomy.

**Primary Cricotracheal Resection with
Thyrotacheal Anastomosis for the Treatment of
Severe Subglottic Stenosis in Children and
Adolescents**

Jaime Penchyna-Grub, MD
Hiram Alvarez-Neri, MD
Juan D. Porras-Hernandez, MD
Gerado Blanco-Rodriguez, MD
Ruth Gonzalez, MD
Mexico City, Mexico
Michael J. Rutter, MD, FRACS
Cincinnati, OH

OBJECTIVE: To describe clinical outcomes with the cricotracheal resection (CTR) and end to end anastomosis technique in pediatric patients with severe subglottic stenosis in a tertiary-care pediatric teaching hospital in Mexico City.

METHODS: Prospective follow-up of all consecutive patients younger than 18 years of age with a Myer-Cotton's grade III or IV subglottic stenosis who underwent cricotracheal resection between May 1 2000 and March 31 2003. The frequency of each clinical outcome was calculated.

RESULTS: Twenty-two patients, 16 (72.7%) boys and 6 (27.3%) girls were included. Mean age at operation was 4.6 years (11 months - 16 years). Seventeen (77.3%) had stage III and 5 (22.7%) stage IV stenosis. Six (22.7%) had associated clinical conditions and 3 (13.6%) associated vocal cord mobility defects. All were tracheostomy dependent at presentation and none had previous airway surgery. Ten (45.5%) underwent one-stage surgery, 12 (54.5%) had a concomitant temporary tracheostomy.

Eighteen (81.8%) patients required a primary CTR, and 4 (18.2%) required an extended CTR. No intraoperative complications occurred. A patient with type I diabetes mellitus had anastomotic dehiscence on her fourth postoperative day. Seventeen (77.3%) patients developed postoperative granulation tissue that was endoscopically resected. Mean follow-up was 1.2 years (2 months- 2.8 years). No deaths occurred. The overall decannulation rate was 90.9%. Fifteen children (88.2%) with stage III and 5 (100%) with stage IV live a normal life without tracheostomy.

CONCLUSION: Partial cricoid resection with end-to-end anastomosis has been a feasible procedure with reproducible successful results among our patients.

1:42 PM

Friday, 30 April 2004

**Re-Epithelialization of Tracheal Allografts Prevents Rejection
After Immunosuppression Withdrawal**

Eric M. Genden, MD
*Satish Govindaraj, MD **
*Houtan Chaboki, MD **
*Heidi Cleven, BS **
*Elena Fedorova, PhD **
*Jonathan S. Bromberg, MD, PhD **
*Lloyd Mayer, MD **
New York, NY

BACKGROUND: Tracheal transplantation may represent a solution for the reconstruction of extensive tracheal airway defects. Prior work has demonstrated that tracheal epithelium is the target of rejection following tracheal transplantation. Recently, we have shown that immunosuppressed tracheal allografts undergo progressive re-epithelialization with recipient-derived tracheal epithelium. We hypothesized that re-epithelialization of tracheal allografts would prevent rejection after withdrawal of immunosuppression.

METHODS: BALB/c mouse tracheal grafts were transplanted orthotopically into either syngeneic (BALB/c) or allogeneic (C57/BL6) recipients. Recipients were 1) not treated with immunosuppression, 2) immunosuppressed with cyclosporine A (CsA) continuously, or 3) immunosuppressed for 48 days and then withdrawn from immunosuppression. Grafts were assessed for acute and chronic rejection by histology, electron microscopy, CD4/CD8 immunohistochemistry, and cartilage viability 10 days and 50 days following immunosuppression withdrawal. Heterotopic cardiac allografts and mixed lymphocyte reactions were performed on tracheal allograft recipients to assess for immune tolerance.

RESULTS: Tracheal allograft recipients that were immunosuppressed for a 48-day induction period followed by immunosuppression withdrawal, did not undergo acute (10 days) or chronic (50 days) rejection. Following immunosuppression withdrawal, the grafts maintained a ciliated epithelium and assessment via electron microscopy, lymphocyte subpopulation assays, and lamina propria analysis demonstrated that immunosuppression withdrawal did not result in tracheal allograft rejection. In vitro analysis suggests epithelial immune tolerance may be responsible for these observations.

CONCLUSIONS: Re-epithelialization of orthotopic tracheal allografts with recipient-derived mucosa prevents rejection of tracheal transplants in mice. Our findings suggest that tracheal transplantation may require only transient immunosuppression, which can be withdrawn following tracheal re-epithelialization.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

1:50 PM

Friday, 30 April 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

**RECOGNITION OF
CHEVALIER JACKSON AWARD RECIPIENTS
1959-2004:**

1959	Louis H. Clerf, MD
1960	(no award)
1961	Herman J. Moersch, MD
1962	Paul H. Holinger, MD
1963	Edwin N. Broyles, MD
1964	Leroy A. Schall, MD
1965	Herbert W. Schmidt, MD
1966	Paul G. Bunker, MD
1967	Joel Pressman, MD
1968	Verling K. Hart, MD
1969	Joseph P. Atkins, MD
1970	Anderson C. Hilding, MD
1971	Robert M. Lukens, MD
1972	Charles M. Norris, MD
1973	Arthur M. Olsen, MD
1974	Charles F. Ferguson, MD
1975	Shigeto Ikeda, MD
1976	Blair W. Fearon, MD
1977	Francis W. Davidson, MD
1978	Seymour R. Cohen, MD
1979	M. Stuart Strong, MD
1980	DeGraff Woodman, MD
1981	Albert H. Andrews Jr., MD
1982	Gabriel F. Tucker, Jr., MD
1983	Howard A. Andersen, MD
1984	Paul H. Ward, MD
1985	Bruce N. Benjamin, MD
1986	Loring W. Pratt, MD
1987	Robert S. Fontana, MD
1988	Charles W. Cummings, MD
1989	Bernard R. Marsh, MD
1990	David R. Sanderson, MD
1991	William W. Montgomery, MD
1992	John A. Tucker, MD
1993	Gerald B. Healy, MD
1994	Vincent J. Hyams, MD
1995	Lauren D. Holinger, MD
1996	Stanley M. Shapshay, MD
1997	Robert H. Ossoff, MD
1998	John Frederickson, MD
1999	Haskins Kashima, MD
2000	Eiji Yanagisawa, MD
2001	William W. Montgomery, MD
2002	Jack L. Gluckman, MD
2003	Ellen M. Friedman, M.D.
2004	Robin T. Cotton, M.D.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

2:00 PM

Friday 30 April 2004

CHEVALIER JACKSON AWARD

Presenter: Charles N. Ford, MD

*Recipient: **Robin T. Cotton, MD***
Cincinnati, OH

CHEVALIER JACKSON LECTURE

**Transnasal Esophagoscopy: From New Frontier to
the Future of Esophagoscopy**

Jonathan Aviv, MD

New York, NY

The purpose of this talk is to trace the evolution of esophagoscopy from its inception over 100 years ago to its current state of the art. In so doing, the positive consequences that will likely result because of the transition from rigid, per oral esophagoscopy to flexible, transnasal esophagoscopy will be described. Several of the seminal advances in esophagoscopy over the past century were the result of innovations by otolaryngologists. Until recently, the esophagoscopy performed by otolaryngologists has primarily been a rigid, transoral approach performed under general anesthesia. However, beginning in the late 1990's esophagoscopy began to be performed by otolaryngologists with a thin, flexible scope passed transnasally with the patient not sedated. This approach, called Transnasal Esophagoscopy (TNE), will have, or already has, the following advantages over traditional, peroral, rigid or flexible esophagoscopy: 1. enhanced patient safety 2. improved survival of esophageal adenocarcinoma 3. increased practice efficiency. Within a short time TNE will be the primary manner in which the esophagus is examined by clinicians. It will be up to the otolaryngology community at large to apply the same levels of expertise that currently exist with respect to laryngeal disease to esophageal disease.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Friday 30 April 2004

SESSION #2: LARYNGEAL

Moderator: Clark Rosen, MD
Pittsburgh, PA

2:20 PM

Friday 30 April 2004

**How Extensive Must Surgical Resection Alone Be
for Early Supraglottic Cancer?**

Jochen A. Werner, MD

*Anja A. Dunne, MD **

Marburg, Germany

R. Kim Davis, MD

Salt Lake City, UT

Twenty-one patients with clinical T1 or T2 primary squamous cell carcinomas with N0 or N1 neck disease were treated by endoscopic supraglottic laryngectomy coupled with neck dissection(s). Endoscopic resection was standardized by the senior authors whereas neck dissections varied from classical modified radical neck dissection to selective neck dissection of Levels I * IV. Clinically four patients were T1, seventeen patients T2, and four patients N1. Pathologically three T2 patients were upstaged to T3. With an average follow up of 28 months there have been no local or regional failures. No patients required tracheotomy, and only one patient long-term tube feeding.

Initially patients were treated by bilateral neck dissections, but as no patients with lateralized N0 or N1 primary cancers were found to have contralateral cancer on pathological evaluation, only ipsilateral dissection was subsequently performed. Refinements in endoscopic resection and the rationale for decreasing the extent of neck dissection will be discussed. The potential role of the sentinel node concept in more midline (infrahyoid epiglottic) lesions will be introduced.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

2:28 PM

Friday 30 April 2004

ABSTRACT WITHDRAWN

2:36 PM

Friday 30 April 2004

**Bipolar Radiofrequency Induced Thermotherapy
(RFITT) for the Treatment of Spasmodic Dysphonia**

Jean Abitbol, MD

Marc Remacle, MD, PhD

*Isabelle Plouin-Gaudon, MD **

*Georges Lawson, MD**

Yvoir, Belgium

INTRODUCTION:

The symptoms of Adductor Spasmodic Dysphonia are most commonly palliated by periodic botulinum toxin injections. The need for repeated injections, difficulty in obtaining injections and cost make this form of treatment intolerable for some patients. To address these concerns we propose a new treatment approach utilizing trans-oral recurrent nerve coagulation. The goal is to weaken the force of laryngeal closure during spasms by creating fibrosis of the terminal branches of one recurrent nerve through coagulation.

TECHNIQUE:

Under general anesthesia without paralysis, an electrical stimulator is used to identify the region within the thyroarytenoid muscle that produces the greatest contraction with minimal stimulation. The radiofrequency laryngeal probe or electrocautery device is introduced into this position, and energy is delivered.

RESULTS:

The region of maximal stimulation is usually located just lateral and anterior to the vocal process of the arytenoids. Between 1989 and 2000, 7 patients were treated with electrocautery. To achieve remission of spasms 3 patients needed 3 sessions, 4 needed 2 sessions and 1 only 1 session. Since 2001, 3 patients have achieved remission of spasms with a single treatment with radiofrequency during which 80 joules were delivered. Voice results are comparable to those obtained with botulinum toxin. Initially the voice is breathy and laryngeal examination shows complete vocal fold immobility. After 1-2 months, the voice improves and examination reveals unilateral hypomobility.

CONCLUSION:

Trans-oral recurrent nerve coagulation is an effective alternative to Botulinum toxin injections.

2:44 PM

Friday 30 April 2004

**Histological Review of Cidofovir Treated
Respiratory Papillomatosis**

*Fred Lindsay, DO, MD **

Seth Pransky, MD

Douglas Brewster, MD

Anthony Magit, MD

Robert Stabley, MD

Paul Schick, MD

San Diego, CA

David Bloom, MD

Seattle, WA

OBJECTIVE: Recurrent Respiratory Papillomatosis (RRP) is currently the most common benign lesion of the larynx in children. The clinical course of the disease is variable and often requires repetitive surgical interventions to maintain the airway. Mortality occurs from disease spread to the tracheobronchial tree. Cidofovir is an acyclic nucleotide phosphonate with activity against members of the DNA virus family, including human papillomavirus and is currently being used as an intralesional injection to control extensive disease caused by RRP. Development of local malignant change secondary to use of cidofovir was an initial concern when cidofovir was first introduced. The histopathologic findings from biopsy specimens from children treated with multiple injections of cidofovir has not been previously reported.

STUDY DESIGN: Retrospective review of intraoperative histologic biopsies and charts of patients from January 1, 1995 through May 1, 2002 before and after treatment with intralesional Cidofovir.

RESULTS: Ninety-six specimens were evaluated by two blinded pathologists. One case was benign skin. No cases of dysplasia were identified. Ten criteria for making a diagnosis of dysplasia in this process were identified. The most commonly identified finding was an increased nucleus to cytoplasm ratio in 8/95 (12 %). There were no cases of abnormal mitoses, prominent nucleoli, cellular or nuclear enlargement.

CONCLUSION: This is the first report of pathologically evaluated RRP specimens before and after treatment with intralesional Cidofovir. There appears to be no significant dysplastic changes in the specimens analyzed.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

2:52 PM

Friday 30 April 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

3:00 PM

Friday 30 April 2004

BREAK WITH EXHIBITORS

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

3:30 PM

Friday 30 April 2004

PANEL DISCUSSION

**Pharyngoesophageal Subcommittee: The
Otolaryngologist in the Evaluation and Management
of Dysphagia**

Moderator:

Gregory Postma, MD
Winston-Salem, NC

Jonathan Aviv, MD
New York City, NY

Milan Amin, MD
Philadelphia, PA

Peter Belafsky, MD
San Diego, CA

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Friday 30 April 2004

SESSION #3: HOW I DO IT?

Moderator: J. Paul Willging, MD
Cincinnati, OH

4:20 PM

Friday 30 April 2004

**How I Do It: Use of Injectable Silicone in
Laryngotracheal Reconstruction**

*Yolanda D. Heman-Ackah, MD **
Robert T. Sataloff, MD, DMA
Philadelphia, PA

ABSTRACT: We describe a technique for endolaryngeal stenting in the treatment of subglottic stenosis via a case report. The patient had hypertrophy of the cricoid cartilage from relapsing otychondritis that resulted in 100% stenosis of the subglottic airway. The patient underwent laryngotracheal reconstruction, with core resection of the cricoid cartilage and temporalis fascia underlay. The patient did not tolerate stenting of the neo-lumen with traditional, pre-fabricated endolaryngeal stents. Injectable silicone, commonly used to prepare ear canal molds for hearing aid construction, was injected into the neo-endolarynx to serve as an endolaryngeal stent. The patient tolerated the injectable silicone well and had a patent airway with epithelialization at 8 months follow-up. Injectable silicone is a suitable medium for endolaryngeal stenting. It conforms to the configuration of the individual's airway, is well tolerated, and is a useful alternative to pre-fabricated stents in laryngotracheal reconstruction.

