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SAVE THE DATE
MGH Department of Surgery
Annual Reception
Hilton SF and Towers
Continental Rooms 5-6
October 7, 2002, 6:00-8:00 p.m.

WANTED
PROFESSIONAL AND PERSONAL NEWS
Please send to Editorial Office address above

The MASSACHUSETTS GENERAL HOSPITAL SURGICAL SOCIETY Newsletter

Fall 2002 ***Volume 3, Issue 2***

A MESSAGE FROM THE PRESIDENT

The second meeting of the MGH Surgical Society in June witnessed two important milestones. Jerry Austen, who supported, guided, and financed the society during its embryonic years, completed his term as the first President. And Seth Wolk reported on the present sound financial status of the organization and that it now even seems on the threshold of financial independence.

The meeting, which seems to have been uniformly judged a great success, was attended by 154 of the 413 members. The program had been designed and arranged by Mike Margolies. Anchored by the Grillo talk on the Churchill Residency, it featured speakers from presidents and deans to surgeons and residents and topics that encompassed science and fantasy, the recent and the ancient, surgical politics and resident survival, and even practical advice on how to balance two busy surgical careers with raising two sets of twins. Social events included a more or less formal dinner in the Great Hall of the venerable Harvard Club, and an arctic lunch in a tent on the Bulfinch Lawn. Most importantly, it brought back together comrades from resident days; an aging but apparently still spirited band.

Although plans were not entirely finalized at the council meeting, it was generally agreed that three years is about the right interval between meetings. As to the site, although others have invariably been considered, coming back to Boston in 2005 also received majority approval. As an added inducement to this, by then there will have been major additions to the hospital and further changes in what seems to be a rapidly evolving department.

Finally, it seems important to recognize the quiet and effective work of Seth Wolk, our first and only secretary-treasurer, who has seen to so many details of getting started and has agreed to stay on for another MGH Surgical Society term, which happens to be three years. Also I note with pleasure the work of the newsletter editors, Jack Burke and Robb Rutledge, the latter of whom is our next president-elect.◆ ***Les Ottinger***

Heads up - next reunion June 2005 - Hope to see you then!

HIGHLIGHTS OF THE 2ND MEETING OF THE MGH SURGICAL SOCIETY

by Seth Wolk

The 2nd Meeting of the MGH Surgical Society was held in Boston on June 6-8, 2002. Events began with an alumni cocktail reception held on the Wang Terrace the evening of June 6th. Although the weather was inclement, seeing old friends and mentors lifted the attendee's spirits.

Top row left to right -

Nancy and Ed Salzman;
Graeme and Janet Hammond
Les and Joan Ottinger

Bottom row left to right -

Jon and Shelley Hupp
John Baldwin and Shelia Davis
May and Clem Hiebert

The following morning, the scientific sessions began after welcoming remarks by Andy Warshaw. He informed the group of many new initiatives in the Department of Surgery. There will once again be two "ward service chief residents" who will be sharing responsibilities for running the ward service as well as performing mini-fellowships in such areas as advanced laparoscopy and critical care. Partners update revealed that the financial status of the MGH remains robust and its relationship with its affiliated institutions remains sound. Dr. Warshaw also described the massive physical plant renovations and additions that are in progress that will result in a substantial increase in the number of beds, ambulatory care facilities and research, administrative and hotel space over the next decade.

John Baldwin presented his thoughts on the issue of attracting medical students to General Surgery Residency programs and the importance of mentoring. The role that Edward Churchill played in the present day design of the MGH surgical residency was discussed next by Hermes Grillo. Hatem Abou-Sayed gave a humorous account of his MGH general surgery residency experience. Joel Cooper discussed controversies surrounding regulation of innovations in the field of surgery. The present status of development of whole organ fabrication was presented by Jay Vacanti. A panel discussion on the conflicting demands of general surgery residency and subspecialty fellowships included Charlie Ferguson, Dave Rattner and Barbara Smith. Les Ottinger served as moderator of what could be described as a quite lively discussion. Judah Folkman closed the morning session with an update on angiogenesis and lymphangiogenesis stimulators and inhibitors in the treatment of non-neoplastic diseases.

The Business Meeting held during the morning session included election of the new councilors (Jo Buyske '93, Joren Madsen '90 and William Wood '74 as well as the president-elect (Robb Rutledge '57). Outgoing councilors Ronald Tompkins, Harold Urschel and Richard Whyte were thanked for their excellent service since the society's inception three years ago. At this time, Dr. Ottinger presented Dr. Austen with a certificate of appreciation

Following a group picture of the meeting's attendees, lunch was served on the Bulfinch Patio. Many members then departed by bus for a tour of the John F. Kennedy Presidential Library.

Social activities continued that evening with a dinner at the Harvard Club on Commonwealth Avenue. Although the food and music were superb, the opportunity to visit with friends was once again the highlight of the evening.

Rich Cambria kicked off the second scientific session on Saturday morning with a description of the history of Vascular Surgery at the MGH as well as his view of where the field is headed. The demands of trying to balance practice, administration and family was succinctly presented by Jo Buyske. Gus Vlahakes informed the membership of the MGH's role and the current status of total artificial heart replacement. Francisco Cigarroa discussed his remarkable transition from an MGH surgical intern to the President of Texas Southwestern Medical Health Center. Pat Donahoe's much anticipated talk entitled "Sex Cures Cancer" eruditely informed the membership of the role of molecular controllers in reproductive duct development and their potential applicability in the treatment of neoplastic disease. Research efforts at the MGH in transplantation tolerance were reviewed by David Sachs. Michael LaQuaglia discussed the application of the lessons he learned as a trainee at the MGH in the management of complex childhood tumors.

The last talk of the session was delivered by Leslie Ottinger. A historical account of George Hayward, M.D. and his contributions to the Department of Surgery in its nascent states were recounted.

Following Dr. Ottinger's talk, the membership was escorted to the Ether Dome atop the Bulfinch Building for an enlightening description of "The Making of the Ether Day Painting" by Warren and Lucia Prosperi. An enraptured audience participated in a multimedia recounting of the events surrounding one of the most historically significant events in medicine. This ended the official events of the second meeting of the MGH Surgical Society.

Although many members were missed, one who was unable to attend because of health reasons needs special recognition. Michael Margolies served as the Program Committee Chairman and put together a superb program. We hope to see him at future meetings.◆

THE SECOND SURGEON presented by Les Ottinger at the 2nd Meeting of the MGH Surgical Society, June 2002

The first patient was admitted to the MGH in 1821. For the next 90 years, surgery in the hospital was largely dominated by three surgeons. These were John Collins Warren, Henry Jacob Bigelow, and Maurice Howe Richardson. Warren, appointed surgeon to the hospital in 1817, and visiting surgeon in 1843, was, along with James Jackson, a major figure in the founding of the hospital. He was a pillar of the medical school, as had been his father, and was an accomplished surgeon and a noted anatomist. Bigelow, visiting surgeon from 1846 until 1886, became the best known American surgeon during the great expansion of surgery that followed the introduction of anesthesia. Richardson, visiting surgeon from 1886 to 1911, was the Mosely Professor and the MGH's first Surgeon-in-Chief. All were so dominant that they received the recognition and homage even of their immediate peers.

Despite their dominance, though, the responsibility of running the one, two or sometimes three surgical services was shared after 1835 by a succession of other visiting surgeons. Some such as John Homans, Samuel Jason Mixter, J. Collins Warren, and Jonathan Mason Warren, remain quite noted in their own right. Other visiting surgeons served and then pretty much faded into our unrecorded history, forgotten workers in Churchill's Vineyards of Surgery. These, with the year they became a visiting surgeon, were:

William Allen Brooks 1906
Henry Grafton Clark 1851
William Merritt Conant 1900
Algernon Coolidge 1868
John Wheelock Elliott 1894
George Henry Gay 1854
George Hayward 1836
Richard Manning Hodges 1863
James Gregory Mumford 1905
Charles Burnam Porter 1875
David Humphreys Storer 1849
And Solomon David Townsend 1839

In fact, in addition to these, there were another two dozen even more obscure surgeons who held appointments to the outpatient department. No doubt all were during their day among the leaders of Boston surgery, but history has not been very kind to them.

Despite the faded significance of these remote MGH surgeons, I do, nevertheless, plan to devote the next quarter of an hour or so to one of them. This is George Hayward. Except that he was the first appointed, he actually probably is not that different in most ways from all the others.

Hayward's first appointment was in 1826, as Assistant Surgeon. He was the son of Lemuel Hayward, a Revolutionary War surgeon. Lemuel had graduated from Harvard in 1767, had studied medicine with Joseph Warren, John Collins Warren's uncle who had been killed in the battle of Bunker Hill, and had been a member of the first group of consulting physicians to the hospital, having been appointed with 7 others in 1817. It was at the same time that James Jackson, then 40, had been appointed physician and John Collins Warren, 39, surgeon. George Hayward was born on March 9, 1791. He grew up in Jamaica Plain and graduated from Harvard with a BA at the age of 18. Following this he made a decision which perhaps inevitably influenced his status in Boston medicine. He elected to take his MD degree at the University of Pennsylvania, which was, by all odds, the superior American medical school of the time. With the teachings of Benjamin Rush, Benjamin Barton, and Caspar Wistar firmly in hand, he returned to take an AM degree at Harvard in 1812 and then left for studies in Europe, especially under John Abernathy and Astley Cooper in England, but also on the continent. After that he returned to Jamaica Plain to enter practice with his father.

