



The MASSACHUSETTS GENERAL HOSPITAL SURGICAL SOCIETY

Newsletter

Fall 2005

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MGH SURGICAL SOCIETY

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**MGH Surgical Society
Annual Reception
Monday, October 17, 2005
6:00-8:00 p.m.
San Francisco Hilton**

WANTED
PROFESSIONAL AND
PERSONAL NEWS
Please send to Editorial
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A MESSAGE FROM THE PRESIDENT - A GIFT OF THE SPIRIT

Whether we are in practice, research, or education we all have the opportunity to leave legacies which will influence future generations. Our differing skills and interests will determine our contributions.

There are some surgeons who can transform an ordinary surgical operation into a work of art. There are others who have the ingenuity to develop needed new operations that will improve surgical care. Other surgeons have literary skills and can leave a valuable collection of texts, articles, mottoes and sayings that will be classic references for years to come. Still others make their contributions in research. Their fertile imaginative minds produce results that stimulate others to pursue their own unsolved quests.

Although all of these legacies are important, in 1917 Moynihan pointed out that the greatest legacy that a surgeon can leave is "a gift of the spirit", the ability to inspire students with the highest ideals of our profession. If the surgeon shows kindness and concern for both his patients and his students he will develop a warmth and loyalty with them that will endure. The "gift of the spirit" is the greatest legacy you can leave. It will preserve surgery's soul.

Reference: Moynihan, B, Obituary Theodor Kocher. Brit Med Journal, pages 168-169, 1917.

Robb Rutledge ♦

THIRD MEETING OF THE MGH SURGICAL SOCIETY

JUNE 10-12, 2005

BOSTON, MASSACHUSETTS

The meeting activities started with a welcome reception at the Wang Lobby on the evening of June 10, 2005. Warm greetings were exchanged by all.

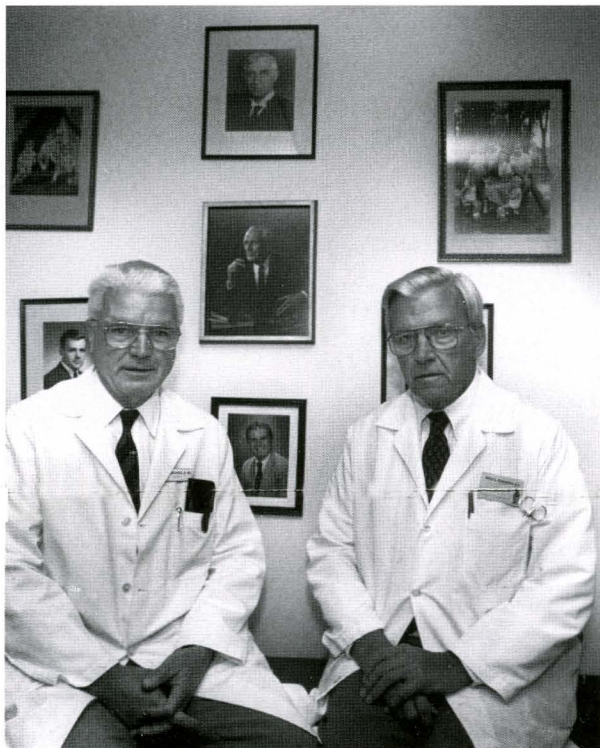
The scientific sessions began the morning of June 11, 2005 after welcoming remarks by Leslie Ottinger. The first talk was delivered by Joseph Friedberg on the use of perfluorocarbons in the peritoneal cavity for use as an artificial lung. Sarah Thayer then spoke on developmental pathways in pancreatic cancer. An update on the MGH Thoracic Aortic Center was given by Alan Hilgenberg. The sections of cardiac and vascular surgery, as well as cardiology participate in this center. Significant increases in volume, as well as decreases in morbidity and mortality were quite noteworthy. Innovative ways to increase donor organs that the MGH has pioneered was discussed next by Francis Delmonico. Patricia Donahoe then described her circuitous route as a pediatric surgeon in developing pharmacologic treatments for ovarian cancer. Mark Katlic discussed his longstanding interest in the surgical treatment of geriatric patients. The last talk of the morning sessions by Gregory Hirsch described the Nova Scotia experience in the delivery of cardiac care in a single tier health care system.

(Reunion continued on page 6)



The Gundersen Brothers and the Growth of the Gundersen Clinic by A. Erik Gunderson '62

Sigurd Gunderson, Jr. and his brother, Adolf, went through the MGH surgical training program just a year apart, Sigurd finishing his four years in 1954 and Adolf, a year later. Both had had Harvard college educations and had their residency programs interrupted by two years' service in the US Navy. Their best memories of the residency years - Sig on the East Service, Adolf on the West Service - are those involving their friends Hermes Grillo, Dick Austin, Robb Rutledge, Hank Moorman, George Richardson, and many other fellow penitents in white suits. Among the staff, they have the usual reverence for Marshall Bartlett, Oliver Cope, Claude Welch, Robert Linton, and Hawk Shaw and even for some of the "4th floor" subalterns, among others, Bill McDermott and George Nardi.