4:25 PM

Friday 30 April 2004

**Repair of a Membranous Tracheal Tear in Gastric
Transposition with Minimally Invasive Cardiac
Instrumentation**

Mark D. DeLacure, MD, FACS
*Lawrence Glassman, MD, FACS **
*Theresa Tran, MD **
New York, NY

ABSTRACT: Repair of a Membranous Tracheal Tear in Gastric Transposition with Minimally Invasive Cardiac Instrumentation

PURPOSE: To familiarize the non-cardiac surgeon with instrumentation commonly utilized in minimally invasive cardiac surgery which we have used to advantage in the endoluminal repair of the membranous trachea.

DESIGN: Case report of endoluminal repair of a membranous tracheal tear using the Heartport-TM system instrumentation.

RESULTS: A membranous tracheal tear was created during the surgical salvage of a chemo-radiation failure squamous cell carcinoma of the cervical esophagus in a 42 year-old patient. Due to the vertical length of the tear, only one lung could be effectively ventilated through mainstem endotracheal intubation, resulting in severe desaturation and extremis conditions intraoperatively. Heartport-TM instrumentation was used to perform direct primary closure of the tear by working through the transected tracheal lumen (concurrent total laryngopharyngectomy), thus avoiding the requirement for thoracotomy and/or muscle flap reconstruction. Effective bipulmonary ventilation was reestablished immediately upon completion of the repair and the resection and reconstruction were completed. The patient went on to complete and uncomplicated tracheal wound healing.

CONCLUSIONS: Minimally invasive direct coronary artery bypass and port access cardiac valvular surgery have been made possible by the development of advanced instrumentation that is commonly available in major medical centers, but otherwise unknown to the head and neck surgeon. Familiarity with such systems may be of great benefit in selected non-cardiac circumstances and applications and may minimize the requirement for additional operative procedures.

4:30 PM

Friday 30 April 2004

Suprastomal Stenting – How I Do It

*Michael J. Rutter, MD, FRACS **
Cincinnati, OH

The traditional suprastomal stent has been the rigid teflon stent originally designed by Albouker. While this is very effective, prolonged stenting may result in granulation tissue formation or restenosis at the distal end of the stent. Additionally if the stent inadvertently overlaps the tracheotomy site, there is risk of loss of the airway during changing of the tracheotomy tube.

Since 2000 we have converted to using a segment of a silicone T-tube as a suprastomal stent. This had the advantages of minimizing the risk of distal granulation tissue formation, and of permitting the stent to overlap the tracheotomy site, thereby eliminating the dead-space between the distal end of the stent and the tracheotomy tube. These stents may be left in place for up to 6 months if required.

The technique for placing these suprastomal stents is presented, as are the results from over 30 such cases.

4:35 PM

Friday 30 April 2004

**Minimizing the Residual Pouch in Endoscopic
Staple-Assisted Esophagodiverticulostomy (ESED)
for Zenker's Diverticula**

William J. R. Richtsmeier, MD, PhD
Cooperstown, NY

ABSTRACT: Objectives: All three staplers suitable for Endoscopic Staple-Assisted Esophagodiverticulostomy (ESED) leave a residual pouch of 1.5 cm when unmodified. The small Zenker pouch is a major challenge for ESED. This study tested the stapler dimensions so as to identify limitations they impose on ESED. Combining the ESED with additional endoscopic suturing could extend the incision and consequently the myotomy.

STUDY DESIGN: Zenker's diverticulum residual pouch measurements were performed using a previously reported, latex glove, model, and patient experience.

METHODS: Two stapler designs were compared measuring the residual pouch length for both the stock and modified staplers. One other stapler model cannot be modified without damaging the mechanism. The endostitch (US Surgical) was used to place an additional suture at the apex of the staple line, allowing cutting between the staples while leaving a closed distal incision.

RESULTS: The modified-anvil staplers gave a smaller residual pouch but had differing properties. An additional septal reduction can be accomplished by suturing the area distal to the staple line and incising beyond the stapler cut. The absolute residual amount of pouch with an additional myotomy is 3mm. The combined staple-suture technique has proved safe thus far.

CONCLUSIONS: To provide maximum efficacy, the surgeon needs to be aware of the stapler differences. Modifications of the staplers may decrease the depth of the residual pouch but carries an added liability. Minimum residual pouch can be achieved with a combination of stapler and suture techniques but is more technically demanding than the original ESED description.

4:40 PM

Friday 30 April 2004

**New Ligature Technique and Instrument to Control
Difficult Pharyngeal and Laryngeal Hemorrhage**

*Professor György Lichtenberger, MD, PhD **
Budapest, Hungary

ABSTRACT: New Ligature Technique and Instrument to Control Difficult Pharyngeal and Laryngeal Hemorrhage The bleeding by or after operations may cause serious problems in narrow anatomical areas such as the pharynx and larynx. Placing sutures in this area is cumbersome and difficult. A "Ligature Instrument" has been developed to alleviate this problem. The Ligature Instrument and Technique was developed in cadaver and in vitro model experiments in an effort to greatly simplify suturing of vessels in the base of the tongue, larynx, hypopharynx and oropharynx. The instrument consists of a tip structure that will accept a suture and with one simple thrust of the handle will encircle the blood vessel allowing easy ligation. The further developed and designed instrument will be commercially available by the STORZ Co. soon. The instrument and technique was utilized to control operative hemorrhage in 26 cases: 4 patients with base of the tongue lesions, 7 patients with hypopharyngeal surgery and most helpful was in lesions of the pharynx in 15 cases. The best results were achieved to control difficult tonsillectomy hemorrhage but its use was limited for laryngeal bleeding. Full details of the Ligature Instrument will be presented. The advantages of this Ligature Technique are simple, straightforward, and safe as compared to other suture methods.

4:45 PM

Friday 30 April 2004

**Prefabricated Composite Grafts for Tracheal
Reconstruction: A New Technique**

*Benjamin Malkin, BS **

*Marita S. Teng, MD **

*Mark L. Urken, MD **

New York, NY

ABSTRACT: Successful laryngotracheal reconstruction requires both structurally supported tissue that withstands airway pressure changes and well-vascularized epithelial lining to prevent granulation and stricture formation. For circumferential defects, end-to-end reanastomosis achieves favorable results, but for long-segment or large non-circumferential defects, no proven methods have emerged. Several animal studies describe prefabricated soft tissue flaps wrapped around synthetic materials or cartilage. However, use of prefabricated flaps for human airway reconstruction has not been reported.

We present a patient with laryngeal stenosis and tracheostomy dependence following chemoradiation for hypopharyngeal carcinoma. In an attempt to widen her laryngeal airway, a thyrotracheal autograft, previously described by our institution, was performed. A segment of hemitrachea was moved cephalad using the thyroid gland as a "vascular carrier," thus creating an 8cm-long trough inferiorly which involved a 40% defect of the anterior tracheal circumference. Severe radiation damage to the cervical skin precluded use of traditional tracheoplasty methods.

We employed a technique whereby costal cartilage strips were implanted into a radial forearm free flap, designed to mimic the anterior tracheal wall. Four weeks later, the prefabricated composite flap was harvested and placed into the defect, using forearm skin as tracheal lining. The cervical skin defect was closed with an island deltopectoral flap. A soft stent was kept in the neo-trachea for three weeks, leaving a tracheostomy tube inferiorly. The tracheostomy was subsequently closed using local advancement flaps, and the patient currently maintains an excellent airway. We conclude that prefabricated composite free flaps are an attractive option for certain challenging cases of airway reconstruction.

4:50 PM

Friday 30 April 2004

**Fiberoptic Endoscopic Management of Zenker's
Diverticulum**

Eric M. Genden, MD

*Jason Altman, MD **

New York, NY

ABSTRACT: Background: Endoscopic management of Zenker's diverticulum is traditionally managed with a suspension laryngoscope and either an endo-stapler or CO2 LASER. Patients with cervical spine pathology may not be candidates for endoscopic management because access to the diverticulum may be difficult or result in mucosal injury.

METHODS: We present a new method for endoscopic management of Zenker's diverticulum using a fiberoptic esophagoscope in place of a suspension laryngoscope to assist placement of the endo-stapler in patients that are who are unable to undergo suspension laryngoscopy for endoscopic management of a Zenker's diverticulum.

RESULTS: Fiberoptic endoscopic management of a Zenker's diverticulum is a safe and efficacious alternative to open treatment in patients who may otherwise require open treatment.

CONCLUSION: This new method for management of patients who are not candidates for rigid laryngoscopy represents an alternative to open surgical management.

4:55 PM

Friday 30 April 2004

**Glottic Resurfacing Utilizing Thin Acellular Human
Dermis**

*Gary Y. Shaw, MD **
Overland Park, KS

PURPOSE: This study details the use of thin acellular human dermis to resurface vocal folds denuded from surgical procedures or trauma.

FORWARD: Mucosal injuries of the glottis remain a therapeutic challenge. When denuded, particularly in the anterior commissure, the risk of web formation and scarring is significant. A variety of techniques have been attempted, including keels, stents, and steroid mitomycin applications. One potential way to limit scarring would be immediate resurfacing of the vocal fold. We present a technique of utilizing ultra thin (.17 - .26mm) acellular human dermis to resurface denuded injuries in the vocal fold. We have found this technique may offer a wide application to mucosal injuries in the larynx and subglottis.

STUDY DESIGN: Prospective study of four patients who have undergone vocal fold resurfacing with acellular human dermis. Two after excision of vocal fold web. One after mucosal avulsion after laryngeal trauma and one from excision of micro-invasive vocal fold cancer. All are followed postoperatively at six weeks, three months and six months with video stroboscopy, computerized acoustic analysis and perceptual analysis as performed by a blinded speech and language pathologist.

RESULTS:

All four patients maintained their grafts.
No web reformation occurred.
Vocal parameters improved postoperatively.

CONCLUSION: Thin dermal grafting may be considered as a potential option for vocal fold resurfacing and for possible use in other laryngeal and subglottic denuded injuries.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

5:00 PM

Friday 30 April 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

5:10 PM

Friday 30 April 2004

ADJOURN

7:00 AM

Saturday, 1 May 2004

**BUSINESS MEETING
ABEA MEMBERS ONLY**

Announcements

**Report of Nominating Committee
Election of New Officers**

Report of the Treasurer

Audit Committee Report

Report of Secretary

**Report of Editor
Webmaster Report**

Recognition of Departing Council Members

Old Business

New Business

Recognition of Departing Officers

Introduction of New President

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

SESSION #4: BASIC SCIENCE

Moderator: Mark E. Gerber, MD
Chicago, IL

8:00 AM

Saturday 1 May 2004

**The Role of Vascular Endothelial Growth Factor-A
in Recurrent Respiratory Papillomatosis**

Reza Rahbar, DMD, MD

*Sara Vargas, MD **

Trevor McGill, MD

Gerald Healy, MD

*Lawrence Brown, MD **

Boston, MA

OBJECTIVE: Vascular endothelial growth factor-A (VEGF-A) is known to play an important role in the angiogenic response essential for tumor growth in a variety of human and experimental tumors. This study was designed to investigate whether VEGF-A may play a role in the pathogenesis of recurrent respiratory papillomatosis.

DESIGN: IRB approved study

SETTING: Tertiary care pediatric medical center

PATIENTS: Five patients with history of respiratory papillomatosis. Age at the time of initial diagnosis ranged from 17 * 108 months (mean 41 months). All patients had involvement of right and left vocal cords. All patients required multiple endoscopic procedures; range (5-65, mean 30).

INTERVENTION: Formalin-fixed paraffin embedded sections of laryngeal squamous papillomas from five consecutive patients were examined by in situ hybridization for the presence of mRNAs for VEGF-A and its receptors VEGFR1 and VEGFR2. Biopsy sites include: vocal cord (N = 4) and subglottis (N=1).

RESULTS: Strong expression of VEGF-A mRNA was noted in the squamous epithelium of papillomas of all five patients. Strong expression of VEGFR1 and VEGFR2 was noted in the endothelial cells of the underlying vessels in all five patients.

CONCLUSION: The angiogenic growth factor VEGF-A is strongly expressed in the epithelium of squamous papillomas and VEGFR1 and VEGFR2 mRNAs are strongly expressed by underlying vascular endothelial cells suggesting an important role in the pathogenesis of recurrent respiratory papillomatosis.

8:08 AM

Saturday 1 May 2004

**STEVEN DEAN GRAY
RESIDENT ESSAY AWARD
1st Place**

**Acute Histologic Effects of Extra-esophageal Reflux
on Vocal Fold Healing**

Seth Cohen, MD, MPH *

*Shan Huang, MD **

C. Gaelyn Garrett, MD

Mark S. Courey, MD

Nashville, TN

PURPOSE: To evaluate the influence of extra-esophageal reflux (EER) on membranous vocal fold healing.

METHODS: A canine model was used. Native acid was suppressed with proton pump inhibitors. Standardized injuries were created along the length of each membranous vocal fold. Animals were then randomly assigned to 3 groups. EER was simulated in groups 1 and 2 by bathing the vocal folds every other day for 2 weeks with solutions of acid and pepsin at pH 2 and pH 6, respectively. Group 3 was treated in a similar fashion with saline. In addition, all experimental vocal folds were compared to untreated and uninjured vocal folds from animals being sacrificed for other reasons. Histologic examination was performed with hematoxylin and eosin and immunohistochemical analysis for fibronectin and procollagen I. A standardized area within each wound was analyzed in a blinded fashion using computer morphometrics.