I have no idea of the duties of an assistant surgeon in the hospital in 1826 but the Trustees, who kept tight control over the affairs of the institution and Warren, must have thought him a promising fellow. It may have just meant that he could bring his students into the hospital for instruction. It is noted in the trustees minutes about that time that physicians were to be allowed to do this at a fee of $30 per student, the fee to be retained by the teacher as also was responsibility for the conduct of the students. At that time, education at the medical school took the form of lectures only and did not include exposure to the less theoretical aspects of medical practice. It was usual for faculty members and other town physicians to take on one or more students who were often furnished room and board in exchange for the performance of various specified duties, usually related to their practice. In fact, in addition to the formal instruction in medicine offered by the medical school, groups of doctors, often including faculty members, sometimes joined together to offer their own courses of lectures. It is known that George Hayward, along with John Collins Warren, Enoch Hale and five other practitioners conducted such a "school" between 1830 and 1838, and that this was only one of several. Actually, it seems probably that this competition was an important stimulus for the restructuring of the medical school curriculum, in 1846.

John Collins Warren, Professor of Anatomy and Surgery, an appointment to which he had succeeded his father in 1815, was, as I said, by far the dominant surgeon of the time. To illustrate this and also to tell you a little more about him, it appears that at one point he even offered an arrangement to the other Boston doctors whereby he would do all operations and in exchange he would agree to manage no non surgical patients. Boston had a population of about 40,000 at that time. Not surprisingly, the offer was declined. Though a very skilled anatomist and a competent surgeon, he was more than a little deficient in the skills that had made his father a beloved and admired member of the medical community and one with a wide circle of warm personal friends. Aloof, stern, remote and outwardly supremely confident, it appears that he was not a particularly popular colleague or teacher. Warren's poor performance as a teacher may explain the fact that in 1835 Hayward received an appointment from the medical school as professor of the Principles of Surgery. It was noted that "It shall be the duty of the professor to give elementary lectures on the principles of surgery and clinical lectures on the surgical cases in the Massachusetts General Hospital." It is clear that Hayward was an excellent teacher, and much esteemed by the students. There, then, is nothing to tell us why he elected to resign from the professorship after only two years. He was immediately succeeded as professor of the Principles of Surgery by the bright, young, ambitious, and aggressive Henry Jacob Bigelow. In passing, one may note that this relatively obscure George Hayward was, technically, Harvard's first Professor of Surgery, the Warrens having been professors of Anatomy and Surgery.

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MGH INSPIRES TWO CONFEDERATES
by Sterling Edwards

Sterling Edwards

Stanley Crawford

This is the story of two southern boys from Alabama who found themselves learning general surgery at the MGH in the early 1950s. We met after we came to Boston, each having gone to a different medical school. Stanley Crawford was from Evergreen, Alabama, south of Birmingham where I grew up. We became good friends and fierce competitors.

Stanley and I became interested in vascular surgery, having worked with Dr. Robert Linton at the MGH. This was an exciting new field with lots of possibilities. At Grand Rounds on Thursday mornings we both experienced merciless teasing for our southern accents when presenting cases. We developed a strong comradeship in this foreign Yankee land.

Stanley had a natural talent for surgery, as he had excellent dexterity and could learn new operations twice as fast as the average resident. He won the first competition between us, when Dr. Churchill elected him for an extra year as Chief Resident of one of the surgical services. I did not receive this kind of appointment and returned to Birmingham where I became an instructor in the Department of Surgery at the new Medical College of Alabama. Stanley left a year later to join Dr. Michael DeBakey as an Instructor at Baylor University in Houston.

In Birmingham, I got permission from my chief, Dr. Champ Lyons, to set up an animal laboratory to investigate new techniques in cardiovascular surgery. In Houston, Stanley worked on a currently popular technique for freeze-drying human arteries taken from autopsies. I was working on a similar homograft technique and was invited to the American Surgical Association meeting in April 1954 to present a paper on this subject. At the meeting another young surgeon from New York, Arthur Voorhees, gave a classical paper about the use of synthetic cloth, such as nylon, dacron or teflon, tailored into tubes which could replace arteries. This excited me enormously as I saw it as a way to eliminate having to get up at night to retrieve arteries from autopsies.

Immediately after arriving home from this meeting, I obtained some nylon slips from my wife, Ann, and tried to emulate the production of straight and Y-tubes as Voorhees had described. Making a straight tube by folding over the material and sewing it was not too difficult, but cuffing back the ends so that the material would not fray was a problem. Suturing these tubes into the aorta of a dog was not easy and the graft often appeared wrinkled, which could often cause clotting. At that time a patient of mine was an executive at Chemstrand Chemical Corporation, a branch of Monsanto, located in Decatur, Alabama. I told him about my efforts to develop a prefabricated tube of synthetic fiber to replace human arteries. He became very enthusiastic about helping with this project. He even talked his president into assigning a physical chemist named James Tapp to work with me. The beautiful part of this corporate relationship was that it was to be a public relations project and we could start immediately without waiting until we wrote and received a grant. In just a few months, Tapp and I developed the Edwards/Tapp Graft. By October 1954 we put in the first crimped-tube graft in a patient with a gunshot wound in the femoral artery.

Meanwhile, Stanley was making a reputation as one of the best vascular surgeons in the world. He was fast and accurate and could repair an aneurysm that was difficult for other surgeons. A few years later, Stanley and I were both invited to exhibit our work in Chicago at the meeting of the American College of Surgeons. These exhibits were held in the basement of the Conrad Hilton Hotel. Stanley's exhibit on homografts was very professional with colored slides and even a movie. His huge exhibit required two booth spaces, and it took a moving van to bring it from Houston. In contrast, my exhibit was made up of two poster board to which I had attached several types of grafts that I had developed with Jim Tapp. It was small enough to carry on the airplane. Between our exhibits was a third exhibit, one that had a Bunsen burner whose flame was used to sterilize instruments, in this case one used to obtain scrapings from surgeon's throats for bacterial analysis. The first day of the meeting the Bunsen burner was knocked over and caught the curtains of the exhibit hall on fire. I quickly folded up my exhibit and headed for the exit door. Firemen rushed in and soaked the exhibit area, putting out the fire, while at the same time destroying Stanley's exhibit. When the smoke cleared, I sauntered back in and rehung my exhibit where it was examined enthusiastically by many surgeons. Stanley always teased me as if I had turned over the Bunsen burner. I was just happy to beat Stanley at something even when it was simply getting my exhibit out of the fire! Throughout our lives, we remained devoted friends and colleagues.

(Editor's note: Sterling Edwards completed his MGH surgical residency in 1952 and went home to Birmingham, Alabama, where he began his surgical career under Dr. Champ Lyons. In 1954 he made a monumental contribution to vascular surgery when he introduced the Edwards-Tapp crimped nylon tube blood vessel graft to prevent kinking. Then in 1957 he added a crimped Y-shaped graft to replace the aortic bifurcation.

He moved to Albuquerque when he was named the Director of the Cardiovascular and Thoracic Surgery Department at the University of New Mexico in 1969. Five years later he became the Chairman of the Department of Surgery there, a position he held until his retirement in 1987.

After his retirement he turned his attention to health counseling emphasizing "empathic" listening. His health precludes his attending meetings, but he and Ann have had an active life in Albuquerque with their four children and their families.)◆

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Reunion of Boston Bruins' doctors, past and present, Earl Wilkins, left and Ashby Moncure, right

MAURICE HOWE RICHARDSON (1851 – 1912)

By George S. Richardson, M.D.

MHR's life in surgery was a remarkably happy one, maturing in the dawning time of the conquest of infection and the unfolding understanding of what came to be regarded as surgical disease. His response to his times was an intense zest for action and joy in life.

What follows is assembled from a number of memoirs of him published shortly after his death and from a scan of the beautifully sorted and filed collections of his case notes, correspondence and papers now in the archives of Countway Library. His notebooks as a student at HMS, also included in those files, contain some elegant anatomical sketches.

He was born on December 31, 1851. His grandfather was a blacksmith, his father an inventor of rattan-weaving machinery. He went from high school in Fitchburg, Massachusetts, to Harvard College, graduating fin 1873. He then taught at Salem High School, eventually marrying one of his pupils – but not before her father, a highly-regarded local physician (Edward B. Peirson, 1820-1874) had told him he was wasting his talents and started to teach him medicine. This got him into Harvard Medical School in the second year, graduating in 1877 – ten years after Lister had published his first cases treated using carbolic acid (phenol) antisepsis. His friend and contemporary, Samuel J. Mixter (1855-1926) claimed that he was the only man who ever got 100 in an anatomy examination.