Upon wrapping it up at the MGH, the pull to return home was a strong one. "Home" was La Crosse, Wisconsin, and the Gundersen Clinic, an 18-doctor medical clinic founded by their Norwegian-born grandfather in 1891. Their father, a general surgeon, was tiring after 30+ years of bearing the major portion of the Clinic's surgery and needed help. Along with their father, three of their father's brothers practiced at the Clinic, so the tradition of a "family clinic" was profound and assumed. The Clinic's organizational structure was familial and hierarchical, with their father and his brothers as senior partners and "the boys", Sig and Adolf, junior partners. Sig and Adolf didn't mind the designation "junior partner", but that of "junior surgeon" rankled a bit.

The young men quickly became very busy, assuming call every other night and doing a broad field of general surgery and general practice. Their surgery included everything from burr holes to gynecology - including thoracic surgery, fractures and abdominal surgery in patients of all ages. They were soon joined in surgical practice by their friend George Murphy (MGH '58) and by orthopedic surgeons John Hayden and Doug Tompkins (both MGH '58). Other MGH-trained men joined, as well, including their

cousin Erik in pediatric, thoracic and cardiovascular surgery (MGH & Boston Children's Hospital '64) and Martin Smith, hematology (MGH '66).

Sig and Adolf became involved in clinic and hospital management, always aiming to expand the number of specialties, to upgrade clinical quality, and to make the Gundersen Clinic a premier place to work. One of the chief obstacles to their vision, however, was the clinic's organizational structure. Joining a family-owned, family-managed clinic held little appeal for much of the new talent the Clinic wanted to recruit. Finally, in 1964, after many uncomfortable discussions, they convinced their father and uncles to form a service corporation managed by an elected board and president. This landmark organizational change ushered in a period of rapid growth, matched by growth in the adjacent La Crosse Lutheran Hospital. From 1970 to 1990, growth was largely guided by one or the other brothers, who were clinic presidents for a combined 15 years. In 1996, merger mania swept the country, and the Gundersen Clinic and Lutheran Hospital joined to become Gundersen Lutheran Medical Center with a single CEO and board of directors.

At the end of 1991, Sig and Adolf retired from active practice, having worked for 37 and 36 years, respectively. They had both done a prodigious amount of surgery and had helped to shape a modern medical center, one of the best in the country. Its size alone is impressive, with 420 doctors covering all medical specialties, except organ transplantation and major burns. The Medical Center has 6,000 employees, 27 satellite clinics and a 2005 teaching/research budget of \$10 million.

Adolf L. Gunderson died in 2002. He had developed post hepatitis cirrhosis (a boyhood infection) and underwent an emergency liver transplant in 1991. This gave him 11 more years of life, but in his last year he developed idiopathic pulmonary fibrosis, which ultimately caused his death.

Sigurd B. Gunderson, Jr. is in good health and enjoying retirement in his hometown of La Crosse, Wisconsin.

(Editor's note: In 1891 Adolf Gunderson, a Norwegian surgeon, read an advertisement in a Norwegian newspaper to join another Norwegian surgeon named Christiansen as an assistant for one year in La Crosse, Wisconsin. Dr. Gunderson accepted Dr. Christiansen's offer, went to La Crosse, and never left.

The original practice was called the Christiansen-Gundersen Firm. After Christiansen died in 1919 it became the Gundersen Clinic.

Six of Dr. Adolf Gunderson's sons became physicians, and by the current fourth generation some 20 descendants have gone into medicine. About fourteen of these have worked at the Clinic.

Sigurd, Adolf L., and Erik, members of the third generation, graduated from HMS in 1948, 1949, and 1955 respectively. All three took their surgical training at the MGH. Erik went on with residencies in pediatric surgery at Boston Children's Hospital and thoracic and cardiovascular surgery at the Ulleval Hospital in Oslo, and the Newcastle Thoracic Unit in England. He was certified in all three fields and opened up new units in thoracic and cardiovascular surgery and pediatric surgery when he joined the Clinic in 1964.

The efforts of the two brothers, Sigurd and Adolf L., and their cousin Erik, are largely responsible for the transformation of the Gundersen Clinic from a good small family clinic to one of our country's leading medical centers.) ♦

The Problems

In 1950, it was widely believed on the basis of clinical experience and autopsy studies that no more than 2-3 cm of trachea could be resected and anastomosis be reliably accomplished. It was also held that cartilage – and hence the trachea – healed poorly. An additional impediment to tracheal surgery was concern about ventilation and administration of anesthesia when the trachea was completely divided. Consequently, despite advances in pulmonary resection in the 1930s, esophageal surgery in the 1940s, and the beginnings of cardiac surgery in the 1950s, little had been done with the trachea. Lateral or “window” resections were hesitantly employed for small tumors, with application of patches of autogenous tissues or foreign materials. Death from mediastinal leakage and early recurrence of tumor due to timorous margins were too frequent. Experimental tracheal replacement with solid or porous materials failed. Implantation of bioprostheses (fixed tissues) and fashioning complexes of autogenous tissues with or without synthetic supports also failed, even as a very large literature accumulated. Experimental tracheal transplantation performed more recently, with all variations of auto and allografts, tissue treatment, use of immunosuppression or not, and indirect and direct vascularization, persistently remains clinically impracticable. After about 75 years of experimental efforts only relatively recent work in tissue engineering shows any promise for the future.