RESULTS: Re-epithelialization was nearly complete in all injured groups. Overall, injured specimens had three times greater cellular infiltrate than the uninjured ($p \leq 0.001$, ANOVA), twice the concentration of fibronectin ($p \leq 0.001$, ANOVA), and twice as much procollagen I ($p \leq 0.001$, ANOVA). No significant differences or trends were identified for cellular infiltrate, fibronectin, or procollagen I within the injured groups ($p > 0.05$, Bonferroni t-test).

CONCLUSION: Acute wound healing did not appear to be influenced by the presence of acid and pepsin at pH 2 and 6 and these were not significantly different from wounds bathed with saline.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

STEVEN DEAN GRAY RESIDENT AWARD

The Steven Dean Gray Resident Award was established as part of the continuing legacy of Dr. Gray in order to recognize excellence in resident research in both laryngology and bronchoesophagology.

**RECIPIENTS OF THE
STEVEN DEAN GRAY RESIDENT AWARD**

- 2003 Sarah Hodges, M.D. - 1st
Randal Leung, MBBS - 2nd
2004 Seth Cohen, M.D. - 1st
Jonathan P. Lindman, M.D. - 2nd

8:16 AM

Saturday 1 May 2004

Radiographic Evaluation of Aspirated Metallic Foreign Bodies

*Richard D. Orgill, MD **

Thomas R. Pasic, MD

Mark Hoffman, MD

*Wally Pepler, PhD **

Madison, WI

PURPOSE: To determine if conventional or dual energy chest roentgenograms rule out aspirated metallic foil wrappers.

BACKGROUND: A 9 month-old male presented with persistent bronchitis and wheezing two weeks after a witnessed cough-choke episode while playing with foil wrapped candy. Repeated chest roentgenograms were negative for a metallic foreign body. Bronchoscopy revealed a multilayered 4 by 8 mm foil wrapper in the left main bronchus.

METHODS: Roentgenograms of 37 single layer and 6 multilayered metallic candy wrappers were obtained at standard exposure for pediatric chest films. These were repeated using 2 and 4 inches of Lucite to simulate pulmonary and mediastinal densities respectively. The aspirated metallic foreign body was also imaged on the surface of a synthetic thorax overlying both pulmonary and mediastinal tissues. All studies were then repeated using dual energy radiography.

RESULTS: None of the single layer metallic wrappers were detectable using conventional or dual energy radiography. The folded foil wrappers were not detectable until 16 layers (pulmonary tissue model) and 32 layers (mediastinal model) using both conventional and dual energy radiography. No images of the multilayered foreign body were detectable on the synthetic thorax model using both conventional and dual energy techniques.

CONCLUSION: Conventional and dual energy chest radiography do not reliably rule out the presence of metallic foil wrappers.

The Effect of PH and Pepsin on Gene Expression of Laryngeal Fibroblasts

*Riita Ylitalo, MD, PhD **

Stockholm, Sweden

*Susan L. Thibeault, PhD **

*Andrew Baugh, BS **

*Wenhua Li, MS **

Salt Lake City, UT

BACKGROUND: LPR is among the most important factors behind the development of inflammatory disorders of the upper airway. Pepsin has also been considered a possible key element in developing reflux aggravated laryngeal injury. The purpose of this study was to determine the effect of pepsin on gene expression measured during momentary low pH in laryngeal fibroblasts.

MATERIALS AND METHODS: Cell cultures were established from human postcricoidal (PC) mucosa and false vocal fold (FVF). Using real-time PCR gene expression of the following cytokines -- MMP-1, MMP-2, Decorin, VEGF, FGF-2, TGFB-1 and VEGF were analyzed in the following conditions: normal media, pH 4, pH 5, pepsin, pH 4 + pepsin, and pH 5 + pepsin.

RESULTS: FVF fibroblasts differed substantially from PC fibroblasts in regards to changes in gene expression. The only significant change caused by low pH and pepsin in FVF culture was increased gene expression in TGFB-1 that is an anti-inflammatory cytokine inducing angiogenesis.

In PC fibroblast culture the low pH together with pepsin increased the gene expression of TGFB-1, VEGF, FGF-2, MMP-1, MMP-2 and Decorin. These proteins are for instance critical mediators of wound repair, induce angiogenesis and vasculogenesis, and have been associated with tumor progression, poor treatment response, and poor survival in patients with esophageal adenocarcinomas, and in animal models.

CONCLUSIONS: Momentary low pH together with pepsin may induce gene expression changes that are different in FVF and PC tissue. These changes may explain the macroscopic changes seen in different parts of larynx in patients with LPR.

Saturday, 1 May 2004

BROYLES-MALONEY AWARD

The Broyles-Maloney Award was established to encourage advancement of the art and science of bronchoesophagology and closely related subjects. Competition for the award is limited to persons whose abstracts are submitted for inclusion in the Annual Scientific Program. The award is given for outstanding manuscript, thesis or accomplishments in bronchoesophagology, laryngology or related science.

**RECIPIENTS OF THE
BROYLES-MALONEY THESIS AWARD:**

1988	Richard A. Kosarek, MD
1989	(no award)
1990	Thomas F. Dowling, MD James A. Koufman, MD
1991	(no award)
1992	(no award)
1993	Jos. J.M. van Overbeek, MD, PhD
1994	Steven D. Gray, MD
1995	Jonathan E. Aviv, MD John H. Martin, PhD Ralph Sacco, MD Beverly Diamond, PhD Andrew Blitzer, MD, DDS
1996	(no award)
1997	Ira Sanders, MD Liancai Mu, PhD
1998	Nancy M. Bauman, MD Degiang Wang, MD Eric S. Luschei, PhD Debra M. Jaffe, MD
1999	Robert Berkowitz, FRACS Qi-Jian Sun, PhD John Chalmers, PhD Paul Pilowsky, PhD
2000	Asif Amirali, MD Greg Tsai, MD Nicole Schrader, MD Donald Weisz, PhD Ira Sanders, MD
2001	(no award)
2002	Shin-ichi Kanemaru, MD Hisayoshi Kojima, MD Akhmar Magrufov, MD Koichi Omori, MD Yasuyuki Hiratsuka, MD Shigeru Hirano, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Juichi Ito, MD
Yasuhiko Shimizu, MD
2003 Ira Sanders, M.D.
2004 Clarence T. Sasaki, M.D.

8:32 AM

Saturday 1 May 2004

BROYLES-MALONEY AWARD

Presenter: Peak Woo, M.D.

***Recipient:* Clarence T. Sasaki, M.D.**

Bile-Induced Laryngitis: Is There a Basis in Evidence?

Clarence T. Sasaki, MD

*James Marotta, MD **

*Jagdeep Hundal, MD **

*Jen Chow, MD **

New Haven, CT

*Richard Eisen, MD **

Greenwich, CT

Most agree that bile reflux occurs with regularity in an otherwise healthy population and that biliary and acid reflux may exert a synergistic role in damaging esophageal mucosa. But to what extent is laryngeal mucosa at risk? We constructed a saline controlled rat model (n=55) in which active component solutions of bile, taurocholic acid (TA) and chenodeoxycholic acid (CDA) were applied to intact laryngeal mucosa at varying pHs. Histologic sampling of laryngeal mucosa allowed inflammation scores to be generated by a pathologist blinded to the solutions used. Both TA at acid pH and CDA at basic pH preferentially induced statistically greater inflammation scores (5.0 to 5.4) than saline control (2.2)*, approaching or exceeding inflammation scores attributed to HCl at pH 1.2 (5.0). These observations may clarify reasons for failure to uniformly control laryngeal injury by adequate suppression of gastric acid alone and may further justify alternative methods of laryngeal protection in those patients refractory to adequate acid control.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

8:40 AM

Saturday 1 May 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

SESSION #5: LARYNGEAL SECTION II

Moderator: Albert Merati MD

Milwaukee, WI

8:50 AM

Saturday 1 May 2004

**Treatment of Microinvasive Vocal Fold Cancer with
the 585nm Pulsed Dye Laser**

Steven M Zeitels, MD
*Robert E. Hillman, PhD **
*R. Rox Anderson, MD **
Boston, MA

The 585nm pulsed-dye laser (PDL) has been effective for involuting vocal-fold dysplasia. One putative mechanism of action is photoangiolytic of the subepithelial/sublesional microvasculature within the superficial lamina propria. Based on this experience, the PDL was used to involute limited areas of microinvasive vocal-fold carcinoma.

Prospective evaluation was done on 4 cases in which there was carcinoma involving both vocal folds. Respective staging was T1b [2], bilateral T1a [1], and T2b [1]. These highly selected patients underwent conventional unilateral carbon dioxide (CO₂) laser resection on the side of more extensive vocal-fold disease. At the time of resection, the limited contralateral disease was treated with the 585nm PDL without resection. Each patient underwent a follow-up microlaryngoscopy and a second PDL treatment. All 4 vocal folds that were treated by CO₂-laser resection epithelialized normally and all disease on the 4 PDL-treated vocal folds involuted completely. Despite treatment of bilateral disease, objective voice measures revealed overall improvements in post-surgical vocal function in all 4 patients; aerodynamic efficiency, maximum phonatory ranges, and voice quality-related acoustic parameters. These results substantiated stroboscopic observations of post-surgical improvements in mucosal-wave function of PDL-treated vocal folds.

The 585nm pulsed-dye laser demonstrated the capacity to involute microinvasive vocal-fold cancer. This approach is conceptually attractive since it also enhances vocal function by improving mucosal pliability. These findings support the concept that inhibition of neoplastic blood supply (anti-angiogenesis) results in tumor regression.

No conclusions can be drawn about the long-term oncological efficacy of this approach but the observations herein warrant further investigation.

**STEVEN DEAN GRAY
RESIDENT ESSAY AWARD
2nd Place**

**The PedsQL™ in Pediatric Recurrent Respiratory
Papillomatosis**

Jonathan P. Lindman, MD *

Linda S. Lewis, MSN, RN 8

Brian J. Wiatrak, MD, FACS, FAAP

Birmingham, AL

OBJECTIVE: The objective of this study was to use the Pediatric Quality of Life Inventory (PedsQL), a 23-question modular instrument designed to measure health-related quality of life (HRQOL) in children and adolescents, to measure HRQOL in children with recurrent respiratory papillomatosis (RRP) and their parents and compare their HRQOL to that reported for healthy children and children with other chronic medical conditions.

METHODS: The PedsQL 4.0 Generic Core Scales consist of 23 questions in 4 subscales (Physical, Emotional, Social, School) for parent-proxy reporting on HRQOL in children ages 2 to 4, parent-reporting for children 5 to 18, and child self-reporting for ages 5 to 7 (age-adjusted questions and rating scales) and 8 to 18. The questionnaires were administered in person or by telephone to 27 children with RRP and (or, for children 2 to 4) one parent recruited from a tertiary pediatric otolaryngology practice. Results were compared to validated norms for healthy children and scores for children with other chronic medical conditions.

RESULTS: Compared to healthy controls, children ages 5 to 18 with RRP scored significantly ($p<0.05$) lower overall and on all subscale scores, except Physical and Emotional function. Compared to children with other chronic illnesses, children with RRP had lower total PedsQL scores, lower Psychosocial Health and Social Functioning scale scores, and notably lower ($p=0.05$) School Functioning Subscale scores. All parent-proxy report scores on the PedsQL were also significantly lower ($p<0.0001$) for children with RRP compared to healthy children. Compared to children with other chronic medical conditions, parent-proxy report scores were significantly lower for Psychosocial Health ($p=0.005$) and School Functioning ($p<0.0001$).

CONCLUSIONS: Children with RRP report a lower quality of life than do those who are healthy and a similar quality of life to those who have other chronic medical problems. Parents of children with RRP also perceive a lower quality of life for children affected by this disease when compared with healthy children. The PedsQL may be utilized to evaluate HRQOL outcomes of clinical or experimental treatments for children with RRP.

9:06 AM

Saturday 1 May 2004

Complications of Suspension Laryngoscopy

Clark Rosen, MD

*Pedro Andadre, MD **

Lucian Sulica, MD

*Robert A. Buckmire, MD **

Pittsburgh, PA

OBJECTIVE: This study was designed to evaluate the complications of suspension laryngoscopy (SL).

METHODS: We prospectively analyzed 46 (37 male) consecutive suspension laryngoscopies for intervention-related complications. Oral and pharyngeal symptoms and physical exam abnormalities were collected in a prospective fashion before and after SL. Suspension Laryngoscopy related-symptoms were graded in severity and followed over time (weekly) until resolution was achieved. All patients had SL with a true suspension device (Boston University Suspension) and not a rotation-oriented laryngoscope-holding device.

RESULTS: Oral/pharyngeal complaints following SL were found in 28.2% of patients and all these were temporary. No dental injuries occurred in the study cohort. Minor swallowing difficulties occurred in 21.3% patients, 17.3% patients had alterations related with taste and 7% had numbness in the tongue. Average duration of the post-SL complaints was 9.8 days (4-34). There were no statistically significant independent variables between the complication group and the no complication group.

CONCLUSIONS: Suspension Laryngoscopy carries a higher risk for lingual and glossopharyngeal nerve injuries than previously recognized. All of these complications were temporary. This information should be used to improve pre-suspension laryngoscopy patient education and informed consent.

9:14 AM

Saturday 1 May 2004

Injection Laryngoplasty for Non-Paralytic Glottic Incompetence

Peak Woo, MD
New York, NY

TYPE OF STUDY: Retrospective chart review

STUDY DESIGN: Glottic incompetence due to bowing, scar, sulcus vocalis, laryngeal fracture, partial laryngectomy and neurogenic diseases may be treated by injection laryngoplasty. Micronized dermis has been used for injection laryngoplasty for vocal fold paralysis. There is little data to support its use in non-paralytic glottic incompetence. Fifty-four injections were carried out in fifty patients between 1/2000 through 5/2003 for non-paralytic glottic incompetence. The charts were reviewed. Success was rated as closure of the glottal gap at 6 months on videostroboscopy with an improvement of >10 points on the Voice Handicap Index (VHI). The indications in 50 patients were: bowing and senile atrophy (22), unilateral vocal fold scar (5), with sulcus vocalis (4), post-laryngeal fracture (5), post hemilaryngectomy (8), and other (6).