An eminent contemporary, John Collins Warren (1842-1927) sets the next scene: "The hospital of the early 1870s was as fine a representative of the surgery of the day as could be found in the country… on a par with the best that was to be found in Europe… Surgery was still 'external medicine' …No attempts were made to extend surgery into the major cavities of the body.' (Churchill,E.D. "To Work in the Vineyard of Surgery", p.153-4).

Richardson's career at MGH began on graduation, when he served as surgical HO. After only 3 months, however, he left to start an immediately successful private practice and did not return for 5 years, when he was appointed surgeon to outpatients. In the interval he also worked as an assistant in the anatomy department at HMS, was noticed by the Professor of Anatomy, Oliver Wendell Holmes (1809-1894), began preparing specimens for Holmes' lectures, and was appointed Demonstrator in Anatomy.

In 1886 he became a visiting surgeon at MGH. In the same year, he published a widely noted paper describing the first gastrotomy for the removal of foreign body – a set of false teeth – lodged in the lower esophagus. He began a close association and lifelong friendship with a pioneer pathologist and pupil of Rudolf Virchow (1821-1902). Reginald H. Fitz (1843-1913), who, also in 1886, published his epochal paper on "perforating inflammation of the vermiform appendix". (Fitz was not actually the first to describe this condition, but was the first to recognize its varied disguises and complications and to give it the name of appendicitis).

For Fitz and Richardson surgical pathology was gross pathology. Indeed, at the turn of the century surgeons were reluctant "to surrender their traditional role of relying on clinical findings and gross pathology for their diagnoses to laboratory physicians, who were less knowledgeable clinically and were just beginning to unravel the perplexities of diagnostic microscopy" (Scully, R.E. and Vickery, A.L. "Surgical Pathology at the Hospitals of Harvard Medical School", in "Guiding the Surgeon's Hand. The History of American Surgical Pathology").

Physiology had begun at HMS in 1871 under the vigorous leadership of Henry P. Bowditch (1840-1911), who had studied with Claude Bernard (1813-1878) in Paris, but the subject seems to have had little interest for MGH surgeons. J.M.T. Finney, who entered Harvard Medical School in 1884, remarks that the vital importance of physiology "as a fundamental science…was just beginning to be recognized. This was one of the outstanding courses in the School, as far as it went, but of course, it was limited largely to lectures and demonstrations." ("Changing conditions in surgery since the time of Henry J. Bigelow." Lecture on receiving the Henry J. Bigelow Medal of the Boston Surgical Society. New England Journal of Medicine 206: 263-276, 1932).

The year 1887 is worth a note: it was 20 years after Lister's publication on antisepsis, and the year that John Collins Warren later declared to be the one in which the antiseptic era of surgery closed, and the aseptic era began. During his rotation as surgical visit in that year Warren had introduced the use of aseptic surgical dressings, only to find when he returned in the following year that all was forgotten, "and thus an opportunity had been missed by the Hospital to introduce aseptic surgery in this country". (Churchill, E.D., p.170). (Warren's choice of 1887 nicely fits the chronology given in Carl W. Walter's monograph. "The Aseptic Treatment of Wounds", MacMillan, 1948. (Incidentally, it was in 1889 that William Halsted (1852-1922) introduced rubber gloves in the operating room). In 1901 we find Richardson writing that "the ungloved hand is a shock to me".

In 1988 Richardson gave up private general practice in order to be a full-time surgeon, and was the first physician in New England to do so. In the same year he published his first paper on the surgical treatment of appendicitis.

Ten years later in a paper written with George W.W. Brewster (1866-1939) he reported 720 case of appendicitis, 64% of which were described as acute. Of these, 61% were operated upon, just over half by appendectomy and the rest by drainage. The mortality in those operated upon was 22%, while that in those not operated upon was 17%, all of the latter being "moribund at the time of diagnosis"! The operated cases had not simply perforated but "in almost every case there was found to be a general peritonitis." Clearly, prompt operation on non-perforated appendicitis was something for the future.

Beginning with a successful cholecystostomy in 1892 he went on to publish many papers on the diagnostic and surgical difficulties of problems of the biliary tract. In general he seems to have favored cholecystostomy with removal of stones over cholecystectomy for severely inflamed gallbladders.

In 1898 he reported a successful total gastrectomy. Other papers, as time went on, concerned pyloroplasty, pylorectomy, pancreatitis (following Fitz's classical paper in 1889), pancreatic cysts, intestinal obstruction, intestinal resection, lateral anastomo-

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MESSAGE FROM THE CHAIRMAN

By Andy Warshaw

The primary goal of the MGH surgical residency is to facilitate and foster the professional growth of the residents, whatever their ultimate goals and life roles may turn out to be. Unlike some programs, time out from the formal training years for research is not a requirement. Nonetheless, the opportunity has been eagerly taken by almost all of our residents. Because the Department has guaranteed salary support, they have much broader entrée to laboratories around the United States and abroad. Recently an incentive program has motivated most to apply – generally successfully – for National Research Service Awards (NRSA) from the NIH and grant support from outside agencies including the American College of Surgeons and specialty societies. These awards not only save the Department hundreds of thousands of dollars each year but also provide useful experience and a CV gold star for the applicant. The current participants comprise 14 of the 16 members of the intern classes of 1998 and 1999.

Wing Cheung has joined Jay Vacanti's tissue engineering group at the MGH. She will be designing and building new organs from living cells and is supported by a V.H. Kazanjian Fellowship from the Department.

David Cooke is at Stanford with Robert Robbins, studying the role of Bcl-2, an inhibitor of apoptosis and oxidative stress, in preventing chronic rejection in rat and mouse heart allografts. He is a Claude E. Welch Fellow.

Katherine Deans and Peter Minneci are in the Critical Care Program at the National Institute of Health. After a year of clinical fellowship, they are now working together in a basic science laboratory directed at the microcirculation and inflammatory processes in sepsis.

James Donahue receives support from a NIH training grant to study replication – competent viruses as anti-cancer agents. Under Ken Tanabe he is examining the role of the immune response to oncolytic viruses and trying to improve the targeting of viral replication specifically to cancer cells.

Erik Finger is working on the role of co-stimulatory blockade in preventing alloimmune and autoimmune rejection of islet cell transplants in various non-human models and human recipients. He is at the UCSF Diabetes Center and is the recipient of a Juvenile Diabetes Foundation postdoctoral fellowship.

John J. Gonzalez is in his second year of a clinical and clinical research fellowship at the Texas Endosurgery Institute. He is learning advanced laparoscopic techniques and investigating their effectiveness.

Douglas Johnston is working in the laboratory of Joren Madsen on mechanisms of immune recognition involved in chronic heart allograft rejection and in developing novel preventative strategies. He is an Edward D. Churchill Fellow and has received an NRSA and an American College of Surgeons scholarship.

Akemi Kawaguchi is in the Pediatric Surgical Research laboratories under the supervision of Pat Donahoe. She is studying the role of four candidate genes in fetal lung development with the goals of treating the pulmonary hypoplasia associated with congenital diaphragmatic hernia. She is a Robert Linton Fellow and is awaiting a decision on the NRSA.

Larisse Lee is at Columbia with Dr. Ann Schmidt. She is working on the role of RAGE (Receptor for Advanced Glycation Endproducts), a multiligand member of the immunoglobulin superfamily, in diabetic atherosclerosis and restenosis after carotid injury. An Edward D. Churchill Fellow, she has also received an NRSA and an ACS research fellowship.

Richard Pin and Maura Reinblatt have Surgical Oncology Research Fellowships to contrast and study the effects of oncolytic herpes simplex viruses for delivery of gene therapy to various tumors. They are working under Yuman Fong at Memorial Sloan-Kettering Cancer Center.

Jennifer Wargo is at UCLA's Jonsson Comprehensive Cancer Center in the laboratory of James Economou. She is focused on developing gene therapy for melanoma in a murine model and on improving a vaccine by selective targeting of tumor antigens. She is supported by an NIH training grant.

Matthew Williams has been awarded a Marshall K. Bartlett Fellowship and an NRSA to study the role of adrenergic receptors in the functional regulation of the normal and failing heart. He will also be exploring the use of gene therapy for heart failure in the laboratory of Walter Koch at Duke.◆

EVENTS OF NOTE

CRAIG P. FISCHER, M.D. ' **was recently featured in an ABC nationally televised series on the daily lives of medical personnel and their patients at the Memorial Hermann Hospital in Houston. The series traced Dr. Fischer's care of a patient with locally advanced pancreatic cancer with hepatic arterial involvement. The patient, who is currently free of cancer, underwent a neoadjuvant trial of up front fractionated radiotherapy and gemcitabine followed by radical pancreaticoduodenectomy including resection of the hepatic artery and reconstruction. The series is scheduled to be picked up by CBS in January 2003 and will feature Dr. Fischer's practice in pancreatic surgery.**

MICHAEL E. JABALEY, M.D. ' **was recently honored by the American Association for Hand Surgery with their Clinician/Teacher of the Year in Hand Surgery Award in recognition of his lifetime commitment in teaching a generation of hand surgeons.**

Congratulations to *JAMES BALCOM, M.D. PGY4* for authoring one of the Best of the Best - 2001 articles in *Archives of Surgery*. Dr. Balcom's article (136:391-8) is a study that looks at outcomes of pancreatic resection at MGH over a 10-year period with respect to the impact of case management and clinical pathways.