However, experiments and also clinical evidence, especially from trauma, plus a few case reports of short tracheal resections with anastomosis demonstrated that the trachea did heal. The presumed limitation of resection to 2-3 cm, persisted more stubbornly, despite several encouraging reports based on cadaver dissections but these findings were not translated to clinical experience.

An informal account of contributions from the MGH to the development of contemporary tracheal surgery follows. Although the story is told from a personal and an MGH point of view, its purpose is not to claim priorities. Detailed reviews of historical development the world over are found in references cited at the end of this paper.

Tracheal Mobilization, Anesthesia

Presentation of a patient with an intrathoracic tracheal “cylindroma” at Tuesday morning thoracic rounds in the Ether Dome

in 1961 (Drs. Churchill, Sweet, Scannell, King, Pittman, Robbins, Castleman) piqued my interest. Dr. Churchill pointed out the possibilities of staged reconstruction of trachea in the neck versus the requirement for a safe, definitive anastomosis in the thorax. It occurred to me that after rupture of the trachea by blunt cervical injury, the distal segment retracted deeply into the mediastinum. I raised the question of whether a cervical tracheal segment might be devolved into the chest for primary anastomosis there, allowing later cervical reconstruction. EDC accepted this far-out contribution with tolerance, but hardly with enthusiasm. I pursued the idea through systematic anatomic dissection in the autopsy room (with the help of Drs. Ellen Dignan and Tsuyoshi Miura, whose only compensation was their interest in the project). We concluded in time that about half of the human trachea might be removed intrathoracically with apparently safe anastomotic tension. The latter was judged on the basis of animal experiments.

With these encouraging anatomic findings, Henrik Bendixen and I spent several sessions plotting detailed anesthesia techniques to maintain ventilation via sterile tubes across the operative field. The goal was to maintain control systematically at all times in order to permit unhurried surgery. It seemed feasible. We ruled out cardiopulmonary bypass in order to maintain simplicity and avoid complications, which indeed were later found to be potentially lethal for complex carinal resection. In short, bypass for tracheal surgery was safe only when it was unnecessary.

First Cases—Primary Tumors; Carina

Just as all of this fell into place, Earle Wilkins sent us a patient from the Pondville cancer hospital who was nearly totally obstructed by a lower tracheal cylindroma (adenoid cystic carcinoma). She decompensated following bronchoscopy and operation was forced at night. After placating the Chief Resident, Hal Urschel, by carefully explaining that I had to do the operation because it was our first one and also since I didn't have a totally clear idea of how I would proceed, we performed an ad hoc tracheobronchial hookup. A successful result encouraged continuation of the project, and this encounter with the carina early on spared us many hours in the laboratory working out suitable techniques for carinal reconstruction.

Jim Shannon sent us the next patient

from Salem with a squamous carcinoma in the lower trachea. Other tumors followed, although at a slow rate of accrual. In the meanwhile, we designed a multistage technique in dogs for construction of a cervical tracheal replacement. This was done using full-thickness cervical skin with its underlying platysma, supported by inlying polypropylene rings. This was intended to replace the cervical trachea should it have to be devolved into the thorax. I later employed this technique with success in a few patients (one reoperated on for a different tracheal lesion 40 years later). The procedure failed in some and was soon abandoned as mobilization techniques improved.

Precise anastomotic techniques were worked out and proved to be dependable as long as excessive anastomotic tension was avoided. Over succeeding years, systematic techniques were also devised for excising carinal tumors which involved various lengths of trachea or main bronchi. Intrapleural mobilization of the hilum of the lung also proved to be an important adjunct.

Tracheal Blood Supply

It may seem odd in retrospect that detailed descriptions of the blood supply of the trachea were not then available. This was obviously important in tracheal mobilization and anastomosis. Dr. Miura and I defined the blood supply of the upper trachea with injection studies, describing a principally segmental supply from the inferior thyroid artery. Later, a group at the Mayo Clinic completed a classic study of the blood supply of the entire trachea. We were always careful to preserve blood supply of mobilized segments.

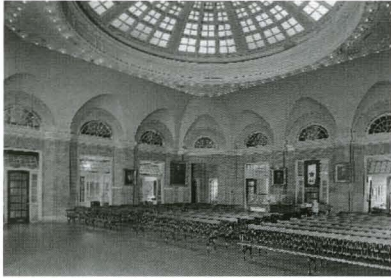
Post Intubation Lesions

In the polio epidemics of the 1950s and 1960s, mechanical respirator care evolved from the earlier Drinker tank respirators to positive pressure machines requiring delivery (in adults) via cuffed endotracheal or tracheostomy tube cuffs. Henning Pontopidan first called my attention to the devastated bronchoscopic appearance of the trachea in patients being thus ventilated. Soon thereafter, our first patient appeared with critical tracheal obstruction following ventilation. She had very severe stenosis and bilateral basal pneumonia. The stenosis was successfully resected on an emergency basis, using a wide exposure – neither of which are now necessary.