RESULTS: Two groups were clearly identified as to successful outcome. The group that did well were those with soft tissue membranous vocal fold defects. Bowing, scar and sulcus vocalis patients had a successful outcome in 31/33 injections (94%). Patients with laryngeal fracture, post-hemilaryngectomy, and neurogenic or intubation injuries did poorer with success achieved in only 8/21 injections (38%). Smaller defects due to minimal glottal insufficiency due to bowing and atrophy did better than larger defects.

CONCLUSION: Micronized dermis injection laryngoplasty is a viable soft tissue replacement in membranous glottal defects due to bowing, scar and sulcus vocalis.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

9:22 AM

Saturday 1 May 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

9:30 AM

Saturday 1 May 2004

BREAK WITH EXHIBITORS

10:00 AM

Saturday 1 May 2004

**PRESIDENTIAL CITATION FOR FOREIGN BODY
MANAGEMENT**

Presenter: Charles N. Ford, MD

Recipient: **Joseph Kerschner, MD**

**KTP Laser Assisted Removal of Impacted Esophageal
Foreign Body**

Esophageal foreign bodies (FBs) retained for prolonged periods have the potential for significant morbidity and mortality. These include esophageal perforation, mediastinitis, and major vessel erosion with hemorrhage.

These complications result from the propensity of impacted FBs within the esophagus to migrate laterally through the esophageal wall over time. FBs that have eroded through the esophageal mucosa have traditionally been removed via an open cervical or thoracic approach. This report is the first to detail the use of the KTP laser to assist in endoscopic removal of an impacted coin that had migrated into the submucosal esophagus.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

10:08 AM

Saturday 1 May 2004

QUESTIONS

10:10 AM

Saturday 1 May 2004

PANEL DISCUSSION

**Airway Reconstruction Panel
Laryngotracheal Reconstruction: A Therapeutic
Dilemma**

Moderator:

J. Scott McMurray, MD
Madison, WI

Pat Gullane, MD *
Toronto, Ontario, Canada

Robin Cotton, MD
Cincinnati, OH

Dana M. Thompson, MD
Rochester, MN

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

SESSION #6: ESOPHAGUS SECTION

Moderator: Udayan Shah, MD
Philadelphia, PA

11:00 AM

Saturday 1 May 2004

**Meta-Analysis of Upper Probe Measurements in
Normals and Patients with Laryngopharyngeal
Reflux (LPR)**

Albert Merati, MD
*Hyun J. Yun, PHD **
Robert J. Toohill, MD
Milwaukee, WI

OBJECTIVES: To report in meta-analysis fashion a series of studies that performed 24 hr ambulatory pH monitoring in normal and control patients from LPR studies. These results are then compared with the upper probe findings from LPR patients in the control studies.

METHODS: Data was collected from studies that involved (1)normal patients, (2)the normal control patients in studies of LPR and (3)the LPR patients in these controlled studies. Statistical analysis utilized the fixed effects model by Montel-Haenzel and the random effects mixed model.

RESULTS: 14 studies done over the past 12 years involving 741 patients fulfilled the criteria to be included. 249 normal and 492 LPR patients were involved in the meta-analysis. The numbers of positive reflux events for normal patients and those with LPR differed with a P value of <0.0001. There is also a significant difference in the mean percentage of acid exposure times (AET) between normal patients and those with LPR (p-value = 0.003).

CONCLUSIONS: The upper probe gives accurate and consistent information in normals and LPR patients. The numbers of reflux events and AET are most important in assessing the normals from patients with LPR. The technology and methodology of probe testing is quite reliable and consistent on a worldwide basis.

**Endoscopic Gastric Transposition and
Esophagectomy – Experience with Minimally
Invasive Surgery and Maximally Invasive
Complications**

Mark D. DeLacure, MD, FACS

*Michael Edye, MD, FRCS **

*Lawrence Glassman, MD, FACS **

*Michael Zervos, MD **

*Theresa Tran, MD **

*Brian Trainor, MD **

New York, NY

PURPOSE: To evaluate the impact of endoscopically assisted thoracoabdominal approaches on gastric transposition reconstruction of total esophagectomy and total laryngopharyngoesophagectomy (TLP) defects.

DESIGN: Retrospective chart review. Comparison with cohort of cases performed through traditional open approaches.

RESULTS: Six patients underwent endoscopically assisted total esophagectomy with gastric transposition reconstruction and pharyngogastric anastomosis from June 2002 through July 2003. Three procedures were larynx sparing and 3 were combined with TLP. All larynx preservation cases had L RLN paralysis. Delayed gastric emptying was characteristic and required secondary procedures in 3 patients. This was a factor in a delay to postoperative adjuvant radiotherapy in one case. One patient was returned on 2 occasions for neck exploration and thoracotomy/laparotomy. In this patient, a persistent gastrocutaneous fistula was closed at the time of thyroplasty 2 months postoperative. There was 1 perioperative death and 1 death due to uncontrolled disease. Of 4 living patients, 3 are NED, and 1 is under treatment for metachronous pulmonary malignancy. All eat an unrestricted diet by mouth. Hospital stays and operative times have not been appreciably shortened.

CONCLUSIONS: Endoscopic techniques have revolutionized the fields of general and cardiothoracic surgery. The potential advantages of decreased morbidity in avoiding traditional open laparotomy/thoracotomy approaches have been overshadowed by morbidities attendant to these major resective and reconstructive procedures. Despite expert specialty surgeons working in close coordination, many of the potential advantages of endoscopically assisted techniques have yet to be realized.

11:16 AM

Saturday 1 May 2004

**The Clinical Characteristics of Eosinophilic
Esophagitis in Children**

Dana M. Thompson, MD

*Ellen Dauer, MD **

Rochester, MN

ABSTRACT: The role of eosinophilic esophagitis (EE) in aerodigestive tract disorders in children is underestimated and overlooked primarily because of lack of understanding of this disorder by otolaryngologists.

To better characterize the clinical presentation of EE, we retrospectively looked at 71 children with biopsy proven EE to determine the most common symptoms and laboratory findings that should increase the clinical suspicion of EE.

Dysphagia, food impaction and emesis were the most common symptoms in children with EE. Asthma was the most common airway diagnosis. Rhinosinusitis was the most common ENT diagnosis. Food allergy was present in 75% of the children tested. Eighty-seven percent of the children with elevated IgE levels had thick linear streaking of the esophagus seen on esophagoscopy. Other major medical co-morbidities exist in over half of the children with EE with psychiatric disorders and other disorders of the aerodigestive tract being most common.

EE may contribute to treatment failures of common and complicated aerodigestive tract disorders. To avoid overlooking the diagnosis we present an evaluative algorithm to increase the suspicion of this entity.

**Flexible Endoscopic Evaluation of Swallowing with
Sensory Testing (FEESST): Patient Characteristics
and Analysis of Safety in 1340 Consecutive
Examinations**

Jonathan E. Aviv, MD
*Thomas Murry, PhD **
*Anne Zschommier, BA **
*Manderly Cohen, MS **
*Carolyn Gartner, MS **
Lanny G. Close, MD
New York, NY

OBJECTIVE: FEESST is a comprehensive endoscopic assessment of the sensory and motor components of a swallow. Previous studies addressing patient safety issues with respect to FEESST have been on relatively small numbers of patients with almost no attention paid to patient characteristics. The purpose of this study is to determine the incidence of FEESST-related complications in the outpatient and inpatient settings and to analyze patient diagnoses that led to the FEESST evaluation.

METHODS: Prospective study of FEESST complications in 1340 consecutive evaluations performed over a 4½-year period. The primary outcome variables were incidence of epistaxis and airway compromise. The secondary outcome variable was underlying patient diagnoses.

RESULTS: The incidence of epistaxis was 1/1340 (0.08%). There were no instances of airway compromise. Stroke was the most common reason for the FEESST evaluation (343; 25.6%), followed by cardiac related (298; 22.2%)- dysphagia after open heart surgery (169/298; 56.7%), heart attack, congestive heart failure and new arrhythmia. The remaining etiologies were head and neck cancer (207; 15.4%), pulmonary disease (141; 10.5%), chronic neurological disease (124; 9.3%) and laryngopharyngeal reflux (80; 6.0%).

CONCLUSIONS: FEESST is a safe procedure for the sensory and motor assessment of dysphagia in a cohort of patients with a wide variety of underlying diagnoses. The emergence of post cardiac surgery as a common etiology of dysphagia warrants further study.

**Anatomic Study of Laser Assisted Endoscopic
Cricopharyngeal Myotomy**

*C.W. David Chang, MD **

*Steve S. Liou, BA **

James L. Netterville, MD

Nashville, TN

OBJECTIVES: Laser-assisted endoscopic cricopharyngeal myotomy has been used to correct dysphagia secondary to cricopharyngeal muscle dysfunction. Our aim is to analyze the surrounding buccopharyngeal fascia after laser sectioning of the cricopharyngeus muscle. We hypothesize that this fascia remains intact, acting as a barrier between the surgical field and the retropharyngeal space.

STUDY DESIGN: Anatomical study was performed on five cadaver subjects.

METHODS: A Dohlman endoscope was used to isolate the cricopharyngeus muscle in five lightly preserved thawed cadavers. A CO₂ laser at 10 W continuous power was used to section through the cricopharyngeus in conjunction with a micromanipulator connected to an operating microscope. The specimens were then carefully dissected and grossly photographed to demonstrate the anatomy of the pharyngoesophageal segment at the cricopharyngeus and to determine the integrity of the surrounding buccopharyngeal fascia. In addition, histologic studies of the surgical site prepared with a modified Gomori trichome stain were analyzed.

RESULTS: Gross examination of the retropharyngeal region revealed the presence of intact buccopharyngeal fascia between the lasered region and the retropharyngeal space. Histologic analysis demonstrated sectioned cricopharyngeus muscle with preservation of this fascial layer. Placement of the endoscope was difficult in one cadaver, with failure to properly identify the cricopharyngeus muscle.

CONCLUSIONS: The CO₂ laser-assisted endoscopic cricopharyngeal myotomy is a potentially anatomically safe and viable procedure as the buccopharyngeal fascia remains intact. However, the potential for violation into the retropharyngeal space is real and a conservative approach may be warranted.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

11:40 AM

Saturday 1 May 2004

DISCUSSION

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

11:50 AM

Saturday, 1 May 2004

Introduction of New President

Steven M. Zeitels, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

12:00 PM

Saturday 1 May 2004

ADJOURN

12:15 PM

Saturday 1 May 2004

Annual Photograph of the Membership

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

THE SEYMOUR COHEN AWARD

The Seymour Cohen Award is presented to residents, fellows or practicing physicians who submit the best original unpublished paper in either basic research or clinical investigation in pediatric laryngology and bronchoesophagology.

RECIPIENTS OF THE SEYMOUR COHEN AWARD

1979	Timothy A. Lim, MD
1980	Lauren D. Holinger, MD
1981	Bruce N. Benjamin, MD
1982	John A. Tucker, MD
1983	John S. Supance, MD
1984	Judson R. Belmont, MD Kenneth M. Grundfast, MD
1987	Ellen M. Friedman, MD
1990	Glenn C. Isaacson, MD
1991	Eric Mair, MD Davis D. Parson, MD
1992	(no award)
1993	Steven C. Marks, MD Bernard Marsh, MD
1994	(no award)
1995	John P. Bent, III, MD William Smits, MD Richard J. H. Smith, MD Nancy M. Bauman, MD John W. Kim, MD
1996	(no award)
1997	Robert F. Ward, MD Max M. April, MD Dimitry Rabkin, MD
1998	Brian S. Jewett, MD Raymond D. Cook, MD Kenneth L. Johnson, MD Thomas C. Logan, MD Kristina W. Rosbe, MD Suresh K. Mukherji, MD William W. Shockley, MD
1999	Ryan R. Stevens, MD

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Geoffrey A. Lane, MD
Scott M. Milkovich, PhD
Daniel Stool
Gene Rider
Sylvan E. Stool, MD
2000 (no award)
2001 Nancy M. Bauman, MD
Deqiang Wang, MD
Erich Luschei, MD
2002 (no award)
2003 Robert G. Berkowitz, MD
2004 No Award

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

***ABEA PRESIDENT'S RECEPTION
&
COMBINED
SCIENTIFIC POSTER SESSION***

**JW Marriott Desert Ridge Resort & Spa
Phoenix, Arizona**

**AMERICAN BRONCHO-ESOPHAGOLOGICAL
ASSOCIATION**

AMERICAN LARYNGOLOGICAL ASSOCIATION

AMERICAN RHINOLOGIC ASSOCIATION

All ABEA, ALA, ARS, ANS and AOS
registrants and guests are invited.

Scientific Posters will be attended by authors.

*Abstracts of ABEA submissions to the
Combined Scientific Poster Session
appear on pages (75-98) of this program booklet.*

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

**RULES CONCERNING THE PRESENTATION
OF PAPERS AT THE ANNUAL MEETING**

1. The reading of any paper shall not extend beyond the time allotted by the Program Committee. The exact time for presentation will be allotted by the Program Committee. This shall include presentation of slides, pictures, and video demonstrations.
2. Five complete copies of the paper and illustrations must be submitted prior to the presentation. If the presenter does not comply with this rule, the paper may not be given. Three copies of the manuscript should be directed to The Annals of Otolaryngology, Rhinology & Laryngology, 2 copies to Gady Har-El, MD, Editor of the ABEA Transactions. For those seeking awards, 1 copy must be sent to Ellen M. Friedman, MD of the Awards and Thesis Committee.
3. All papers become the property of the Association.
4. The Annals Publishing Company reserves the right to publish articles in the Annals of Otolaryngology, Rhinology, and Laryngology. The author may publish a paper elsewhere only if the paper is not accepted for publication in the Annals. Written permission must be obtained from the Editor of the ABEA.
5. Only original and unpublished papers may be submitted for consideration. The same or similar abstract should not be submitted simultaneously to any other meeting or publication.