Congratulations to *STEVEN ABBATE, M.D. '01, DAX GUENTHER, M.D. (PGY3), DOUGLAS JOHNSTON, M.D. PGY4, and JOHN MULLEN, M.D. PGY5* on being honored by the HMS Class of 2002 as outstanding house officer teachers.

Congratulations to *CHRISTINA FERRONE, M.D. PGY4* for the best clinical paper presented at the Annual Meeting of the Society for Surgical Oncology award.

***ANTHONY MONACO*, the Peter Medawar professor of transplantation surgery at Beth Israel Deaconess Medical Center in Boston, has received the Roche Pioneer Award from the American Society of Transplant Surgeons for his early studies in experimental and clinical immunosuppression and the use of donor bone marrow to induce tolerance to solid organ transplants.**

SURGICAL CRITICAL CARE AND THE MASSACHUSETTS GENERAL HOSPITAL: A PERSONAL VIEW

Joseph M. Civetta

I am pleased to reminisce about surgical critical care and its development at Massachusetts General. However, I must confess that I spent but 2 short years – September 1970 to September 1972 as Director of the Surgical Intensive Care Unit. However, I realize that critical care emerged as a specialty and developed a national presence during that time. Additionally, there were a number of people at the Massachusetts General Hospital (MGH) who were involved with development and finally I could recount what it was like to try and deliver critical care in the absence of an organized unit.

In fact, my first contact with critical care at the MGH was when I was still a student at Boston University. I had the honor to invite Claude Welch to deliver the annual Alpha-Omega-Alpha lecture and he chose to discuss, "High output respiratory failure, the cause of death after peritonitis." This landmark paper, coauthored by Henning Pontopiddan and John Burke, recognized what we now know to be systemic inflammatory response syndrome and multiple organ system failure, culminating in respiratory arrest. I was most impressed by Dr. Welch's knowledge of physiology and very much looked forward to starting at the MGH. I started on the West Surgical service and quickly found out that intensive care was delivered in the 8 single rooms of the South Wing (on both the East and West surgical services) by interns and a cadre of special duty nurses. Postoperative respiratory complications were common and the then conventional wisdom was that high humidification in the room was an excellent mode of prevention. I can still recall Charlie McKhann peering through the window and remarking that there was not sufficient humidification because he could still see the patient. If the patient needed ventilatory support, tracheostomies were performed because 1963 antedated Joel Cooper and Hermes Grillo's landmark contribution of the enormous lateral wall pressures generated by the red rubber Rusch endotracheal tubes, resulting in tracheal necrosis and stenosis. Tracheostomy tubes were attached to Bird Mark 7 pressure limited ventilators. We all quickly learned that patients with poor compliance could not be ventilated with these anemic (40cm maximum inspiratory pressure) ventilators and we would call for "The Volume Ventilator" – the Emerson, which appeared to be made from a collection of plumbing parts. I learned about 10 years later that it actually was a time-cycled ventilator even though you turned a crank to set the tidal volume.

During the middle 1960's, cardiac surgery was evolving rapidly. Clearly the patients could not be returned to the floors immediately after surgery and so a corner of the White Recovery Room became, by squatters' rights, the "cardiac corner" and housed both the cardiac surgical patients and the residents assigned to the service for sometimes weeks at a time. The Department of Anesthesia was intimately involved in the emergence of critical care both through members such as Mike Laver and Ed Lowenstein as well as Henning Pontopiddan, Benny Geffin and Roger Wilson, who managed the four bed respiratory intensive care unit. Now that our larger tertiary hospitals devote perhaps 20% of their beds to critical care and step down beds, it is hard to believe that this 4 bed respiratory intensive care unit, initially located in the Phillips House (of all places), served the entire 1000 bed patient population. The Department of Anesthesia also set up a blood gas laboratory, specifically for caring for the cardiac surgical patients. But MGH residents have always been a crafty lot and, after having rotated through the cardiac service and learned the value and meaning of blood gases, it was not uncommon for a resident to slip down in the middle of the night and cajole the technician to do a blood gas taken from some critically ill patient perhaps languishing in a dark room in the Phillips House (remember the old saying that the nice thing about the Phillips House was that it was near a hospital?). So when I finished my residency in 1968, there were clusters of sick patient, a few physicians who already had achieved national prominence in their emerging specialty, although the major national organization, the Society of Critical Care Medicine was not to be founded until 1970, and residents, perpetually curious and always wanting the newest and best to be used in the management of their own patients.

I spent two years in the Air Force at USAF Medical Center Keesler in Biloxi, Mississippi. I was fortunate to have a Chairman of Surgery who had been involved in the triple isotope solution studies of Shires and taught me about crystalloid resuscitation (in direct contrast to the colloids favored in Boston) and I also met up with an anesthesiologist by the name of Joe Gabel, who was also interested in postoperative critical care. In fact within a month, Jack Williams made Joe and me the Medical Directors of the Keesler ICU. We then spent the next two years feeding each other articles from our own specialties and cross training each other in what are now common intensive care unit procedures. I learned to put in arterial lines and nasotracheal tubes; he learned to put in chest tubes and do cut downs. About a year later, Jerry Austen had just become Chairman of Surgery and I returned to Boston to ask him what I should do after I finished my training in the Air Force. He asked me what I liked to do. I said, well I think I prefer taking care of the patients after operation even more than doing the operations. He said, "We are about to open an Intensive Care Unit, would you like to be the Director?" I agreed and the die was cast. Joe and I were to return in September 1970: In the interim, the Gray Building had been built and there was supposed to be a 12 bed surgical intensive care unit plus a very large recovery room on the floor below to serve as an overnight ICU observation area. Unfortunately that latter unit, to be Gabel's domain, was never built and the Surgical ICU was filled with cardiac surgical patients by the time we arrived. Since it was pretty clear that the Chief of Cardiac Surgery and the Chief of General Surgery, being the same person, understood this situation, Gabel and I entered the White Recovery Room and established a policy that patients were only discharged when they were deemed safe to return to floor care (by us). Within 8 months, between 50 and 70% of the White Recovery Room (which was the only recovery room serving the ORs) was filled with ICU patients and the hospital built the Gray 3A ICU that could handle 6 sick patients and 8 overnight observation patients.

It was an interesting time for a number of reasons. A group of hearty pioneers founded the Society of Critical Care Medicine in 1970, and we thought it would be a wonderful organization to join. However we were told that it was an elite society made up of experts. So we were rebuffed on the national level. Things were not a lot better on the local level. The MGH surgical services had a long history of providing care to all of their patients. It was well understood that the attending surgeons' role was in the evaluation and selection of patients for operation and performance of technical procedures. Thereafter, postoperative care was in the hands of the residents. Of course, this was prior to the myriad of documen-

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LET US NOW PRAISE FAMOUS MEN
LELAND S. MCKITTRICK, M.D.
By Frank Wheelock

Leland McKittrick (left) was born in 1893 - the son of a physician. He was educated at the University of Wisconsin, Harvard Medical School ('18) and as a "House Pupil" at the Massachusetts General Hospital.

My high regard for Dr. McKittrick started in 1943 when I started my internship and he was Chief of the West Surgical Service in Dr. Edward Churchill's absence. Eventually I became associated with him in his surgical practice - a period which spanned about thirty years.

I want to describe this wonderful surgeon and gentleman in two sections: Contributions to the art and technique of surgery and recollection of LSM (as he was often called) as a teacher, leader and person.

First it is important to remember that not until the early forties were there any antibiotics, that there were only simple x-ray studies –no colonoscopes, CT scanners, MRIs or arteriograms. The surgeon had to adhere to the teachings of Hippocrates who first accented the importance of taking careful histories, doing thorough physical exams, and constantly observing the patient. At this LMS was superb. At surgical grand rounds (Thursdays at 9) often residents would present a case and ask the front row seniors and others for the diagnosis. Frequently Dr. McKittrick would (jingling some change in his pocket) say that perhaps the diagnosis is "whatever"-usually right! He was uncanny in his ability to put findings together to arrive at the correct conclusion.

Humor at these rounds was not lacking. On one occasion when a critical decision was to be made for some appropriate reason he said he wouldn't advise surgery if the patient was improving or getting worse. Dr. Arthur Allen said, "I guess you're not operating much these days, Leland".