With this serendipitous appearance of an
(Grillo continued on page 8)

The Moseley – Memory of an Alpine Tragedy by Bob Coe '55

Guarding the right entry to the White Building “The Moseley” stood from its dedication in 1916 to its razing in 1979 to make room for the Wang Ambulatory Care Center. The grim façade with its five prominent arched windows housed the Treadwell Library and for over 60 years many generations of House Officers. It also hosted numerous change parties featuring the necktie clipping ceremony and in its earlier days was the meeting place where patients’ families could field questions directly to the Staff Doctors. There was also said to be a handy short space from a rear fire escape platform to a window in the nurses’ quarters. The Moseley AC was the alternative resting place for on-call house staff, not grabbing a few winks on a handy gurney, and a busy spot in the early morning with only one bathroom and shower serving as many as four bedrooms. But, no matter, when the time came to collapse, bed was the only consideration.



What was its origin? The will of the Rev. William O. Moseley, in July 1895, provided for a gift to the MGH of twenty thousand dollars in memory of his “dear son,” which was to be used for “free beds and other general purposes.” The story leading to this bequest relates directly to his son, William Oxnard Moseley Jr., M.D., appointed House Officer at the MGH in August 1877 and degreed in Medicine by Harvard in 1878 after the clerkship year. He had spent five years traveling and climbing in the Alps after graduation from Harvard in 1869, was considered an experienced climber, and had been elected to membership in the Alpine Club, a distinguished honor among climbers.

He spent the winter of 1878 in Clinics in Paris, Berlin, and Vienna for additional studies in medicine and in the spring of 1879 recommenced climbing in the Zermatt region. In August, in company with an English friend and with two of the most experienced guides, he started ascent of the Matterhorn with the goal of climbing and returning in one day to avoid staying overnight in a dilapidated hut at the 12,500-foot level. They left Zermatt at 10:30 on the night of 13 August and climbing rapidly reached the summit at 1 a.m. on the morning of the 14th. On the way up, Dr. Moseley had complained to his lead guide that the customary roping was slowing him and demanded to be free and to climb alone. The guide refused to let him off the rope in spite of several further outbursts in favor of rope-free climbing. The lead guide is quoted as saying, “No, Mr. Moseley, Never! It’s impossible. What a queer idea.”

Moseley, according to guides with whom he had climbed earlier, was described as “temperamentally a lone wolf.” During the ascent he said to his leader, “This damned rope paralyses all my movements. You don’t mind, Peter, if I untie it? It would be just splendid to climb this easy mountain alone.” They remained roped.

After a 20-minute rest at the summit, in broad daylight on a windless day, they started down. At one point in a quick descent the party reached a particularly difficult passage where a chain had been stretched across the rock. To prove to his friends the uselessness of rope and climbing aids, he safely cleared the area without using the chain or holds in the wall. As they moved down to areas of less challenge, Moseley continued his demands for rope freedom. “It’s a bore, trampling around these rocks like a yoked oxen. Now Peter, I’ve had enough of it. I’m going to unrope.” His climbing partner then interjected, “Be reasonable, Moseley, what makes you want to unrope here? It’s a stupid idea.”

This exchange had created an atmosphere of discontent among the climbers. For a member of a party to unrope exposed others to danger, showing a total lack of regard for the protective solidarity essential to group safety. A short time later, stopped while the lead guide was ahead checking a danger area, Moseley untied himself and stood free, leaving his guide unsecured on a dangerous slope. The guide was furious and again requested that his client go back on the rope. Moseley refused so the other three roped and began crossing with the unroped Moseley in his place as second in the party. Peter, the guide, crossed slowly clinging to foot and hand holds only inches separate from the face. After crossing he placed his ice ax next to the last opening to assist the unroped Moseley. The latter started across with sure foot until the last clearing, jumped to reach the ice ax, but his take-off foot slipped and he fell into endless space.

He tumbled down a short stretch of snow, gaining momentum, hit a patch of rocks, but was unable to stop his slide and dropped off to fall down 2,000 feet to the underlying glacier.

A rescue party was unable to reach him for four days because of a storm. His body was returned to Zermatt for interment, and later brought back to a final resting place in the Mt. Auburn Cemetery.

The President of the Alpine Club, in Zermatt at the time of the tragic fall, noted in his report, “I was shocked to find that Mr. Moseley had hardly any nails in one of his boots and it is quite clear that if the rope had not unhappily been removed, I would not have had to trouble you with this report.”

The site of the accident is permanently labeled “Moseley Platte” and he is memorialized in the Zermatt Museum with a picture, as well as one of his boots and the punctured metal canister he was carrying at the time of the fall. In the Wang Ambulatory Care Center, in the Moseley Memorial Room will hang the dedicatory plaque of the old Moseley “Flats” as a permanent memory for those Surgical House Officers who grew up in its shelter and that of the MGH surgical internship and residency programs.



(Editor’s note: Dr. Robert C. Coe grew up in Washington State graduating from the University of Washington, Seattle in 1940. He then completed a distinguished four years commanding a vessel in the U.S. Navy. He graduated from the Harvard Medical School in 1950 and had his surgical training at the MGH serving as the East Resident in 1955. He directed the surgical clinics at the MGH but soon returned to Washington where he practiced Thoracic and Vascular Surgery retiring as Clinical Associate Professor, University of Washington Seattle. He now lives on Mercer Island, Washington where he sails his boat and winters in Maui.) ♦



(Reunion continued from cover page)

Following lunch, Leslie Ottinger described the "Reunion of 1962" which detailed the upper extremity reimplantation by the West Surgical Service under the direction of Ronald Malt. The role of physicians in the healthcare industry was discussed by John Wesley. Clifford Straehley spoke about his research project in gender discrimination in general surgery training programs. The genesis of the bariatric surgery program at the MGH was detailed by Janey Pratt. The last talk of the afternoon session was given by Judson Randolph on the development of the rectangular residency program created by Edward Churchill in 1949, as well as his own memories of his general surgery residency at the MGH.