Results of Palatal Advancement Pharyngoplasty for Patients with Stage III OSA

*Stacey L. Ishman, MD **
*Laura Brusky, MD **
B. Tucker Woodson, MD
Milwaukee, WI

OBJECTIVE: Previously published data indicates that the success of uvulopalatopharyngoplasty (UPPP) is only 8% in patients classified as Friedman stage III. To evaluate of the results of palatal advancement pharyngoplasty surgery in obstructive sleep apnea (OSA) patients classified as Friedman stage three.

STUDY DESIGN: Retrospective consecutive case series.

METHODS: The charts of patients classified as Mallampati class III/Friedman stage III who had undergone palatal advancement pharyngoplasty for definitive treatment of OSA at a tertiary care medical center were reviewed from January 2000 to July 2003. Objective success after surgical treatment was defined as a reduction in respiratory disturbance index (RDI) of >50% and an absolute RDI less than 20.

RESULTS: Thirteen patients underwent palatal advancement pharyngoplasty as part of their definitive treatment for OSA. Seven (54%) of these cases were successful based upon objective polysomnographic criteria. Overall, the preoperative RDI decreased from 49 (range 24-95) to a postoperative RDI of 28 (range 4 to 76). Apnea index (AI) decreased from 38 to 13. Three had previously undergone UPPP without success. Two of these cases were successful and the preoperative RDI for this group decreased from 57 (range 29-73) to 36 (range 16-76).

CONCLUSIONS: Palatal advancement pharyngoplasty as part of comprehensive treatment results in significant improvement in OSA. It may also salvage patients who have failed prior UPPP.

Cell Production in Injured Rat Vocal Folds

*Ichiro Tateya, MD, PhD **

*Tomoko Tateya, MD **

*Jin Ho Sohn, MD, PhD **

Charles N. Ford, MD

*Diane M. Bless, PhD **

Madison, WI

PURPOSE: Fibroblasts are reported to play an important role in producing extracellular matrix (ECM) of the lamina propria. However, there have been no reports which focused on how the ECM is maintained or how and where the ECM is generated after injury. To reveal the characteristics of vocal fold cell production, we investigated the cell proliferation and characteristic changes in the acute phase of injury.

METHODS: Using a 1.9mm diameter telescope for guidance, a notch was made in the middle region of the vocal fold tissue with microscissors in 24 Sprague-Dawley rats. Larynges were harvested at 4 time points (1day, 3days, 5days, 7days) and the injured folds were histologically analyzed. Immunohistochemical staining for Vimentin, alpha smooth muscle actin (SMA) and 5-bromo-2-deoxyuridine, a tracer for newly generated cells.

RESULTS: Cell production was limited in the lamina propria of the untreated vocal folds. At day 1, cell production increased dramatically in the epithelium then beginning with day 3 gradually decreased. In the lamina propria, a slight increase of cell production was observed from day 1 to day 7. Cell production in the lamina propria was mainly observed around the injured area and the superficial layer, and sparsely observed in other areas including both the anterior and posterior macula flavae. Immunohistochemistry showed an increasing number of fibroblasts and myofibroblasts in the lamina propria in day 5 and day 7.

CONCLUSION: Cell proliferation activity in the vocal fold increases following injury. The proliferation is complex and does not occur similarly in all areas.

**Migration and Presentation of An Ingested Fishbone
to the Subcutaneous Neck**

*Christopher S. Song, MD **

*Jessica W. Lim, MD**

Brooklyn, NY

PURPOSE: Lodged fishbones are a common occurrence and can manifest as dysphagia, odynophagia, or neck pain. However, penetration into the deep tissues of the neck is rare. We present an unusual case of a patient who ingested a fishbone that migrated through the thyroid gland into the anterior subcutaneous tissue of the neck.

The patient presented with a one-week history of dysphagia and odynophagia after eating fish. Plain neck x-rays taken showed a linear density at the level of the C6 vertebral body. However, endoscopies performed by both the otolaryngology and gastroenterology services failed to visualize any retained foreign bodies. The persistence of symptoms prompted a neck CT (computed tomography) scan that showed 2 cm curvilinear density from the left pyriform sinus to the posterior left thyroid lobe. Yet, rigid esophagoscopy performed in the operating room still could not identify the fishbone. After two months, the patient returned for follow up with complete resolution of the initial symptoms, but with a non-tender midline neck mass anterior to the left thyroid lobe. Repeat neck CT scan showed a 2 cm linear density now in the subcutaneous tissue anterior to the strap muscles, with surrounding soft tissue changes. The patient subsequently underwent excision of the neck mass containing the retained migrated fishbone. Despite unusual anatomic locations, positive radiologic findings after fish ingestion, with persistent symptoms, may warrant surgical exploration.

Familial Bilateral Vocal Cord Paralysis

*Thomas Tarin, MD **

*Robert Pettis, MD **

*Julian Martinez, MD **

Nina Shapiro, MD

Los Angeles, CA

A 5-week-old male born at 37 weeks via uncomplicated Cesarean section was referred for pediatric otolaryngology evaluation for persistent stridor since birth. The patient had inspiratory stridor at rest, which was exacerbated by agitation and feeding. Flexible laryngoscopy revealed bilateral vocal cord paralysis. The patient was admitted to the hospital, and tracheotomy was performed without complication. MRI of the brain revealed no intracranial abnormality. Gastroenterology consultation was obtained and evaluation for gastroesophageal reflux was negative. The patient's father had a history of bilateral vocal cord paralysis as a newborn. He required tracheotomy until age 5 years, at which time he was successfully decannulated. The patient has an older female sibling without a history of airway problems.

Vocal cord paralysis is the second most common cause of stridor in the neonate, after laryngomalacia. Bilateral vocal cord paralysis occurs less often than unilateral paralysis, and can be life-threatening. The majority of cases can be attributed to neurologic abnormalities, such as Arnold-Chiari malformation, meningomyelocele, and meningocele. Other causes include trauma, infection, and idiopathic etiology. The literature has also described rare cases of familial bilateral vocal cord paralysis. Modes of inheritance include autosomal dominant, autosomal recessive, and X-linked recessive. This case examines a family with familial bilateral vocal cord paralysis. Presentation, diagnosis, therapeutic considerations, and modes of inheritance will be discussed.

Histological Characterization of Rat Vocal Fold Scarring

*Tomoko Tateya, MD **
*Ichiro Tateya, MD, PhD **
*Jin Ho Sohn, MD, PhD **
Charles N. Ford, MD
*Diane M. Bless, PhD **
Madison, WI

PURPOSE: Animal models are essential to systematic research on prevention and treatment of vocal fold (VF) scarring. Rats may represent an ideal model of VF scarring. The first step in determining the feasibility of using a rat model is to examine how the ECM properties in the lamina propria differ from those of humans. Therefore, we studied the histological characteristics of VF scarring in rats to determine if the ECM properties in the lamina propria (LP) were similar to humans.

METHODS: By monitoring with a 1.9-diameter telescope, VF stripping was performed unilaterally in 18 Sprague-Dawley rats. Larynges were harvested at 3 time points (2weeks, 4weeks and 8weeks) and the scarred and normal VFs were histologically analyzed. Trichrome stain was used for collagen and Alcian Blue was for hyaluronic acid. Immunohistochemical staining was performed to identify type-I collagen, type-III collagen and fibronectin.

RESULTS: In the normal rat VFs, collagen was fairly sparse and limited primarily to the deep layer of the LP. Type-III collagen was predominant while type-I was present but limited, which is similar to human VFs. Compared to normal VFs, scarred VFs exhibit an increase in both type-I and type-III collagen at 2-8 weeks, a decrease in hyaluronic acid at 2-4 weeks, and an increase in fibronectin at 2-4 weeks.

CONCLUSION: The rat displays similar LP histological characteristics in both the normal and scarred VF. This suggests that the rat may be a good model to help further our understanding of the prevention and treatment of VF scarring.

**Minimally Invasive Approach to Esophagectomy
Does Not Decrease Risk for Aspiration Post-
Operatively**

*Daniel L. Fortes, MD **

San Antonio, TX

*Broadus Z. Atkins, Maj. MD **

*Steven P. Bowers, Maj. MD **

Kevin T. Watkins, Lt Col. MD

Lackland AFB, TX

OBJECTIVE: Esophageal resection (ER) is often complicated by post-operative respiratory disorders, particularly when aspiration risk is not adequately assessed. However, minimally invasive (MI) approaches to ER may decrease rates of respiratory symptoms. This study evaluated pulmonary complications and aspiration risk in patients undergoing MIER.

METHODS: Four patients underwent MIER with gastric pull-up. Mobilization of the stomach and thoracic esophagus was performed entirely transabdominally using a flexible laparoscope (Olympus LTF-V3) for mediastinal visualization and ultrasonic shears (AutoSuture) tissue division. The cervical esophagus was anastomosed to the neo-esophagus at the left neck in each case. Swallowing function was assessed postoperatively using cine fluoroscopy. Pulmonary complications altering the postoperative course were noted.

RESULTS: MIER was successfully completed in each patient. Operative times averaged 4.25 hours. The right pleural cavity was entered in 2 cases, requiring postoperative chest drainage. No other intraoperative complications were encountered. Cine fluoroscopy detected vocal cord paralysis (VCP) and laryngeal penetration in 2 patients, but neither developed pulmonary complications. Two patients required reintubation postoperatively, but these were not associated with aspiration events.

CONCLUSION: Swallowing abnormalities are a major factor leading to pulmonary complications after ER. However, many patients do not experience hoarseness or frank aspiration clinically. Despite the minimally invasive approach to ER presented here, patients remained susceptible to aspiration. To effectively decrease the postoperative mortality of ER, subtle swallowing abnormalities predisposing to aspiration and pneumonia should be identified by videofluoroscopic analysis of swallowing before and after ER. Furthermore, documentation of normal swallowing mechanisms should be made prior to resumption of oral intake.

**The Presentation and Management of Vascular
Rings: The Otolaryngology Perspective**

*Rahul K. Shah, MD **
*Adriane DeWitt, MD **
*Baseem Mora, MD **
*Pedro del Nido, MD **
Reza Rahbar, MD
Boston, MA

OBJECTIVE: To review the presentation and management of children with vascular rings and present guidelines for their treatment.

DESIGN: IRB approved retrospective study.

SETTING: Tertiary-care pediatric medical center: 1991-2002.

PATIENTS: Sixty-eight children with a diagnosis of vascular rings.

RESULTS: There were 38 males and 30 females. At the time of presentation, 91% of patients had airway symptoms and 47% had esophageal symptoms. Airway symptoms included noisy breathing (69%), recurrent respiratory infections (44%), respiratory distress (18%), and cough (18%). Esophageal symptoms included dysphagia (59%), reflux (25%), choking (13%), and failure to thrive (6%). Pre-operative studies included: Chest x-ray (93%), echocardiography (96%), barium swallow (75%), MRI (60%), and CT scan of the chest (59%). Surgical management included open (n=27) and endoscopic (n=41) approach. Complications included recurrent laryngeal nerve injury in 4 patients.

CONCLUSION: Children with vascular rings may present with respiratory and/or feeding difficulty. The evaluation should include chest radiograph, MRI or CT scan, and barium swallow. Rigid and flexible laryngoscopy, bronchoscopy, and esophagoscopy are recommended to assess the degree of compression and tracheomalacia. Surgical options include open versus endoscopic approach and should be individualized based on the patient and experience of the surgeon.

**Laryngeal Synkinesis: Definition and
Phenomenology**

*Anthony Cultrara, MD **

*Ajay Chitkara, MD **

Andrew Blitzer, MD, DDS

New York, NY

Since the advent of electromyography, laryngeal synkinesis has been identified in a variety of vocal fold immobility and abnormal movement conditions usually related to recurrent laryngeal nerve injury and reinnervation. There remains some controversy as to what criteria are needed to make this diagnosis. The term synkinesis is defined as an unintentional movement accompanying a volitional movement. Synkinesis has long been accepted and the phenomenology well described in facial nerve and ocular disorders. The diagnosis of laryngeal synkinesis has been controversial since the phenomenology of laryngeal synkinesis may be vocal fold immobility due to simultaneous adductor and abductor action, or discoordinated movements. This paper will review the literature and the phenomenology of laryngeal synkinesis.

**Chronic Chemical Irritation of Post-Cricoid Mucosa in
Development of Plummer-Vinson Syndrome: A New
Mechanism for Development of Post-Cricoid Web**

*Aasef G. Shaikh, MD, PhD **

Fatema F. Ghasia, MD

St. Louis, MO

*Robert Stachler, MD **

Detroit, MI

*Gulammhammad F. Shaikh, MD **

Gujarat, India

Plummer Vinson Syndrome (PVS), a known predisposing factor for post-cricoid squamous cell carcinoma, is a clinical entity where dysphagia is associated with iron deficiency. Cause of dysphagia is controversial in PVS. Conventionally, post-cricoid-web, seen in a few cases of PVS, was believed to be a cause of dysphagia. However, anatomically unobstructed esophagus was also reported in PVS. The variable presentation of post-cricoid web provoked an idea of autoimmune etiology for its development. Since autoimmune antibodies for pharyngeal mucosa were not found in PVS patients, autoimmune etiology is not likely. Post-abrasive etiology partially explained the development of the web, however, it could not completely explain the variability of its occurrence. We document findings of 28 cases of PVS and explain the variability seen in its clinical presentation. We hypothesize, in PVS, chronic irritation, inflammation and subsequent fibrosis of post-cricoid mucosa leads to development of web. Weak esophageal peristaltic forces during iron deficient state either extend bolus-transit-time leading to chronic irritation of the post-cricoid mucosa by bolus-components or lead to reflux causing inflammation. Presence of chronic inflammatory changes on histopathology of post-cricoid biopsy from PVS patients without web development supported this hypothesis. Quantitative correlation of duration of dysphagia with web development explained the variability in prevalence of post-cricoid web. Conclusively, we document that PVS patients initially present with dysphagia, which is not associated with web. If dysphagia remains untreated, it progresses to web development. The later is two fold in etiology, post-inflammatory and post-abrasive.