At weekly service meetings (4pm Wednesdays) he was always prompt - these were high priorities in his life. All forty patients were seen walking through the ward. Then came service reports. Errors were discussed and death attributed to Patient's Disease, or error in management, in judgment or in technique. At this he was critical but fair and thorough. One was ill-advised to be inaccurate in reporting or covering up any misstep.

Dr. McKittrick's contributions to surgery were wide-ranging. In close association with Dr. Elliot Joslin he changed the approach to surgical problems involving diabetics with vascular or neuropathic foot and leg problems. Prior to his work, a low thigh amputation for these situations was routine. He developed techniques for partial amputations in the foot, and when these were not possible, turned to below-knee amputations.

Another major interest was surgery of the large and small bowel for cancer, ulcerative colitis, or regional ileitis. In colon cancer cases he wrote about more extensive resections and the use of tape ties proximal and distal to the cancer to protect against suture line recurrences. To make low sigmoid resections possible, he advocated side to end anastomosis, which allowed the proximal colon to reach three or four centimeters lower.

In the time we are describing, ulcerative colitis patients often became terribly toxic with high pulses and fevers. The treatment was ileostomy, which produced sometimes a slow remission. Dr. McKittrick decided on emergency colectomy and of course ileostomy. The results were often dramatic when the colon was out the pulse would immediately drop-perhaps from 170 to 110. Now medical treatment is so much better than this is only of historical interest.

Another interesting innovative idea of his dealt with the treatment of duodenal ulcers which, in the absence of our newer array of medicines, were a frequent cause of obstruction. At operation if a subtotal gastrectomy was attempted, the duodenal turn-in often leaked with a fatal event. A posterior gastroenterostomy alone often led to a marginal ulcer. Dr. McKittrick decided to divide the stomach proximally at the usual point, do a gastric resection down to the gastric antrum and do a turn in there. A few weeks later it was simple to go back and resect the antrum safely. Again a new life-saving concept. In the course of his work with surgical problems of the colon it is interesting to note that he was the first to record serious electrolyte imbalance caused by the excretions of large benign villous adenomas.

Now to get away from the operating table, let us turn to his other interests. Foremost he was in the field of education. I have already mentioned the importance he attached to surgical rounds. In addition to this was the considerable time he spent with the surgical resident assigned to help care for his private patients. Another way in which he helped young surgeons develop was to ask one or two at a time to join his practice-really as assistants but whom he always called associates. There were, through the years I believe, eight who held this position. The ones from MGH were John McKittrick, Frannie Moore, Tom Risley, Rich Warren, and me. He was very generous of his time with his associates and offered them a chance to do some surgery. Had they been on their own, building a practice would have been slow indeed, in those days when salaried positions were rare. This pattern was one which he had experienced as a young associate of Daniel Fisk Jones-famous in the twenties and thirties as the first surgeon to do a combined abdominoperineal resection in the United States.

Dr. McKittrick felt a responsibility to the practice of surgery nation wide and held many offices in prestigious surgical societies. He was much involved as a member of the governing board of the American Board of Surgery, and also as an examiner traveling by rail at great expense of time, as he did not fly.

He was concerned about the cost of care and his fees were among the lowest in town. When debates came up about Medicare, Blue Cross/Blue Shield, etc. I remember his comment: "If doctors did what was the best for the patient, it would turn out best for them as well".

He was respectful of his peers and in thirty years I never heard him say any unkind thing about a colleague.

In his personal life, he was a devoted family man and active in many sports including riding, hunting, squash, tennis and rowing. Squash and rowing were part of his regular schedule as he felt a surgeon should stay fit.

He retired in 1971 at the age of seventy-eight. Lest he practice too long and make errors, his wife asked several of us to tell her if we noted anything amiss - we never had occasion to do this.

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LETTERS TO THE EDITORS

Dear Jack and Robb,

In the last Newsletter I enjoyed particularly the articles on East and West Surgical Services and on Drs. Churchill and Allen. Since I rotated on both services, I like to mention the other surgeons who taught us so much. They were Joe Meigs, Bob Linton, Leland McKittrick and Richard H. Sweet.

Dr. Meigs left the General Surgical Serve to head the Vincent Memorial and we residents rotated with him for awhile. He was a super-surgeon and a lovable person.

Dr. Linton was the only "visit" that I called by his first name. He was a courageous and ingenious surgeon who tackled the hardest cases (of portal hypertension among others) and designed the best tube for management of bleeding esophageal varices.

Dr. McKittrick was Dr. Chester Jones' surgeon, that described him well. He was also a good squash player and I seldom beat him; he was colorful as when he said "if you have to take the bull by his horns", and "the surgeon's bib" as when he described the use of sulfas in colonic preps.

Dr. Sweet was the most elegant, precise surgeon I have every known. He was the era's thoracic surgeon and had the best results I ever saw to date. He called me "pupil, friend and colleague" on the picture I keep in my office. I admired him and I cherish his memory.

Rudy Herrera

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Dear Jack and Robb,

It was Dr. Churchill's practice to sit down with each surgical intern toward the end of the year to review his (there were no hers, then) experiences and to discuss career plans. Thus it was toward the end of June, 1959, that I looked forward with only mild trepidation to my appointment with Dr. Churchill, having been told by my fellow intern, Jack Porvaznik, that Dr. Churchill conducted his interview (with Jack) in a relaxed and cordial manner. I arrived early, of course, and after a short wait, was conducted into Dr. Churchill's office by Miss Meehan who offered tea and cookies. Dr. Churchill invited me to sit, and began the conversation with, "So, Daggett, I understand you want to be a "pumper," - reflecting my budding interest in cardiac surgery and his mild disdain for this evolving field. Dr. Churchill went on to say, "I think we are rather good at teaching you clinical surgery; our focus is on the postgraduate experience and clinical science for the residents, as opposed to the undergraduates, important as their education may be. However, if you should develop a research interest during your training here, we would like to arrange for you to go for training to the best authority in that field wherever he might be, here or abroad. I do not think that, as is done at Minnesota, putting every resident into our surgical laboratory to augment the department's bibliography is in anybody's best interest." (paraphrased to the best of my recollection.)

In 1964, during a visit to the NIH, Dr. Churchill took time out to visit both Mort Buckley, who was working with Dr. Andrew G. Morrow, in the Clinic of Heart Surgery, and me in Dr. Stanley J. Sarnoff's Laboratory of Cardiovascular Physiology, and to listen carefully to what we were learning.

Bill Daggett

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Dear Jack and Robb,

Grant Rodkey's warm remembrance of Dr. Allen puts me in mind of my favorite experience with that wonderful man. One of my first Baker patients was a thin young lady needing her gallstones removed. All went quickly and smoothly and we got a tight closure of the gallbladder bed. When putting in skin sutures I turned to John Head who was helping and said "my God, John, we forgot to drain!" We discussed and decided there was nothing to drain, so finished closing. As all who knew and worked with Dr. Allen know, one of his absolute dicta was "always drain!" One of the others, if I remember correctly, was start drain on fourth P.O. day shorten on fifth, out on sixth, sutures out and home on seventh. On about the sixth P.O. day, Dr. Allen stopped me on rounds and said "Bob - I hope you'll have the courtesy never to put one of your gallbladder patients without a drain in a bed next to a patient of mine."

It turned out that the two had been talking and all the fuss related to drain management had made Dr. Allen's patient feel that something had gone wrong, and she was a bit upset, and had asked him for an explanation.

Bob Coe

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(McKittrick continued from page 8)

Dr. McKittrick set standards for himself as well. He decided he would quit if he could not thread a needle easily or if his complication rate reached the average. This never happened, so he finally retired anyway.

He died in 1978 at the age of eight-five, ending an incredible career. He was indeed a hero to many of us and beloved by countless patients.

(Editor's note: After Frank Wheelock finished his MGH residency he became associated with Dr. Leland S. McKittrick in 1951. He practiced at both the MGH and the Deaconess.

Frank became interested in the emerging field of vascular surgery and was the first American surgeon to use an end-to-side femoral popliteal bypass graft. His series of femoral popliteal saphenous vein grafts in diabetic patients is still the standard. He was one of the founders of the New England Society for Vascular Surgery and was subsequently its president.

Frank was always interested in boats. Some of us remember one named "Nancy's Kitchen". Since retiring in 1985 he has sailed from the southern Caribbean to Labrador and has been an active boat builder. He enjoys tennis and bridge and also serves as a director on multiple not-for-profit health and education related boards. Frank and Nancy live in Cushing, Maine.) ◆

MORE REUNION PHOTOS

Top: Steve Abbate, Sarah Thayer and Rich Lee
Bottom: Chan Raut, Danielle Walsh and Brenda Warshaw

(**Second Surgeon** *continued from page 3)*

The conduct of affairs in the hospital is also somewhat unclear during these early years. There is apparently no records of the number and type of operations performed or even the number of admissions, although it is stated that there were nearly 8000 admissions between 1821and 1841. This suggests about 400 each year, which is a number that agrees with the numbers after 1841 that range between 365 and 459. In 1847, there was a marked and sustained increase of about 200, probably reflecting the introduction of Ether anesthesia. During these years, too, most Boston residents were operated upon and cared for at home, being admitted to the hospital only when they did not have access to a suitable facility for this elsewhere.