The highlight of the meeting was the clambake at Lars Anderson Park. This was well attended and enjoyed by a crowd numbering over 200.

The following morning a business meeting was conducted by Dr. Ottinger. The secretary and treasurer's report was delivered by Dr. Wolk. The finance and membership status of the Society was reviewed. The election of new officers was then performed. The following individuals were elected by the membership:

- Robb Rutledge – President
- Jo Buyske – President-elect
- Charles Ferguson – Secretary-Treasurer
- Kimberly Kirkwood – Councillor
- Dennis Lund – Councillor
- Jennifer Tseng – Councillor

At the conclusion of the business meeting, Leslie Ottinger received a gift from the membership for his duty as president.

The State of the Department Address was then delivered by Dr. Warsaw. He reviewed the MGH building program. He described the significant growth in the surgical facility, volume, and research funding. Multiple changes in the organization of the department were described. The melding of the Churchill (Ward) Service and the trauma, emergency surgery and critical care division were reviewed.

Charles Ferguson then gave an update on the status of the general surgery residency detailing the changes and challenges that presently exist.

A personal memoir talk entitled "My Three Love Affairs" was then given by Robb Rutledge. Judah Folkman followed with a talk describing angiogenesis-based biomarkers for early cancer detection.

The first presentation of the final session was given by Susan Briggs: "MGH as Leader in Disaster Medical Responses". She discussed the rich history of MGH's response to our nation's disasters, going back to World War I.

Next Richard Sheridan discussed his surgical experiences aboard the USS Mercy in the aftermath of the December 26, 2004 tsunami.

The final presentation was given by John Grover, who gave tips to help us prepare memoirs.

All agreed that the program was well done, widely varied, with something for everyone. We thank Jim Allan and Dave Berger for their excellent job.

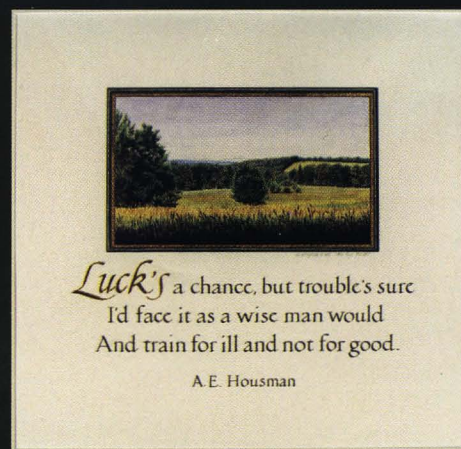
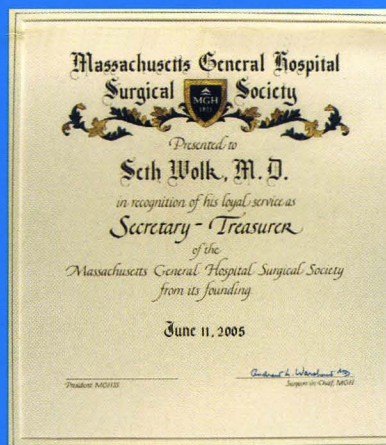
At the conclusion of the Sunday morning session, a farewell luncheon was held. Good-byes were said, as well as hopes for seeing one another at the next reunion in 2008.

Seth Wolk

(Editor's note: In 1993 Seth Wolk and Richard Whyte began to discuss the possibility of an MGH Alumni Society. In 1994 they approached Dr. W. Gerald Austen, the chief at that time. By 1996 an organizing committee had been formed consisting of Drs. Austen, Leslie Ottinger, Ronald Tompkins, Andrew Warsaw, Whyte, and Wolk.

In January 1997 a letter explaining the proposed society was sent to the graduates of the program. Seth drafted a proposed constitution and bylaws. The first meeting of the society was held on June 7, 1999. Jerry Austen was the first president and Seth was the first secretary-treasurer. Meetings are held at three year intervals. Attendance has continued to grow.

Seth has now completed his term as secretary-treasurer and has more time for his busy peripheral vascular practice in Ann Arbor. We are indeed indebted to him for all the work he has done and honor him as a founder of the MGH Surgical Society. We look forward to his continuing contributions.) ♦



In Memoriam

Edwin L. Cantlon, M.D.

A MESSAGE FROM THE CHAIRMAN

In a previous newsletter we explored the forces that are changing the goals and structure of surgical training, the new primacy of subspecialty fellowships, and the influence of social factors on residents' needs, including family, debt, and longer training times. Behind and around these factors are the explosion of new knowledge, new kinds of knowledge, and increasing public expectations of accountability. Our Surgical Ward Service sits in the middle of this swirl; its existence is potentially threatened by diminished desirability of spending an extra year as the traditional chief resident (it doesn't lead to any subspecialty certification: it is "just" an unsurpassed learning experience which adds a year until real life begins), upon which the structure of the Ward Service has totally depended. During the past academic year we had no Chief Resident for 6 months, and faculty were required to drop their usual activities to take on the job for a week at a time. This is clearly an unsustainable threat to stability and even continued existence of the Ward Service, which is already an increasingly unique feature of MGH surgical training. The Brigham has disbanded its ward service and Hopkins for the last 3 years has had to advertise nation-

ally for their equivalent of a Chief Resident.