Since the advent of electromyography, laryngeal synkinesis has been identified in a variety of vocal fold immobility and abnormal movement conditions usually related to recurrent laryngeal nerve injury and reinnervation. There remains some controversy as to what criteria are needed to make this diagnosis. The term synkinesis is defined as an unintentional movement accompanying a volitional movement. Synkinesis has long been accepted and the phenomenology well described in facial nerve and ocular disorders. The diagnosis of laryngeal synkinesis has been controversial since the phenomenology of laryngeal synkinesis may be vocal fold immobility due to simultaneous adductor and abductor action, or dis-coordinated movements. This paper will review the literature and the phenomenology of laryngeal synkinesis.

**Deficits in Laryngeal Sensory Input on Laryngeal
Muscle Biochemistry**

*Hiromi Nagai, MD, PhD **

*Nadine P. Connor, PhD **

Madison, WI

*Fumikazu Ota, MD **

Tokyo, Japan

PURPOSE: Age-related decline in deglutition, swallowing, and voice may be due in part to changes in laryngeal sensation, which is carried by internal branch of superior laryngeal nerve (SLNi). In previous studies, we demonstrated that section of this sensory nerve was associated with changes in laryngeal-respiratory motor control. The goal of this study was to determine if biochemical properties of intrinsic laryngeal muscles are also altered following section of the SLNi.

METHODS: Four groups of Fisher 344-Brown Norway rats were studied: (1-2) old and young unlesioned animals, (3) young animals bilateral SLNi sections, (4) young animals with unilateral recurrent laryngeal nerve (RLN) sections. Animals were euthanized after a survival period and the intrinsic laryngeal muscles extracted. Myosin heavy chain (MHC) properties were evaluated using sodium dodecyl surfaste-polyacrylamide gel electrophoresis (SDS-PAGE).

RESULTS: In the adductor muscles of SLNi-sectioned and old animals, the proportion of type 2B MHC isoforms was decreased and type IIX was increased relative to the young group, while the abductor muscle was unchanged. These changes in MHC composition were similar to those resulting from RLN lesion. As such, disruption in peripheral sensory input to the larynx is associated with changes in the motor apparatus similar to those found in aging.

CONCLUSION: Deficits in laryngeal sensory input may alter the laryngeal motor system, including changes in muscle biochemical properties, and are similar to the naturally occurring changes observed with aging.

Fetal Rhabdomyoma of the Larynx

*Nicole A. Schrader, MD **

Ahmed M.S. Soliman, MD

Philadelphia, PA

OBJECTIVE: We present a 57-year-old female with fetal rhabdomyoma in the larynx.

STUDY: A case report.

DESIGN: This patient was referred to our office with progressive hoarseness and moderate stridor. On rigid video stroboscopy a large polypoid lesion arising from the right superior surface of the true vocal fold was found. This lesion was nearly completely obstructing the airway. The patient underwent awake tracheotomy and suspension microlaryngoscopy with excision of the entire lesion. Cytogenic and immunohistochemical stainings were positive for desmin, myoglobin, actin and vimentin. The final pathology was fetal rhabdomyoma with inflammatory changes.

SUMMARY: Rhabdomyoma is an uncommon benign tumor arising from striated muscle, mostly cardiac in origin. Extracardial rhabdomyoma occur 70% of the time in the Head and Neck region, but are exceedingly rare in the larynx with only 8 cases reported thus far. Rhabdomyoma can be classified into adult and fetal variants based on clinical and morphological features. The treatment is complete excision with preservation of normal structures. Malignant degeneration has not been described.

CONCLUSION: Fetal rhabdomyoma is an unusual tumor in the larynx. The diagnosis of rhabdomyoma is based on microscopy and immunohistochemistry, and is in particular important when the differential diagnosis includes malignant variants, like rhabdomyosarcoma.

**Laryngeal Electromyography for Adult Unilateral
Vocal Fold Immobility: A Survey of the American
Broncho-Esophageal Association (ABEA)**

*Stacey L. Halum, MD **

*Nalin Patel, MD **

Timothy L. Smith, MD

Robert J. Toolhill, MPH MD

Albert L. Merati, MD

Milwaukee, WI

OBJECTIVE: Diagnostic and management strategies for adult unilateral vocal fold immobility (UVFI) vary amongst otolaryngologists. The aim of this study was to determine the current attitudes and practices regarding laryngeal electromyography (LEMG) for the management of adult UVFI within a cohort of subspecialty laryngologists.

METHODS: A 19-item instrument focused on diagnosis and management of adult UVFI was mailed to active members (n=249) of the American Broncho-Esophageal Association (ABEA). The subset of questions related to LEMG was reviewed in this paper. Statistical analysis using Chi-square analysis was performed.

RESULTS: Survey response rate was 34% (n=84) with 8 surveys returned incomplete secondary to pediatric-limited practices. Of the respondents, 75% (n=57) rely on LEMG for evaluation of UVFI, while 25% (n=19) do not use LEMG. Of those using LEMG, 54% place their own electrodes and 44% interpret the LEMG results themselves. Monopolar electrodes are used by 57% (n=25), bipolar by 27% (n=12), and hooked wire by 17% (n=7). Muscles evaluated by LEMG include the thyroarytenoid (100%), cricothyroid (94%), posterior cricoarytenoid (70%), lateral cricoarytenoid (43%), cricopharyngeus (27%) and interarytenoid (17%). LEMG is performed in an unblinded fashion by most respondents (85%), and many (66%) feel a more accurate result is obtained when clinical information is known. No statistically significant difference was found in use of LEMG, placement of electrodes, and interpretation of LEMG versus percentage of laryngology practice.

CONCLUSION: Survey results demonstrate congruence amongst ABEA members in the utility of LEMG in the management of adult UVFI. Some variability exists in the method in which LEMG is performed and interpreted.

How I Do It: Miniplate Reconstruction of the Lateral Thyroid Lamina: One-Stage Restoration of Voice After Teflon Granuloma Resection

*Yolanda D. Heman-Ackah, MD **
Philadelphia, PA

This case report describes a one-stage technique for long-term voice restoration and laryngeal reconstruction in the treatment of Teflon granuloma. A patient who presented with severe dysphonia underwent resection of a Teflon granuloma via a lateral laryngotomy. A pedicled strap muscle flap was used to reconstruct the paraglottic space. The muscle flap was positioned through the lateral laryngotomy with direct endoscopic visualization of the endolarynx to ensure correct vertical positioning and medialization of the vocal fold.

The muscle flap was secured in this position with suture fixation. The lateral thyroid lamina was reconstructed with Titanium miniplates, which were placed lateral to the muscle pedicle flap and secured to the remaining thyroid cartilage to minimize lateral or inferior retraction of the muscle flap. The patient had excellent voice results and has not required revision or augmentation at 1 year post-operatively. Reconstruction of the lateral thyroid lamina using Titanium miniplate fixation helps to stabilize the muscle pedicle flap and the position of the vocal fold, in this case resulting in good long-term voice results following a single stage reconstruction.

**Edwin Broyles, M.D. and the Dawn of Modern
Bronchoesophagology**

*M. Boyd Gillespie, MD **
Charleston, SC

Fifty years have past since Edwin Nash Broyles, M.D. served as president of the American Broncho-Esophagological Association in 1954. The mid-twentieth century was an exciting era for broncho-esophagology with the advent of fiberoptic illumination and bronchoscopic telescopes. Dr. Broyles' contributions to the field are recognized by the ABEA in the Broyles-Maloney Award which is awarded each year for outstanding research in broncho-esophagology. Based on interviews with family members, former residents, and associates, the presentation provides a "behind-the-scenes" account of Dr. Broyles' contributions which include the anatomic description of Broyles' tendon, the introduction of advanced bronchoscopic telescopes, and early applications of fiberoptic technology. The authors anticipate that this review of the heritage of broncho-esophagology will serve to inspire new direction and discovery within the field.

**Rapid Evaluation of Swallowing Complaints with
Transnasal Esophagoscopy**

*Veena Kumar, MD **
Milan Amin, MD
Philadelphia, PA

PURPOSE: To emphasize the importance of office-based Transnasal Esophagoscopy (TNE) in the evaluation of patients with swallowing complaints.

DESIGN: Case series and review of literature.

METHODS: We present a case series of two patients who both presented with complaints of chronic dysphagia, globus sensation, and a sensation of "food sticking" with swallowing. Patients were counseled to undergo esophagoscopy. Informed consent was obtained. The nasal cavities and pharynx were anesthetized with topical 4% lidocaine solution. Trans-nasal esophagoscopy was performed. The procedure was well tolerated by the patients. A review of literature concerning office-based TNE was performed.

RESULTS: Esophagoscopy revealed diverticuli in various segments of the esophagus, including the midesophageal and distal areas. The etiology of the patient complaints could be well attributed to the endoscopic findings. No morbidity was associated with the TNE exam. There are no published reports of mid and distal esophageal diverticuli detected on routine office TNE.

CONCLUSIONS: Transnasal esophagoscopy is a safe and efficient tool that can be utilized in the office setting for evaluation of swallowing complaints. Video documentation can complete the office evaluation and expedite patient management.

Salivary Pepsin as a Marker for LPR

*Nicole A. Schrader, MD**
*Friedrich Kueppers, MD **
Ahmed M.S. Soliman, MD
Philadelphia, PA

OBJECTIVE: To evaluate a new sensitive assay for pepsin activity and to determine whether measurements of salivary pepsin could be used as an office based diagnostic tool for LPR.

Pepsin is a major proteinase produced by gastric chief cells that is absent in the esophagus and trachea under normal conditions. Previous studies have shown an injurious role of pepsin in addition to gastric acid. Pepsin retrievable from the oral cavity would make an excellent marker for laryngopharyngeal reflux disease.

Patients were divided into LPR group which had a mean reflux findings score (RFS) and reflux symptom index (RSI) of 12 & 13 respectively. The control group had a mean RFS/RSI of 2 & 4.3 respectively. Pepsin activity was measured from single and multiple saliva specimens.

Only 3 out of 15 study patients were positive for pepsin and none in the control group.

This assay is a sensitive and specific test to detect gastric pepsin but has not been as successful at detecting pepsin in oral cavity secretions in patients with laryngopharyngeal reflux. This may be due to the intermittent nature of laryngopharyngeal reflux disease and transient nature of the reflux events. Additionally, dilution with saliva may have reduced the sensitivity of this test. Further investigations to decrease the false positive rate are ongoing.

**The Role of Imaging in Planning Crico-Tracheal
Resection and Anastomosis**

*Cesare Piazza, MD **

*Giorgio Peretti, MD **

*Roberto Maroldi, MD **

*Piero Nicolai, MD **

*Antonino Robero Antonelli, MD **

Brescia, Italy

Controversies still exist on the most effective preoperative work-up in airway stenosis to be treated by cricotracheal resection and anastomosis (CTRA). Endoscopy remains the gold standard for an accurate evaluation of the degree and length of stenosis, the presence of inflammation, the associated neurologic and swallow disorders. Nevertheless, imaging by CT and/or MR is mandatory in selected patients in whom crucial informations still lack after endoscopy. Purpose of this study is to define indications for imaging before CTRA. We retrospectively analyzed 50 patients treated by CTRA at our Department between 1996 and 2003. Fourteen were affected by tumors of the laryngotracheal junction (LTJ), and 36 by non-neoplastic stenoses. Every patient was preoperatively studied by flexible and/or rigid endoscopy combined to radiologic exams in 28 (25 CT, 2 CT and MR, 1 MR). According to our experience, indications for CT and/or MR before CTRA are: tumors of the LTJ (14 cases), tight and complete stenoses (severe grade III and IV according to Myer et al. classification) (5 cases), clinically suspected chondritis, chondronecrosis or framework fractures (5 cases), and recurring stenoses after repeated endoscopic dilatations and/or open-neck procedures (4 cases). CTRA can represent the last option to cure an airway stenosis. Therefore, every effort should be done during preoperative work-up in order to anticipate any potential condition that could reduce its success rate. CT and/or MR, in selected cases, are adjunctive tools that allow both precise staging of such lesions and planning their appropriate treatment.

**Smoking History in Patients with Laryngeal Cancer
Who Have Doctoral Degrees**

*David E. Rosow, BA**
Steven M. Zeitels, MD
Boston, MA

Laryngeal cancer was an uncommon diagnosis until the 20th century when its frequency increased coincident with the introduction of mass-produced cigarettes. Large-scale investigations have reported a 97% incidence of smoking tobacco in those patients who developed larynx cancer. Recent anecdotal observations revealed that a number of laryngeal cancer patients who had advanced educational degrees denied substantial tobacco use. This catalyzed an investigation to explore the demographics of smoking habits in individuals with doctoral degrees.

A retrospective review of the past 3 years revealed that 46 patients were diagnosed with laryngeal cancer and 13/46 had obtained a doctoral degree. Eight of 13 had a medical degree. The 13 doctoral patients were selected to answer a panel of questions regarding their smoking history and all completed the survey. Most remarkable was the fact that 3/13 (23%) had not smoked and this difference was statistically significant as compared with previously published reports of patients presenting with laryngeal cancer. Furthermore, 2/13 (15%) had less than a 5 pack-year smoking history. Therefore, 5/13 (38%) had minimal or no tobacco use. No patient had a verrucous lesion or a history of papillomatosis. These data imply that there are other substantial causes of laryngeal carcinogenesis apart from smoking. This investigation does not provide explanations for the observations made herein given the limited patient cohort and the multiplicity of potential factors. However, the findings of this study warrant further investigation to gain insights into these unexpected findings.