It is clear that from the first John Collins Warren asserted his right as the senior surgeon and insisted that only he perform operations in the hospital. This was a jealously guarded, if increasingly challenged privilege. In 1828 there is what one might judge a rather cold and formal letter from Warren to Hayward in which Warren says he has become aware of a conversation between James Jackson and Hayward. In it, the assistant surgeon had expressed the conviction that there should be three surgeons, taking responsibility and the surgical load in rotation. Hayward believed that the community would gain by having three properly qualified surgeons. Warren insisted that there was no sufficient work to keep more than one surgeon in operative practice, this being himself, that there was no reason to change an arrangement that had functioned so well, and finally, and somewhat beside the point, that there was room for only one person to be in charge. So Warren and Jackson continued to shoulder the hospital duties alone, although perhaps to assist them the first surgical and medical house pupils were appointed the next year.

This arrangement prevailed for another seven years until March of 1835. Then a letter to the Trustees from Jackson on the subject was received and referred to a subcommittee. The Trustees decided, on the basis of the recommendations of the subcommittee, to make a change. Two surgeons and three physicians were appointed to assume responsibility for the single medical and surgical services, splitting the year among them. The two surgeons were Warren and Hayward. Four years later, in 1839, the third MGH surgeon, Solomon Davis Townsend, was added. In 1846, with the opening of a second surgical ward and with the patient census now rapidly expanding, the number was increased to six.

Warren, as before, continued to be in charge. This did change temporarily in 1837. At that time, a patient, in a letter to the Boston Post, complained that he had received care in the hospital from Warren's son, J. Mason Warren, at that time not a member of the staff, in place of his father. This letter, even though probably politically motivated, did seem to require action by the Trustees. The result was a mild letter of censure to the elder Warren. He acknowledged it in a courteous and respectful way but three weeks later he announced his intention to take a prolonged European vacation, his first in several decades. The department was entrusted to George Hayward. With that came also a promotion to the rank of surgeon, a position previously held only by John Collins Warren.

One interesting outgrowth of this temporary change in control was the publication of the first detailed report of the surgical activities in the hospital. In introducing his report, Hayward stated that it "will enable anyone who will give himself the trouble to examine it, to form a tolerably just notion of the kind of diseases that are usually met with in the surgical department of this institution". This was before the addition of the wings to the Bulfinch building so there were at that time accommodations for only about 50 charity patients. The report covered the period between May 12, 1837 and May 12, 1838. During the year, 222 patients were treated by the surgical staff. Their diagnoses were tabulated and the results of the hospitalization classified in seven categories. These categories were, discharged as well, 86 patients; much relieved, 40 patients; relieved, 38 patients; not relieved, 22 patients, died, 13 patients; unfit, 3 patients; and eloped, 1 patient. Most of the deaths were patients admitted with severe trauma and who died shortly after admission. The 53 operations were also listed. The report then included a discussion of 13 diseases, conditions or injuries that seemed especially in need of comment, including descriptions, possible etiologic factors, course, treatment, and outcome, each illustrated carefully with case histories from the year's admissions. The sections range from erysipelas to cataracts and amputations to hare lip. In contrast to much of the surgical writing of the time, they are direct and carefully reasoned, and based principally on the experience being reported. From reading them it is clear why Hayward was so admired and esteemed by his students. He also prepared and published a similar report for the period from November 1, 1840 until March 1, 1841. These, I believe, were the first detailed reports of this type from the hospital.

On October 16, 1846, George Hayward again became a second MGH surgeon. The day after John Collins Warren's participation in the first public demonstration of surgical anesthesia and at the request of Warren himself, Hayward performed the second operation done at the MGH under general anesthesia. The patient was a woman with a fatty tumor of the arm between the shoulder and elbow. She was entirely unconscious during the operation, which took seven minutes. These and other facts related to the introduction of ether anesthesia were reported by Hayward to the Boston Society for Medical Improvement six months later. From this and other records, it is not clear whether Hayward was present at Warren's initial operation. On November 1, though, he replaced Warren as attending surgeon and W.G.T. Morton approached him shortly thereafter to allow the use of his as yet unidentified anesthetic agent for an amputation scheduled for the following day. This was meant to be a more severe test of its efficacy. According to Hayward, he declined to do this unless Morton would first write to Warren and identify the agent, until then called letheon, allowing a discussion by the staff of safety considerations before its further use in the hospital. This Morton was willing to do, and that ether was a safe agent was accepted by the staff, many of whom had already used it in the treatment of asthma. On November 7 Hayward went ahead with the operation, a thigh amputation in a 22 year old woman with a chronic infection of the knee and adjacent bones complicated by systemic symptoms. The procedure went well and the patient experienced no pain and made an unusually rapid recovery which her surgeon attributed to the absence of the severe trauma always before associated with the operation. In his discussion before the Society for Medical Improvement, Hayward also pointed out the problems that he had observed when the anesthetic needed to be a prolonged one and when the "atmospheric " gas mixed with the ether was insufficient. Finally he described two operations, one closure of a complicated vesico-vaginal fistula, that he felt could

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(**Second Surgeon** ***continued from page 10)***
not have been accomplished in the pre-anesthesia era.

James Jackson had resigned his hospital and medical school positions at age 60 in 1837, whereas John Collins Warren stayed on until 1847, when he was 69. In 1851 the Trustees received in January a letter from Hayward, who was to observe his 60th birthday that year, declining reelection as a visiting surgeon. The chairman was dispatched to make what proved a successful plea that he remain on the staff, expressing the unanimous wishes of the Trustees that he do so. Shortly thereafter, though, letters of censure went out from the Trustees to three members of the visiting staff, Hayward and the medical and surgical Drs. Bigelow, with respect to the management of an outbreak of small pox in the hospital earlier in the year. There was a regulation against the admission of cases of smallpox and variloid, but a negligent house officer had allowed a patient with the disease to come in, taking another diagnosis by the referring physician as fact without personally examining the patient. The trustees felt that there had been undue delay in vaccinations on all but one of the wards once the presence of smallpox in the hospital had been discovered. Hayward politely disagreed with their opinion, noting that vaccination had been carried out in a timely fashion and that there had been no cases on his own ward and, in his words, he "declined to serve further as a visiting surgeon". He was voted to the Board of Consultation, which then as now was only an honorary body, but on which he served until he death in Boston 12 years later at age 72 on October 7, 1863.

So this is a description of the career of George Hayward with respect to this service to the Massachusetts General Hospital - a strong contributor to patient care and teaching but always in the shadow of the eminent John Collins Warren. Perhaps his most important hospital distinction came later, this in 1857. The notes of the Trustees meeting of March 30 indicate that members "Rogers and Stevenson were appointed a Committee to procure a bust or portrait of Dr. George Hayward for the hospital". Whether or not they did so I do not know. I am unable to discover a portrait. In fact the Fogg Art Museum does have in its collection Hayward's bust, but it is said to have been a gift in 1865, two years after his death, by Mrs. Hayward to Harvard College.

So this is the MGH George Hayward. What of other aspects of his career in surgery and in science? First, as an author, he deserves special notice. At age 22, on his return from Europe, he translated and published the four-volume classic, *Anatomie Descriptive*, by the great French physician, M.F.X. Bichat. In 1834, then age 43, he wrote and published *Outline of Human Physiology*, which is said to be the first American textbook of physiology. Some of the papers he published were on the permanent cure of reducible hernias; diseases of the knee joint; statistics of the MGH on amputations; amputation of a part of the foot; division of tendons; ligature of the carotid artery; wound received in dissection; cases of vesico-vaginal fistula; and the statistics of consumption

A bold and innovative surgeon, he reported in 1839 one of the first successful cures of a vesico-vaginal fistula. He had a strong interest in anatomy, and contributed many specimens to the Warren Anatomic Museum. A respected teacher, he gave, in addition to those on surgical topics, lectures to the medical students on *The Professional Trials of the Young Physician* and an introductory lecture at the opening of the new medical college on North Grove Street in 1847 *On Some of the Duties of the Medical Profession*. He was a member of the committee of the Massachusetts Medical Society that worked successfully to obtain passage of a law legalizing the study of anatomy in 1831, and was chosen by them to present public lectures on the subject beginning in 1829.

He was a member of the Massachusetts Medical Society and served as president, secretary and orator. He was one of the founders of the Boston Linnean Society, a founder and a first vice president of the Boston Society of Natural History. He served as president of the Boston Athenaeum, the Massachusetts Benevolent Society, and the state Military Medical Board. Hayward was a member of the Boston Society of Medical Improvement which he supported with many lectures. At age 27, he was made a Fellow of the American Academy of Arts and Sciences.