Our solution to this threat has now been implemented. With the building of a full-time Trauma/Emergency Surgery/Surgical Critical Care Division (TESCC) and recruitment of 3 new faculty members, we perceived the opportunity to combine resources for mutual benefit of the Churchill Service (we named the ward service for Dr. Churchill last year) and the TESCC Division. George Velmahos, M.D., Ph.D., M.Ed. came from USC one year ago to lead the new division. Hasan Alam came in July from Georgetown and the Uniform Services University of the Health Sciences and will also head the Trauma Research Laboratory. Mark deMoya has joined us from the Ryder Trauma Program in Miami. Jennifer Wargo, the Chief Resident but in actuality a faculty member, not a resident, now joins the TESCC attendings as the Churchill Assistant in Surgery. She retains the principal role for managing the Churchill Service, and its teaching functions, while maximizing her own educational needs. The TESCC faculty provides 24-hour in-house attending presence, as required by the American College of Surgeons for Level 1 Trauma Centers, and a safety net to allow supervised graded anat-

omy for surgical residents. The goals are the opportunity for maximal growth, upgraded active teaching, and maintenance of our responsibility for safe and effective care.

After a year of anxiety ("the end of the ward service"), meetings, committees, endless discussions, and more meetings, we have crossed the river (is it the Rubicon or the Jordan?) into the promise land. Resident experience is unimpaired. They have settled into what is pretty much the old routine. Dr. Wargo and the TESCC attendings are working through the expected bumps and are conscientiously following their assignment to teach without intruding.

So far so good. In the process we have accomplished the simultaneous goals of stabilizing the Churchill Teaching Service for the long run, creating a dedicated Trauma Service, and rebuilding Surgical Critical Care – all three trauma faculty members will attend in the Surgical Intensive Care Unit, of which Dr. Velmahos is now Associate Director. Noteworthy is that our coalescing of Trauma and Urgent Surgery is in the forefront of a national movement, which responds to the need to redefine the role of the trauma surgeon in the light of the increasingly non-operative management of traumatic injuries.

Andy Warshaw ♦

EVENTS OF NOTE

- ♦ **John Baldwin**, the former Dean of Dartmouth Medical School, has been named the President and CEO of the CBR Institute for Biomedical Research. He plans to increase translational research, particularly in human cell-based therapies.
- ♦ The first **Judah Folkman** professor of vascular biology at HMS and Children's Hospital was created in April, 2004 by an anonymous donor. Donald Ingber is the recipient of the endowed chair.
- ♦ **J. Ruben Rodriguez** (PGY4) was awarded 1st Place and a cash prize of \$1000 for best clinical presentation at the 12th Annual Surgical Resident and Fellow Research Presentation Day. Ruben's abstract, "Implications and Cost of Pancreatic Leak Following Distal Pancreatic Resection" was selected from 22 oral presentations and will be published in Current Surgery.
- ♦ **Bob Sloane** will receive the 2005 Gold Headed Cane Award from the Tarrant County Medical Society in Fort Worth on October 6, 2005. This award recognizes a physician who symbolizes the pursuit of the highest standards of scientific excellence and integrity.
- ♦ **Jay Vacanti** has been selected as the recipient of the Sheen Award. Given "to further the study of medicine and the science of medicine and to compensate the doctor or doctors who have each year done something outstanding in the medical profession", Jay will receive the \$25,000 award in December at the New Jersey Chapter of the American College of Surgeons Annual Meeting.
- ♦ **Andrew Warshaw** was selected as an honorary fellow of the Society of Black Academic Surgeons. The honor recognizes Andy for his commitment to the SBAS mission of mentoring, scholarly presentations and encouraging diversity in the field of surgery.
- ♦ **Mike Watkins** was elected president of the Society of Black Academic Surgeons, a distinguished organization that focuses on motivating, encouraging and inspiring young African-American surgeons and medical students to pursue careers in academic medicine.
- ♦ A two-day celebration honoring **Pat Donahoe's** career and accomplishments was held on May 26-27th at the Fairmont Copley Plaza Hotel in Boston. Speakers from Australia, France and the United Kingdom as well as the MGH participated in a "Day of Science" symposium.

Letters to the Editor

To the Editors:

In your last number (Fall 2004), I was happy to read everything in it and especially to know that you need memorabilia for the Sweet Room and that Leo Roseman came up with news about himself. Very few colleagues remain from those times, 1942, and with Len we have kept in touch at least once a year for this season, he keeps me informed of his or his wife's aches and I tell him about my pains with gout and my back ache. My wife Evelina, 25 years younger than me, does not suffer from the changes we, the survivors, tolerate and thank. I say thank because naturally this is what we pay for still being around.

The memories some of us have about Dr. Richard Sweet, have been exchanged recently with Wayne Wilkins (Wilco), those thoughts not only bring back to life the happiness of those times but also the thankfulness to MGH for having prepared us to do good surgery for half a century. In regards to Sir Richard, Wilco and I agree we have never known such an elegant, precise and successful surgeon. Wilco and I had the fortune of getting to know Sir Richard in and outside the hospital environment, having been invited by his wife to his home and by making a real friendship which is shown in the picture I have of him with the title "To Rudy Herrera, pupil, friend and colleague".