**Endoscopic Base of Tongue Reduction for Primary
Treatment of Pediatric Obstructive Sleep Apnea**

*Karen B. Zur, MD **
*Raouf Amin, MD **
*Lane Donnelly, MD **
Michael J. Rutter, MD
Cincinnati, OH

INTRODUCTION: Pediatric obstructive sleep apnea (OSA) is a complex disorder of the upper airway that is potentially caused by multiple levels of pathology. Whereas the majority of cases can be cured by an adenotonsillectomy, a small segment of this population suffers from collapse lower in the oropharynx/hypopharynx. Tongue base reduction has been used successfully in the adult population, but has yet to gain favor in children.

METHODS: We report our initial retrospective experience with six children who underwent endoscopic tongue base reduction. Response to treatment was measured by a postoperative drop in the respiratory distress index (RDI) and normalization of the sleep study.

RESULTS: Five patients (83%) responded to treatment with an average improvement in RDI of 85.4% ($p < 0.013$, paired t-test). There was one treatment failure and no major complications.

CONCLUSION: Endoscopic tongue base resection may be a surgical tool for treatment of pediatric OSA in the well-selected child with glossoptosis.

The Role of Mitomycin in Cervical Esophageal Stenosis

*Matthew Scarlett, MD **
*M. Boyd Gillespie, MD **
*Terry A. Day, MD **
Charleston, SC

The goal of this study is to present the first report of the safety and effectiveness of mitomycin C in the management of upper cervical esophageal stenosis in the adult head and neck population. The study is a retrospective case series of 6 patients successfully treated for head and neck cancer who presented with post-treatment dysphagia secondary to cervical esophageal stenosis diagnosed by modified barium swallow. Three patients had previously failed esophageal dilation.

Outcome variables include complication rate, subjective patient report of improvement, degree of dietary advancement, and change in M.D. Anderson Dysphagia Inventory (MDADI) score. Following progressive dilation to a 60 French Maloney dilator, mitomycin C (1 cc of 0.4mg/ml) was topically applied for 5 minutes to the region of maximal stenosis. No complications were observed (Avg. follow-up 4 months; range 2 to 7 months). Three patients report improved swallowing, progression of diet from liquids to solids, and improved MDADI score. Compared to the three patients with no improvement, improved patients were post-laryngectomy and were on a liquid diet prior to dilation. In conclusion, mitomycin C is an inexpensive topical agent that may be safely used for esophageal stenosis. Dilation followed by mitomycin C may have limited effectiveness in patients with an in situ larynx or in patients who desire advancement beyond soft solids. A randomized, controlled study is needed to better characterize the efficacy of mitomycin C for upper esophageal stenosis.

**Histological Investigation of Liposuctioned Fat
Injection for Laryngoplasty**

Kiminori Sato, MD, PhD

Hirohito Umeno, MD

Tadashi Nakashima, MD

Kurume, Japan

There are few injectable biomaterials in vocal fold augmentation surgery. In this study, liposuctioned autologous fat, used as an injection material, was investigated histologically. Liposuctioned fat, which was harvested from 13 patients during injection laryngoplasty, was examined by light and electron microscopy.

The cell membranes of most of the liposuctioned fat had not been damaged during harvesting and microinjection by our method. The harvested liposuctioned fat was a group of unilocular adipose cells. A single droplet of lipid occupied most of the volume of the cells. There was a thin rim of cytoplasm and the nucleus was displaced to the periphery of the cell. Each cell was surrounded by delicate reticular fibers. In the spaces between the cells there were capillaries. The cells were spherical and about 30 to 130 μm in diameter. The cells size and density were different from individual to individual. Dense and small fat cells were able to survive graft volume. Sparse and large fat cells tended not to be able to survive graft volume.

The structure consisting of a unilocular cell, containing a single droplet of lipid, surrounded by delicate reticular fiber mesh is one of the reasons why autologous fat has viscous properties similar to those of human lamina propria. Graft survival depends on many factors. The method of harvesting and microinjection of the fat, and the resulting damage to the cell membranes is one of the factors. Autologous fat was not damaged by our method. The density and size of cells may be related to resorption and a decrease in surviving graft volume.

**Therapeutic Potential of Basic Fibroblast Growth
Factor for Aged Rat Vocal Folds**

Shigeru Hirano, MD

Kyoto, Japan

*Diane M. Bless, PhD **

*Hiromi Nagai, MD **

*Ichiro Tateya, MD **

*Tomoko Tateya, MD **

Charles N. Ford, MD

Madison, WI

It has been revealed that in aged human vocal folds, collagenous fiber increases in the lamina propria forming thick bundles, and hyaluronic acid (HA) decreases , which may stiffen the aged vocal fold mucosa resulting in presbylaryngis. Fibroblasts in the lamina propria are primarily response for production of extracellular matrix including collagen and HA, and has also been shown to decrease in quantity, contributing to loss of function with age. Basic fibroblast growth factor (bFGF) is a potent stimulant of growth of fibroblasts and can modify the function. The present study examined the effects of bFGF on aged vocal folds using rat model. In an in vivo study, bFGF was injected into aged vocal folds and histologic changes were assessed.

The results showed that HA was significantly increased in the lamina propria of injected vocal folds at both 1 week and 1 month after the injection compared to the sham control group treated with a saline injection. However, there was no significant change in the density of collagen deposition after bFGF injection. It may be that longer times are required to degrade the collagen already accumulated in the aged vocal fold. Alternatively it may be that a greater dose of bFGF is needed. Although it seems clear the bFGF may help improve tissue properties of the aged vocal folds by increasing HA in the tissue, it seems equally clear that further study is necessary to clarify the benefits and determine the ideal dose.

**Clinical Findings of Laryngo-Pharyngeal Reflux
(LPR)**

Jean Abitbol, MD
*Patrick Abitbol, MD **
Paris, France

Laryngopharyngeal reflux is one of the most important cause of complain for dysphonia of outpatients. How to link the LPR to the laryngeal symptoms. Staging of LPR is the purpose of this study. The clinical diagnoses are from chronic dysphonia, vocal fatigue, regurgitation, hard burn to paroxysmal laryngospasms are the most common symptoms of LPR. The anatomical diagnoses are from posterior laryngitis, sulcus vocalis, atrophy of the vocal fold, edema of the false vocal fold, hyper heremia of the larynx, stasis of the piriform sinus, edema of the vocal folds to granuloma and frequent fungus infection. This has allowed to give a staging of LPR from light to heavy LPR. The response to the treatment by PPI is the best proof of LPR.

**A Pilot Study: Anti-Transforming Growth Factor
Beta As a Treatment for Laryngotracheal Stenosis
in a Modified Canine Model**

*Stephen White, MD **
*Stan McGuff, DMD **
C. Blake Simpson, MD
San Antonio, TX

Laryngotracheal stenosis (LTS) provides a significant treatment dilemma faced by otolaryngologists. Recent topical use of Mitomycin C as an adjunctive treatment has proved helpful but does not completely prevent stenosis. Current literature suggests that Transforming Growth Factor Beta (TGFB) plays a significant role in the development of subglottic stenosis. We have modified an existing canine model to test Anti-Transforming Growth Factor Beta (Anti-TGFB) as a possible treatment for laryngotracheal stenosis. Eight mixed breed dogs underwent cautery injury to the subglottic region creating subsequent laryngotracheal stenosis. Four dogs were treated with saline injection into the injury site and four dogs were treated with a combination of intravenous and local injection of Anti-TGFB. A trend toward increased survival time was noted in Anti-TGFB treated dogs, but a significant statistical difference in airway stenosis compared to control dogs was not seen. Further study of dose and delivery route is needed to understand the role of Anti-TGFB as a treatment for laryngotracheal stenosis. Our modifications to an existing canine model may provide a reliable method to further test the effectiveness of this anti-scarring agent in the treatment of laryngotracheal stenosis.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

ACTIVE MEMBERSHIP REQUIREMENTS

BYLAWS (Article III, Section 2a) – Admission to the Association shall be by invitation only. All nominations for Active membership shall be made by the Council. Elections to membership shall be made by the Association.

BYLAWS (Article III, Section 2e) – Each candidate for Active Membership must be a graduate of medicine, a diplomat of the recognized Board in his/her specialty, engaged for three years or more in the active practice of this specialty, and one who by his/her endoscopic skill and scientific ability has proven his/her expertise in Broncho-Esophagology, Laryngology, Gastroenterology, Pulmonology, Thoracic Diseases and/or related disciplines by submitting five authored articles by him/her addressing such areas of expertise.

BYLAWS (Article III, Section 2b) – Each candidate shall be proposed to the Council on the written recommendation of two Active Members, preferably residing in their vicinity. Also, letters of recommendation are required from two leading physicians or surgeons in his/her region of the country.

CANDIDATE MEMBERSHIP – 1) If the candidate is a resident, he/she must have one letter of recommendation from the Chair of the Department or the Program Director. 2) If applying post-residency, the candidate must have one letter from the Chair and/or Program Director and one Active Member of the ABEA. 3) The applicant for Candidate Membership is required to attend at least one ABEA meeting every three years to maintain good standing in this category.

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

ABEA MEMBERSHIP LISTING*

ACTIVE MEMBERS

Dr. Mona M. Abaza (2003)
Dr. Elliot Abemayor (1989)
Dr. Jean Abitbol (2004)
Dr. Allan L. Abramson (1974)
Dr. Bobby R. Alford (1968)
Dr. Kenneth W. Altman (2003)
Dr. Milan R. Amin (2003)
Dr. Vijay K. Anand (1987)
Dr. Vinod K. Anand (1998)
Dr. Donald J. Annino, Jr.
Dr. Cynthia K. Anonsen (1988)
Dr. Max April (1997)
Dr. Ellis M. Arjmand (1999)
Dr. James E. Arnold (1993)
Dr. Joseph P. Atkins (1984)
Dr. Jonathan E. Aviv (1996)
Dr. Nancy Bauman (1997)
Dr. Stephen P. Becker (1989)
Dr. Thomas P. Belson (1988)
Dr. Gerald S. Berke (1990)
Dr. David J. Beste (1990)
Dr. Neil Bhattacharyya (1999)
Dr. Jeffrey W. Birns (1990)
Dr. Andrew Blitzer (1988)
Dr. Charles D. Bluestone (1971)
Dr. Joel H. Blumin (2003)
Dr. Rondald S. Bogdasarian (1987)
Dr. Linda Brodsky (1993)
Dr. Michael Broniatowski (1998)
Dr. Orval Brown (1996)
Dr. James D. Browne (1998)
Dr. W. Mark Brutinel (1987)
Dr. Louis Burgher (1978)

**PLEASE NOTE: The membership listing is in the process of being updated. If you find your name listed in error or in the incorrect membership area, please contact the ABEA Office of the Secretary to make any corrections. Thank you.*