So is there more? Not much that I am able to find. Both the MGH archives and the Countway Library have a few of his letters and the Countway also has a set of a student's notes of some of his lectures. And, last, there are the instruments in the MGH archives. Attached to this small collection is a card which states, "These instruments were made for me under the direction of Sir Astley Cooper in June 1814 by Laundry, the most celebrated instrument made at that time in the city. Those in the operation case were in frequent use for nearly 40 years but are still capable of doing some service. The others have been used but little". Signed: "George Hayward, November 15th, 1862". On the reverse side is found "Dr. Hayward, Jr., Temple Place". His son, George Hayward Jr. had been a house pupil in surgery at the MGH in 1841.

One other holding in the Countway Library is an obituary of George Hayward by B.F. Cotting. It appears to have been printed but never published. This is the last paragraph:

"In all these and many other similarly prominent positions, he unselfishly maintained the dignity of his calling. Intolerant of professional sham and pretension, even the suspicion thereof in others led to impetuous denunciation. A man of honor, he was quick and unsparing whenever he thought infringed upon. Disgusted with the too frequent hollowness of posthumous eulogy, he scrupulously destroyed everything that might lead to it in his own case. The future biographer may therefore lament the loss of valuable documents; but for the many distinguished services which his high social position and ability gave him the power, and his ardent temperament impelled him to render, the profession and the public will place the name of Hayward, widely known at home and abroad, high upon the roll of eminent medical men."

The Dictionary of American Biography speaks more simply of him as being retiring and abhorring publicity, but as having unusual skill as a surgeon, and being beloved as a teacher - good characteristics for the second surgeon for any surgical department, I believe. ◆

MGH DEPARTMENT OF SURGERY
ANNUAL RECEPTION
HILTON SF AND TOWERS
CONTINENTAL ROOMS 5-6
OCTOBER 7, 2002, 6:00 TO 8:00P.M.

(Richardson continued from page 5)
sis for idiopathic dilatation of the colon, omentopexy, dissection-resection for tuberculosis of the mesenteric glands, nephrectomy, renal stone, ureteroplasty, ureteral implantation, ovarian tumor with twisted pedicle, extrauterine pregnancy, surgical treatment of fibroids, cancer of the uterus. He removed thyroid tumors and did suprapubic prostatectomies. He reported successful resection of two cases of diverticulitis (Zenker's) of the esophagus.

An interesting report from 1891 is "A case of intestinal resection and suture for artificial anus following gangrenous hernia". The artificial anus" was a nest of fistulas that were resected en bloc, uncovering intact bowel which was removed with some mesentery. The anastomosis was with a single row of "fine intestinal (Lembert) sutures". In the discussion of the paper Charles B. Porter (1840-1909) said, "I think I did the first intestinal suture done in Boston, in 1883", a side-to-side enterocolostomy.

A report from 1897 is "A case of chronic intestinal obstruction from incomplete volvulus of the sigmoid flexure, reduction and fixation; recovery. Recurrence of twisting and obstruction (about a year and a half later); resection of the whole coil; end-to-end suture; recovery. "The report includes an excellent drawing of "the whole coil"

For a time Richardson was interested in nerve and cranial surgery, and performed operations for spasmodic torticollis and for trigeminal neuralgia. One such operation, in 1891, consisted of division of the second and third divisions of the trigeminal. Pain recurred, and the patient was reoperated in 1894 and the Gasserian ganglion was removed, resulting again in relief of pain.

As he went on he restricted himself to abdominal surgery and planned and partly worked out, but never finished, a systematic treatise on the subject.

He usually wrote his papers between 5:30 and 8:00 AM, working on several at once. He wrote shorthand and typed fluently. His private practice was as an itinerant surgeon, operating in several hospitals and in homes. Although a Boston Herald article describes him as "an experienced operator who thoroughly understands the function of the modern gasoline motor" his business travel was for many years in a "Stanley Steamer", a steam-powered automobile in which he sat by the chauffeur, blowing the horn.

An amusing picture of the whole way of life is given by John Homans (1877-1954), his surgical assistant from 1904 to 1908. In the more well-to-do homes a room would be selected and prepared ahead of time, the curtains taken down and a sheet laid on the floor. "An operating table would have been secured", and a nurse of nurses to help and take care of the patient postoperatively. In a farmhouse a kitchen table would be used, there would be a wash boiler on the stove for instruments, and basins would be "scalded out". Several automobiles would take the full surgical team to the scene: the operating nurse, who was also the office nurse, with the sterile instruments and "dry goods: she had prepared; the assistant; the anesthetist, latterly an ENT specialist like Dr. F.E. Garland or his associate; and often Dr. W.H. Whitney, "a pathologist, expert in the rapid gross and microscopic examination of tumors and other tissues".

Homans reports that Richardson "actually took pride in making some very minute wounds. He would sometimes take out the uninflamed appendix through an incision into which one could not force the middle joint of one's forefinger. He acknowledged that it was a 'stunt' but used every possible precaution to make it a safe one." Here undoubtedly the Richardson retractor was involved (see Romm.S. Plastic and Reconstructive Surgery, 71:432, 1983).

His contemporary and friend Arthur Tracy Cabot (1852-1912) describes a "usual day's routine: operate in Boston, then in Nashua, New Hampshire, then a consultation in Keene, NH, then back to Boston for a nigh operation".

In the early years when he had an operation to perform Richardson would spend hours working on the cadaver. Samuel J. Mixter wrote that for him, "given a cancer, no operation was too severe or too radical if it promised cure". Daniel Fiske Jones (1868-1937) described him as "a pioneer in delicate handling of tissue, prior to Crile". A big man, with large hands, he loved to show how he could write the Lord's Prayer in a circle circumscribing a dime. Fitz described his usual demeanor in a difficult operation: "extreme tension, fearless, quick, accurate, alert, impatient with assistance, abrupt in criticism, forehead sweating, his eyes needing to be blotted by a nurse".

Homans reports that it usually took Richardson less than an hour to operate on a case of acute appendicitis, not from skin to skin, but from arrival in the patient'' home to departure.

He loved to teach, doing anatomical drawings with both hands simultaneously, a different colored chalk in each. He especially enjoyed teaching small classes, as in his course on regional anatomy, when he would often begin by saying, "this morning I did..." or "tomorrow I do...". His enthusiasm was contagious. Homans reports that in dealing with his operating team he maintained that the youngest first give his opinion "in order that it should be uninfluenced by anything said by his elders. Only when all, in due sequence, had expressed their views, would he come out with his." David W. Cheever (1831-1915) noted that he was "one of the few teachers of the period, of major reputation, who had neither the alleged disadvantage (sic) of a legendary Bostonian nor the advantage of study abroad". The latter he obtained second-hand, from Jonathan Mason Warren (1811-1867), Henry J.Bigelow (1818-1890), J. Collins Warren, and Arthur T. Cabot.

Fitz notes that each of his patients was made to feel that he or she was a special object, and many of his memorialists remark that he was just as willing to report his mistakes as his successes. George L.Walton (1854-1941, a neurologist and co-author of the paper on the Gasserian ganglion) noted that when one family with an unhappy outcome confronted him with "Don't you think you ought to have known, Dr. Richardson?" he replied with "Of course I ought, and it has troubled me greatly". The family reaction was to commiserate with him.

In 1907 he succeeded John Collins Warren as Moseley Professor of Surgery at HMS, and in 1910" after a rearrangement of the surgical staff" he was appointed Surgeon-in-Chief at MGH.

In his early years he had played several instruments in a small orchestra: flute, bassoon, cello and piano. He continued with the latter all his life, often playing on evening visits at the Corey Hospital. When the famous surgeon, Johann von Mikulicz (1850-1905) visited, the two played Beethoven symphonies together, for hands on the piano. (Mikulicz had supported himself in his student years by playing the piano). On another occasion when Richardson was visiting friends, one, a singer, wanted to sing Schubert's "Erlkonig". Richardson was instantly able to play the accompaniment for him.

He as a vigorous outdoorsman, according to Arthur T. Cabot "little more than a boy when he swam from Martha's Vineyard to

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Falmouth". He did this a number of times, and also swam the 9 miles in colder waters from Salem to Magnolia. In one day he walked 60 miles from Fitchburg to the top of Mount Monadnock and back. Regularly in Septembers he would walk the Adirondack trails with Fitz, and in his beloved Eastham on Cape Cod he would go walking, fishing, clamming, observing and migrating birds, coastwise shipping, and wreckage, and searching for arrowheads in plowed fields. J.M.T. Finney (cited above) asks, "Who of the resident staff of his period (1880s) will forget the early morning hunts for mushrooms that took place in the Hospital grounds with Dr. Richardson leading the search?"

He had 6 children, 2 girls and 4 boys. Three of the latter became doctors: Edward Peirson (1881-1944), the eldest and his father's last assistant, became John Homans Professor of Surgery at HMS; Henry Barber (1889-1963) became a psychoanalyst associated with New York Hospital and Cornell University; and Wyman (1896-1953) was a beloved physician and teacher of hematology at MGH and HMS.

On July 30, 1912 Maurice H. Richardson was discovered dead in bed by his son and assistant, Edward. It was the morning after a hard day's surgery. Arthur T. Cabot's tribute to him summarizes many that were made at the time: he was "Big of body, great of soul, strong of mind and warm of heart".