In regards to personal news, I can tell you that I received the Title of Commander of the Legion of Honor from France last year, five years have gone since I stopped operating, nor do I pilot my helicopter anymore. But I am still active in the Faculty of Medicine as Dean and as Medical Director of our University Hospital. I like to mention that our Faculty of Medicine has Exchange Agreements for Students and Professor with several institutions such as Harvard, King's College, The Cleveland Clinic, Toulouse and Tulane, to mention but a few.

I am sorry to read of the death of the three ex-residents whom I still had a chance to know as fine young officers at the end of my six years at the good old MGH.

When I was made Honorary Member of the American Association of Thoracic Surgery, I talked about "A Thoracic Tale of Two Cities" and Gordon Scannel organized a dinner in my honor and a meeting with surgical residents in the Sweet Room. Seeing a portrait of R.H. Sweet for the first time filled me with emotion. May his pres-

ence inspire the present and future surgical residents at the MGH.

Rudolfo Herrera-Llerand, M.D.

Dear Editors:

Les Ottinger's comments in the Spring Newsletter on the value of the internship interviews is right on target. When I held Charlie Ferguson's job many years ago, I personally rated each applicant over two or three successive years from I to IV, with I as the current "A" category. I found that nearly all candidates finally selected were from my category I with an occasional II. When I told Dr. Churchill of these findings, he smiled and patiently informed me that he well knew that he and I (he politely included me) could easily select the house officers, and do just as good a job. As Les divined, EDC, wished to have the entire staff participate in the choices to ensure a deep commitment to the residents' education. And, he added, he also would not be beleaguered by an indignant staff surgeon asking why he had picked such an incompetent resident.

Hermes C. Grillo, M.D.

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epidemic of postintubation stenosis due to the spread of successful ventilator therapy more tracheal lesions appeared. Many older pulmonary patients could not safely undergo transthoracic procedures – nor were these necessary. With John Mulliken, a surgical resident, we explored in the autopsy room the length of trachea, which could be safely removed by transcervical tracheal mobilization, with the neck in a flexed position. Results were most encouraging. Almost all of these patients were treated via a cervical incision, plus upper sternotomy in some. Results were generally very good, even in reoperations. Bennie Geffin and later, Roger Wilson directed anesthesia management. Gerry Austen's establishment of a General Thoracic Surgical Unit in 1969 enormously improved care of these patients in and out of the operating room.

Bill Montgomery at Massachusetts Eye and Ear Inirmary ontributed two modes which were helpful in managing tracheal patients: 1) a laryngeal release procedure useful in extreme upper tracheal resection, and 2) the silicone tracheal T-tube. The latter provided a patient-friendly airway temporarily, or, in some, permanently, as reported by Henning Gaissett.

Etiology, Prevention The spectrum of postintubation lesions was clarified as experience grew. Triangular stomal stenoses

were distinct from circumferential stenosis produced at the level of the ventilatory cuffs. Etiology was not at that time clear with several competing theories in play. I elected to study this by careful examination of the tracheas of all patients who died while on respirators. By good fortune, Joel Cooper was at that time assigned to Pathology, and I invited him to join in this task. He did so in his usual enthusiastic and thorough manner. Injury from high-pressure cuffs then in use was clearly shown to produce the lesions. Their evolution was fully described. On this basis Joel and I reproduced the injury in dogs and used this model to develop a large volume, low-pressure cuff to prevent these injuries. The model proved successful in clinical trial in the old RICU with assistance from Geffin and Pontoppidan. No cuff stenosis has been produced at MGH in over 30 years since then. Current plastic cuffs follow these specifications, but lack the infinite extensibility of latex, which was originally used. If misused a plastic cuff may still produce the lesions.

Laryngotracheal Repair We also began to see numerous patients whose upper airway stenosis extended from the subglottic larynx to the upper trachea (the result of endotracheal intubation, high tracheostomy with erosion, or cricothyroidostomy). Clearly simple circumferential resection wasn't possible with salvage of recurrent laryngeal nerves. ENT procedures for such lesions had usually been done in multiple stages and often with poor results. Early work in St. Louis by Ogura and concerted work by otolaryngologists and thoracic surgeons in Toronto (Bryce, Pearson and Cooper) led to a single-stage surgical procedure for correction of laryngotracheal stenosis. Our modified technique for single-stage repair of laryngotracheal stenosis has also been very successful. The operation has further been applied to successful correction of idiopathic laryngotracheal stenosis, previously thought to be extremely rare, progressive, and resistant to operation. The pathology of this odd lesion was definitively described with Gene Mark from the Department of Pathology.

TEF Tracheo-esophageal fistula, often giant in size, also resulted from cuff ventilation, usually in presence of an inlying esophageal tube. In 1976 we reported a single-stage procedure for closure of the fistula and resection of the injured trachea, which has been accepted as the standard of care internationally. The origin of two (Grillo continued on next page)

(Grillo continued from previous page) types of tracheal innominate artery fistula due to erosion was also defined, differing emergency management described, and operative treatment employed successfully. Understanding of the etiology of these acquired lesions has markedly reduced their incidence over the years.