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Brian B. Burkey (1995)
Dr. Nicolas Busaba (2000)
Dr. Thomas C. Calcaterra (1974)
Dr. David D. Caldarelli (1975)
Dr. Rinaldo F. Canalis (1979)
Dr. Ricardo Carrau (2001)
Dr. Paul Castellanos (1997)
Dr. Sukgi Choi (1997)
Dr. Lanny G. Close (1990)
Dr. Sharon L. Collins (1993)
Dr. Stephen F. Conley (1993)
Dr. Robin T. Cotton (1978)
Dr. Stanley W. Coulthard (1979)
Dr. Mark S. Courey (1995)
Dr. Dennis M. Crockett (1991)
Dr. James P. Cuyler (1992)
Dr. David H. Darrow (2000)
Dr. R. Kim Davis (1995)
Dr. Ziad E. Deeb (1999)
Dr. Mark D. DeLacure (2003)
Dr. Craig Derkay (2003)
Dr. Daniel G. Deschler (1998)
Dr. Ellen S. Deutsch (1997)
Dr. Donald T. Donovan (1998)
Dr. Amelia F. Drake (2003)
Dr. James A. Duncavage (1988)
Dr. Michael F. Dunham (1991)
Dr. Ronald D. Eavey (1986)
Dr. David E. Eibling (1995)
Dr. David W. Eisele (1994)
Dr. Willard E. Fee (1979)
Dr. Charles N. Ford (1995)
Dr. James Forsen, Jr. (2000)
Dr. Marvin P. Fried (1985)
Dr. Ellen M. Friedman (1985)
Dr. Michael Friedman (1990)
Dr. William H. Friedman (1980)
Dr. William H. Frist (1993)
Dr. C. Gaelyn Garrett (1999)
Dr. Edward B. Gaynor (1993)
Dr. Kenneth A. Geller (1986)
Dr. Eric M. Genden (2002)
Dr. Mark E. Gerber (2003)
Dr. Carol Roberts Gerson (1984)
Dr. Jack Gluckman (1995)
Dr. Michael E. Goldman (1993)
Dr. W. Jarrard Goodwin, Jr. (1992)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Christopher Green (1994)
Dr. John Greinwald (2003)
Dr. Gregory A. Grillone (1998)
Dr. Benjamin Gruber (1993)
Dr. Kenneth M. Grundfast (1982)
Dr. David J. Halvorson (2000)
Dr. Steven D. Handler (1983)
Dr. Gady Har-El (1998)
Dr. Earl Harley (1997)
Dr. Bruce H. Haughey (2003)
Dr. Gerald B. Healy (1978)
Dr. Diane Heatley (2002)
Dr. Robert A. Hendrix (1991)
Dr. Arthur S. Hengerer (1980)
Dr. Garrett Herzon (1997)
Dr. Raymond L. Hilsinger (1997)
Dr. Michael L. Hinni (2003)
Dr. Shigeru Hirano (2002)
Dr. Henry T. Hoffman (1999)
Dr. Lauren D. Holinger (1978)
Dr. Andrew J. Hotaling (1993)
Dr. Andrew F. Inglis (1991)
Dr. Glenn Issacson (1992)
Dr. Ian Jacobs (1997)
Dr. Bruce W. Jafek (1976)
Dr. Michael E. Johns (1990)
Dr. Jonas T. Johnson (1985)
Dr. Raleigh O. Jones (1991)
Dr. Jan L. Kasperbauer (1999)
Dr. Burns W. Kay (1973)
Dr. William Keane (1997)
Dr. Donald B. Kearns (1992)
Dr. James H. Kelly (1993)
Dr. David W. Kennedy (1998)
Dr. Kemp H. Kernstine (1998)
Dr. Joseph E. Kerschner (1998)
Dr. Charles P. Kimmelman (1984)
Dr. Peter J. Koltai (1993)
Dr. Arnold Komisar (1988)
Dr. Charles F. Koopman (1990)
Dr. Jamie Koufman (1989)
Dr. Dennis H. Kraus (1996)
Dr. Yosef P. Krespi (1989)
Dr. Frederick A. Kuhn (1993)
Dr. William Lawson (1988)
Dr. Francis E. Lejeune (1973)
Dr. Howard L. Levine (1989)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Paul A. Levine (1990)
Dr. Rodney P. Lusk (1989)
Dr. Lynette J. Mark (1995)
Dr. Nicole Maronian (2003)
Dr. Kenneth F. Mattucci (1991)
Dr. Thomas V. McCaffrey (1984)
Dr. John C. McDougall (1982)
Dr. Trevor J. McGill (1984)
Dr. W. Frederick McGuirt, Sr. (1990)
Dr. William F. McGuirt, Jr. (1998)
Dr. J. Scott McMurray, MD (2001)
Dr. Albert L. Merati (2003)
Dr. Henry A. Milczuk
Dr. Robert P. Miller (1990)
Dr. Rose M. Mohr (1984)
Dr. Anthony Mortelliti (1997)
Dr. Harlan R. Muntz (1991)
Dr. Charles M. Myer (1994)
Dr. H. Bryan Neel III (1978)
Dr. James L. Netterville (1993)
Dr. Moses Nussbaum (1978)
Dr. Laurie Ohlms (1995)
Dr. Robert H. Ossoff (1984)
Dr. Randal C. Paniello (2001)
Dr. Albert H. Park (2000)
Dr. Steven M. Parnes (1990)
Dr. Thomas R. Pasic (1998)
Dr. Mark S. Persky (1987)
Dr. Glenn Edison Peters (1994)
Dr. Harold C. Pillsbury (1984)
Dr. Robert L. Pincus (1991)
Dr. William Portnoy
Dr. Gregory Postma (1998)
Dr. William Potsic (1997)
Dr. Seth M. Pransky (1992)
Dr. Reza Rahbar (2002)
Dr. Elie E. Rebeiz (2001)
Dr. Mark Reichelderfer (2003)
Dr. Timothy J. Reichert (1980)
Dr. James S. Reilly (1986)
Dr. Anthony J. Reino (1996)
Dr. Marc Remacle (2004)
Dr. Dale H. Rice (1980)
Dr. Mark A. Richardson (1986)
Dr. William J. Richtsmeier (1994)
Dr. Marion Ridley (1994)
Dr. Franklin L. Rimell (1998)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Eugene Rontal (1976)
Dr. Michael Rontal (1981)
Dr. Kristina Rosbe (2003)
Dr. Clark Rosen (1999)
Dr. Richard M. Rosenfeld (1999)
Dr. Mike A. Rothschild (1998)
Dr. Alain N. Sabri (2003)
Dr. Clarence T. Sasaki (1989)
Dr. Robert Sataloff (1997)
Dr. Kiminori Sato (2004)
Dr. Richard L. Scher (1996)
Dr. Scott R. Schoem (1998)
Dr. Nancy Sculerati (1994)
Dr. Roy B. Sessions (1983)
Dr. Michael Setzen (1988)
Dr. Udayan K. Shah (1998)
Dr. Jo Shapiro (1998)
Dr. Nina L. Shapiro (1998)
Dr. Stanley M. Shapshay (1984)
Dr. Gary Y. Shaw (2001)
Dr. William W. Shockley (1993)
Dr. Sally R. Shott (2001)
Dr. C. Blakely Simpson (2000)
Dr. George T. Simpson (1984)
Dr. Marshall E. Smith (2003)
Dr. Raymond O. Smith (1980)
Dr. Richard Smith (1990)
Dr. Timothy L. Smith (2002)
Dr. James Stankiewicz (1987)
Dr. Marshall Strome (1981)
Dr. Fred J. Stucker (1978)
Dr. David Terris (2000)
Dr. Dana M. Thompson (2000)
Dr. Jerome W. Thompson (1985)
Dr. Robert J. Toohill (1976)
Dr. Harvey M. Tucker (1980)
Dr. David Tunkel (1996)
Dr. David Walner (2000)
Dr. Ko-Pen Wang (1980)
Dr. Robert F. Ward (1995)
Dr. Mark K. Wax (1998)
Dr. Gregory S. Weinstein (1996)
Dr. Robert A. Weisman (1984)
Dr. Mark C. Weissler (1993)
Dr. Barry L. Wenig (1991)
Dr. Jay Werkhaven (1995)
Dr. Ralph F. Wetmore (1999)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Ernest A. Weymuller (1981)
Dr. Brian Wiatrak (1997)
Dr. Richard Wiet (1980)
Dr. J. Paul Willging (2001)
Dr. Daniel Wohl (1997)
Dr. Peak Woo (1993)
Dr. W. Edward Wood (2001)
Dr. Gayle E. Woodson (2002)
Dr. B. Tucker Woodson (2000)
Dr. Audie L. Woolley (1998)
Dr. Eiji Yanagisawa (1979)
Dr. Ken Yanagisawa (1997)
Dr. George Zalzal (1997)
Dr. Steven M. Zeitels (1991)
Dr. David A. Zwillenberg (1992)

SENIOR MEMBERS

Dr. Warren Y. Adkins (1980)
Dr. Howard A. Andersen (1955–1982)
Dr. John R. Ausband (1954–1984)
Dr. William L. Barton (1956–1985)
Dr. George Berci (1975–1986)
Dr. Hugh F. Biller (1987)
Dr. Donald S. Blatnik (1989 - 2001)
Dr. Stanley M. Blaugrund (1969)
Dr. Roger Boles (1978)
Dr. David W. Brewer (1954–1990)
Dr. Robert W. Cantrell (1976 - 2001)
Dr. Francis I. Catlin (1974–1991)
Dr. Jerrie Cherry (1969 – 2002)
Dr. Paul Chodosh (1976–1993)
Dr. Noel L. Cohen (1982 - 2003)
Dr. Seymour Cohen (1962–1995)
Dr. George H. Conner (1969-2003)
Dr. Charles W. Cummings (1978 - 2003)
Dr. Timothy L. Curran (1961–1982)
Dr. John F. Daly (1958–1981)
Dr. Alfred A. Droenbusch (1956–1979)
Dr. James P. Dudley (1980)
Dr. Arndt J. Duvall (1978–1992)
Dr. L. Penfield Faber (1975)
Dr. Randolph M. Ferlic (1974–1991)
Dr. J. Allen Fields (19 –1980)
Dr. John P. Frazer (1956–1985)
Dr. John M. Fredrickson (1978)
Dr. Herman Froeb (1976–1990)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Willard A. Fry (1975)
Dr. William S. Gibson (1993)
Dr. Charles W. Gross (1985 - 2003)
Dr. Thomas W. Grossman (1985)
Dr. Cornelius E. Hagan (1966–1978)
Dr. Donald B. Hawkins (1978–1995)
Dr. Leonard L. Hays (1978-2003)
Dr. Henry J. Heimlich (1953–1987)
Dr. Jerome A. Hilger (1951–1975)
Dr. William R. Hudson (1974–1995)
Dr. Robert M. Hui (1966–1986)
Dr. Haskins K. Kashima (1980)
Dr. Thomas K. Keyes (1955–1981)
Dr. Robert I. Kohut (1975–1997)
Dr. Max M. Kulvin (1948–1963)
Dr. Paul A. Kvale (1980)
Dr. Melvin Robert Link (1972–1986)
Dr. Louis D. Lowry (1976)
Dr. George D. Lyons (1973–1992)
Dr. Anthony J. Maniglia (1989)
Dr. Bernard R. Marsh (1973)
Dr. Nael Martini (1982)
Dr. Gregory J. Matz (1979)
Dr. Brian F. McCabe (1978)
Dr. Harry W. McCurdy (1978–1985)
Dr. Francis L. McNelis (1959–1991)
Dr. Harold C. Menger (1964–1984)
Dr. Peter J. Moloy (1987–1991)
Dr. Fernand Montreuil (1955–1976)
Dr. Willard B. Moran (1980)
Dr. Karl M. Morgenstein (1964–1991)
Dr. Harry R. Morse (1965–1984)
Dr. Eugene N. Myers (1980)
Dr. Martin L. Norton (1970)
Dr. Joan O'Brien (1971–1989)
Dr. Nels R. Olson (1979)
Dr. James L. Parkin (1978)
Dr. Victor Passy (1984 - 2002)
Dr. Claude Pennington (1963–1990)
Dr. John L. Pool (1952–1975)
Dr. Loring W. Pratt (1954–1985)
Dr. Robert Priest (19 –1994)
Dr. F. Johnson Putney (1947–1975)
Dr. Richard A. Rassmussen (1959–1983)
Dr. John Rayl (1974–1990)
Dr. Frank N. Ritter (1969–1992)
Dr. Bruce Rothmann (1981–1991)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Robert J. Ruben (1974)
Dr. Melvin L. Samuels (1965–1984)
Dr. David R. Sanderson (1970)
Dr. Gary Schechter (1990)
Dr. Joyce A. Schild (1970–1999)
Dr. C. Ben Schoemperlen (1958–1981)
Dr. Myron J. Shapiro (1958–1989)
Dr. Harvey D. Silberman (1974–2001)
Dr. Graham C. Smith (1965–1982)
Dr. James B. Snow (1968–1993)
Dr. James T. Spencer (1963–1990)
Dr. James H. Spillane (1974–1985)
Dr. Philip M. Sprinkle (1978–1991)
Dr. John A. Tucker (1970–1996)
Dr. Donald P. Vrabec (1978)
Dr. Duncan D. Walker (1963–1983)
Dr. Paul H. Ward (1969–1993)
Dr. Louis W. Welsh (1978)
Dr. Chester M. Weseman (1960–1980)
Dr. John R. Williams (1964–1991)
Dr. M. Lee Williams (1965–1991)
Dr. Charles T. Yarrington (1970)
Dr. Anthony J. Yonkers (1973)

CORRESPONDING MEMBERS

Dr. Mario Andrea (1991)
Dr. Bruce N. Benjamin (1974)
Dr. Robert Berkowitz (1997)
Dr. P. J. Bradley (1991)
Dr. Daniel F. Brasnu (1993)
Dr. G. Patrick Bridger (1991)
Dr. Harvey L. Coates (2001)
Dr. William S. Crysedale (1987)
Dr. Ermiro E. Delima (1946)
Dr. J. M. Dubois Demontreynaud (1965)
Dr. Oscar Dias (1997)
Dr. Jean-Francois Dumon (1991)
Dr. Hans J. Eckel (2002)
Dr. Enje Edens (1977)
Dr. Alfio Ferlito (1988)
Dr. Carlos A.M.S. Fonseca (1965)
Dr. Rolando Fonseca (1980)
Dr. Gerhard Friedrich (2003)
Dr. E. Noel Garabedian (2001)
Dr. Minoru Hirano (1982)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

Dr. Yasuo Hisa (1995)
Dr. Katsuhide Inagi (2000)
Dr. Nohuhiko Isshiki (1991)
Dr. Sukhanand N. Jain (1973)
Dr. Otto Jepson (1976)
Dr. Hisayoshi Kojima (1994)
Dr. Julian H. Lee (1980)
Dr. Gyorgy Lichtenberger (2001)
Dr. Carl-Eric Lindhom (1979)
Dr. Salvador Magaro (1980)
Dr. Hans Mahieu (2002)
Dr. Wolf J. Mann (1992)
Dr. Juan Antonio Mazzei (1987)
Dr. Randall P. Morton (1991)
Dr. Yasushi Murakami (1991)
Dr. Michael Nash (1997)
Dr. Arnold M. Noyek (1976)
Dr. Koichi Omori (2002)
Dr. Tadesz M. Orlowski (1987)
Dr. Alexey A. Ovchinnikov (1984)
Dr. P. E. Pantazepoulos (1966)
Dr. Vincente R. Plata (1953)
Dr. Robert W. Pracy (1979)
Dr. Alexandra Rinaldi (2000)
Dr. Marcel-Emile Savary (1974)
Dr. Conrad F. Smit (2002)
Dr. Gordon B. Snow (1991)
Dr. Georg Mathias Sprinz
Dr. Jean Triglia (2002)
Dr. Toshiyuki Uno (1991)
Dr. Jos J.M. Van Overbeek (1993)
Dr. Jochen A. Werner (2003)

HONORARY MEMBERS

Dr. Flavio Aprigliano (1952, 1977)
Dr. Juan Carlos Arauz (1948, 1982)
Dr. Hermes Grillo (1989)
Dr. Shigeto Ikeda (1974)
Dr. Mary Lekas (1978)
Dr. Plinio Demattos Baretto (1944, 1980)
Dr. Gordon McHardy (1972)
Dr. Arthur M. Olsen (1944, 1980)
Dr. Peter Stradling (1979, 1982)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

ASSOCIATE MEMBERS

Dr. Ronald Gerughty (1969)

Dr. Jerome Goldstein (1984)

Dr. Andrew Herlich (1998)

Dr. JoAnne Robbins (2001)

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

**ABEA COSM 2004 PROGRAM
COMMITTEE**

J. Scott McMurray, MD
Program Chair

Peak Woo, MD

Charles N. Ford, MD

Jonathan E. Aviv, MD.

Michael Rothschild, MD

The ABEA gratefully acknowledges the generous support of the following sponsors:

MEDTRONIC-XOMED

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

NOTES

THE AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION

NOTES