(Editor's note: George Richardson graduated from Harvard Medical School and was appointed as an intern at the Massachusetts General Hospital in 1946. He completed his surgical training as East Surgical Service resident in 1955 having interrupted his residency years for a time in the service serving as Regimental Surgeon for the 34th Infantry division stationed in Sabeo in Kyushu, Japan, completing his service in 1950. George was appointed an Instructor in Surgery in 1955 and Associate Professor of Surgery in 1974. He has had a distinguished career in gynecology, both in the clinic and in research, serving as Director of the Vincent Research Laboratories from 1980 to 1988 and as Acting Chief of the Department of Gynecology at the MGH from 1985 to 1988 and as Acting Chief of the Department of Gynecology at the MGH from 1985 to 1988. George's contribution to the MGH community and to surgery, has not been only through his distinguished role as a clinician and investigator, but also by his outstanding literary ability, utilized as Book Review Editor for the New England Journal of Medicine 1968-1995, as Editor of the Harvard Medical Alumni Bulletin 1970-1980 and now by the newsletter for his discussion of Maurice Richardson and the development of the MGH Surgical Service) ◆

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tation requirements that we all now face but it was kind of an unwritten rule that a note or order by an attending surgeon in the chart of his own patient meant that the resident had failed to fulfill his obligation to provide correct care. It was actually a pretty satisfactory system because the evolution of physiology and pathophysiology as applied to the surgical patients was being learned contemporaneously by the residents. However the addition of Civetta and Gabel kind of messed up this arrangement. First, we had already spent more years reading and learning than the residents had and second; we were the only ones who spent any time in either the recovery room or the ICU. As a result, we were in a unique situation of standing at the bedside, watching cardiac arrhythmias on the monitor, holding a lab report with a potassium value of 2.7 in one hand and a syringe of potassium chloride in the other and waiting for the intern on the floor to answer his page and to authorize us to give the potassium.

But we had a fortuitous break. Mike Lever showed us an article entitled "The flow directed pulmonary artery catheter" written by two West Coast fellows by the names of Swan and Ganz. These catheters had previously been placed only in patients who had suffered myocardial infarction. Mike told us that these catheters would be of much more use in surgical patients and advised us to learn how to use them. Remember the old dictum, "see one, do one, teach one"? Well, we took it one step further. We had a patient in severe ARDS and we knew that the myocardial infarction research unit had these new Swan Ganz catheters. I paged the fellow and we brought one over to the SICU. I asked him to proceed to put it in and he said that he would be happy to assist me. I asked him what to do first. He said that I should do an antecubital cutdown. I figured I could do that much and isolated the brachial vein, passed the catheter up and then we hooked it to the pressure transducer. It went in smoothly enough to about 45cm and he then told me to inflate the balloon. By the way, the first version of the catheter was a soft 5 French catheter that had just 2 lumens: a distal lumen to measure pressure and the 2nd lumen to inflate the balloon. The thermistor and cardiac output measurements came along just a few years later. After inflating the balloon and keeping my eye on the monitor, I pushed the catheter forward. Lo and behold, it passed into the right ventricle and then, within 4 beats, out into the pulmonary artery. I kept pushing and pretty soon the pulmonary artery pressure became damped, the tracing fell a bit and I believed we had achieved wedge position. I then turned to the fellow and said, "Is that okay?" His response was "I don't know, this is the first one I have ever seen." However within about 6 months, I decided to visit Willi Ganz in California. By that time we had already placed more catheters than they had in the preceding 3 years. The PA catheter then became our leverage to influence and change the previous MGH tradition of residents managing total patient care. We could obtain mixed venous blood samples and I would pull out my trusty slide rule (remember, it was before calculators had been invented) and calculate intrapulmonary shunt and arterial venous oxygen content difference. We had a couple of technicians who could do the tedious green dye dilution cardiac outputs. So we became the repositories of knowledge about their particular patients and residents naturally wanted this information, too. By the second year, both the anesthesiology and surgical services had established rotations in the ICU as well as fellowship positions.

It did not take long for the general surgeons to realize that postoperative intensive care was now becoming necessary, that is to say, they were forced to abandon the old adage "if you do the operation right, the patient will do okay." In the beginning, we only had a few spaces available in the White Recovery Room and maybe, once in a while, we could take a patient who was clearly going to require intensive care for some weeks and transfer the patient to the surgical (cardiac) ICU on Gray3A. I do remember Roy Wirthlin who was then a young vascular surgeon. He had just completed a ruptured triple A and came up to me. Roy, who was a devout Mormon asked me "Is there any room in the Inn (SICU)? When I told him no, he plaintively asked "How about the Manger (WRR)?

Life became a bit more manageable after the new ICU was opened on Gray 3A. With 6 beds for the "chronically acutely ill" and 8 beds for primarily overnight observation, we handled a

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monthly census of 250 patients. Although we had achieved some credibility, we still had not been able to break the "chain of command." One memorable case involved another patient who had had a ruptured triple A. Because of the excessive oozing and coagulopathy; the patient was placed in the old Curity G-suit. This device resembled a plastic cocoon that extended from the patient's nipples to toes and was laced up like an ice skate. Not surprisingly, the patient became anuric. His potassium started to rise. The intern called from the floor and ordered a Kayexalate enema. I suggested that the intern come down and see the patient and tell us exactly how we should do it. In reality, the way that our relationship with the surgical teams evolved during those 2 years resulted in what I still consider to be the most satisfactory distribution of responsibilities - "the collaborative care model". Even today, most discussions of ICU responsibility are limited to the "open" and "closed" models. In the open units, the admitting surgeon or other physician directs the care by communicating with the nurses. This physician may or may not utilize consultants, including intensivists. The closed unit requires that the admitting surgeon transfer authority completely to the intensivist and winds up in the unnatural role of consultant in managing a patient that he or she operated upon. A collaborative model, which resulted from our inclusion in management decisions during that 2 year period, has remained with me ever since. First, the attending surgeon remains the responsible attending. Second, the intensivist is included in all management decisions. Third, the two teams must agree upon a particular course of action or a sequence of actions if the two differ or no one is sure what will work. The advantages are the surgeon's pre-existing and continuing relationship to the patient and family, which is not disrupted during the ICU stay, and that the intensivist can devote all the time needed at the bedside of the critically ill patient. This combination also prevents either the surgeon or the intensivist from going off on a tangent without any checks and balances.

Though I spent but 2 years as an attending in Surgical Critical Care (probably before the term was even coined), it happened at a fortuitive moment in time. Surgical procedures of increasing complexity were being performed on patients with preexisting serious diseases and developed severe perioperative complications. As there was no precedent, we learned from the patients. Standing at the end of the bed waiting for the blood gas values to return or the blood pressure to respond to a vasoactive infusion, we talked and mused and learned from each other as well.

At the ACS Clinical Congress in 1971, Bob Zeppa, who was then the Chairman of Surgery at Miami, invited me to take a look at a job in Miami. He had a PhD in physiology and in his words, "The intensive care unit was the living physiology lab." I could become the fifth surgeon in his department and refine the collaborative care model. Besides, I had had an epiphany in 1968 when I went to Biloxi, Mississippi. I realized that being cold in winter was a choice not a necessity. My first visit was March 14, 1972: I remember it well because my flight was delayed for 4 hours while they cleared the snow from the runways at Logan and I landed 2 1/2 hours later in sunny Miami where the temperature was 80 degrees. I ended up staying 25 years.

The evolution of surgical critical care at the MGH started long before I arrived and it has continued long since. The lessons I learned in my residency and the blending of the surgeon and the intensivist that occurred during my two years served as the foundations of my subsequent development. It was an exciting time and I am pleased for the opportunity to reminisce.

Dedicated to Joe Gabel, one of a kind, who died in 1999

(Editor's note: Joseph Civetta has been the chairman of the Department of Surgery at the University of Connecticut Medical Center since 1997. His entire career before this had been involved with the development of surgical intensive care.

Joe completed his MGH residency in 1968. His interest in critical care increased during his two years of military service. He returned to the MGH in 1970 as the first director of the newly opened Surgical Intensive Care Unit. His piece in this issue of the Newsletter details the trial and successes of that period.

In 1972 Joe moved to the University of Miami where he spent the next 25 years as chief of the division of Surgical Intensive Care. He believes that learning to help patients, families, and other caregivers deal with end-of-life issues has been the most rewarding experience of his surgical career.) ◆

MGH SURGICAL SOCIETY REUNION A FAMILY AFFAIR

Top: Ken and Karen Barron with their daughter, Yoshimi

Left standing: Charlie and Stacey Ferguson Seated: Anne and Ira Ferguson

Bottom: Ruth Felsen and Miguel Chueca with their son

INFORMATION FORM
FALL 2002 NEWSLETTER

Name_____
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Request for honors, comments, personal notes, anecdotes, current activities, suggestions, etc.

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