Secondary Tumors

The natural history and long term results of treatment of postintubation lesions and of primary tracheal tumors has been well defined over the years. The largest experience in both of these categories has been reported from the MGH. Refined techniques of tracheal and carinal resection and reconstruction led to steady reduction in complications and mortality over the decades, while increasing rates of resectability. The use of absorbable synthetic sutures alone nearly eliminated granulations at the anastomoses. Cameron Wright has recently reported a detailed study of anastomotic complications and factors involved in their occurrence. Techniques for tumor removal were also successfully applied to treatment of secondary invasion of the airway chiefly by differentiated papillary thyroid carcinoma. My first such resection was done in 1965, and the first series in the West (Europe and the Americas) was published from MGH in 1986. This included removal of invaded portions of adjacent larynx as well with plastic repair. Dr. Masazumi Maeda, an MGH fellow, subsequently played a major role in introducing tracheal techniques into Japan, where series of excisions of thyroid carcinoma from the trachea were reported earlier. Henning Gaissert has recently reported on additional techniques, which we have used for preservation of functioning larynx where a primary tracheal tumor also invades that structure – the first report of its type.

Facility with carinal reconstruction led to safe carinal pneumonectomy for bronchogenic carcinoma, which extended centrally. Douglas Mathisen, now Chief of Thoracic Surgery, has reported numerous series of tracheal surgical cases in this and in almost all categories mentioned. He is probably among the busiest airway surgeons in the world. With Mathisen, basic principles in repair of acute and late tracheal rupture were clarified. John Wain and his colleagues have achieved an enviably low level of bronchial complications in lung transplantation, which he attributes largely to MGH expertise in airway surgical techniques.

Pediatric Tracheal Surgery – Long Congenital Stenosis

These techniques for tracheal, laryngotracheal, and carinal resection were also found to be applicable in children. Early on, with Masazumi Maeda and Yahiro Kotake from Osaka University, we demonstrated, as others did, growth of trachea after experimental resection in puppies, observing, however, that the juvenile trachea tolerated tension less well than the adult. This was later confirmed in children. Cameron Wright has recently reported the largest series of pediatric tracheal resections ever. However, no solution for the treatment of long segment congenital stenosis was available until Kimura in Japan utilized a long vertical patch tracheoplasty of costal cartilage or pericardium, much too often suffered complications of recurrent granulations, occasional necrosis, and tracheal collapse. Goldstraw's suggestion of "slide tracheoplasty," with one successful case, seemed to offer a better solution: shortening and widening the stenotic trachea, and utilizing trachea for reconstruction. We reported success with a modification of slide tracheoplasty in four and then in eight patients. Following these successes, this procedure has largely replaced patch tracheoplasty worldwide.

Other Problems

The resectional techniques noted have also been successfully applied to infectious processes - tuberculosis, histoplasmosis, mucormycosis, and to rarer cases of amyloid disease, sarcoid, and idiopathic stenosis. A variety of unique specific procedures were developed to treat successfully such conditions as tracheopathia osteoplastica, expiratory tracheobronchial collapse due to COPD, postpneumectomy syndrome, straight back syndrome, and a unique congenital vascular compression syndrome unresponsive to conventional vascular ring division.

Cervicomediastinal Exenteration

In fortunately rare instances huge lesions may present (thyroid carcinoma, adenoidcystic carcinoma, etc.) which irretrievably involve larynx, trachea, pharynx, and esophagus. Radical cervicomediastinal exenteration which requires mediastinal tracheostomy has presented serious problems. Bill Waddell, with Brad Cannon's help, devised a cutaneous tube formed with chest wall skin flaps to lead to the tracheal stump, which cannot safely be pulled to the surface. Innominate artery hemorrhage continued to be a problem however.

We brought the surface down to the stoma instead, by resecting anterior bony chest wall and dropping a broad bilaterally based

skin flap into the mediastinum. Elective division of innominate artery and protective advancement of omentum solved this problem. Successful use of omentum for many major intrathoracic problems followed.

Conclusion

Thus, over about 40 years, efforts at the MGH and also in a small number of institutions worldwide (especially Toronto, Moscow, Toulouse, Bordeaux, Paris), techniques for surgical treatment of the vast majority of tracheobronchial lesions have been developed. Ronald Belsey, who had been a fellow with EDC in the 1930s, observed in 1951: "The intrathoracic portion of the trachea is the last unpaired organ in the body to fall to the surgeon, and the successful solution of the problem of its reconstruction may mark the end of the expansionist epoch in the development of surgery."

A definitive textbook, Surgery of the Trachea and Bronchi, from the MGH, was published in 2004.

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(Editor's note: Dr. Hermes C. Grillo grew up in New England and graduated Summa from Brown University. Following graduation from the Harvard Medical School (HMS) he had his surgical training at the MGH and was the West Resident in 1955. During 1951-1953 he served in the US Navy Medical Corps in Korea as surgeon 1st Marine Division, Fleet Marine Force and finished his military duty at the US Naval Hospital, St. Albans, NY. On completion of surgical training he practiced General and Thoracic Surgery at the MGH becoming Chief of General Thoracic Surgery in 1969 and Professor of Surgery HMS in 1973. He is now Emeritus of both and Senior Surgeon at the MGH where he continues to expand and write on the development of tracheal surgery.) ♦

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