The MASSACHUSETTS GENERAL HOSPITAL SURGICAL SOCIETY



Fall 2016 Newsletter Volume 17 Issue 2

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MGH Surgical Society
ACS Cocktail Reception
Monday, October 17, 2016
6:00 to 8:30 PM
Marquis Ballroom
Washington, DC

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Reflections from the Chief

I hope everyone had a great summer. As the calendar turns to September, many of us at the MGH feel the "new year" is upon us. The new residents, fellows, and even a few new faculty have settled in, and it is business as usual across the MGH. A series of national meetings will start soon including the American College of Surgeons Clinical Congress. A highlight of the meeting, as always, will be the MGH Surgical Society Reception on Monday, October 17, from 6-8:30 p.m. This year, our own Dr. Susan Briggs will be giving the Scudder Oration on Trauma, Tuesday, October 18, at 12:45 p.m. We hope to see everyone at both events.

Time to do a little MGH bragging. I'm sure by now you've seen that the U.S. News & World Report has released their annual rankings, and the MGH has fallen from the #1 position, to a respectable third place. The change in USNWR ranking methodology does not distract from the fact that the MGH has just completed a spectacular year, and has been recognized with a very special "Grand Slam" for academic medical centers. In 2015-2016 MGH was ranked #1 in all four pillars of our of missions. These include: #1 in patient care as ranked by U.S. News & World Report; #1 in research as the top independent hospital recipient of NIH funds, as well as #1 in a recent Nature Index list of health care organizations based on publishing of articles in high-impact journals; #1 in education, as MGH has the most quality residency programs across multiple specialties as ranked by *Doximity*; and finally, #1 in community service, as the MGH received the 2015 Foster G. McGaw prize for Excellence in Community Service. I'm proud to say that the Department of Surgery contributed substantially to the success of all these four missions.

Finally, in closing, a reminder that in September 2017 the next MGH Surgical Society Reunion will be held here in Boston. Plans are already under way, so please keep this in mind as we will be announcing the dates very soon. See you all in D.C. in October.

Keith D. Lillemoe, M.D. Surgeon-in-Chief, Massachusetts General Hospital



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Breakthrough

Penis Transplant

By Curtis L. Cetrulo, Jr. MD and Dicken Shiu-Chung Ko, MD

Mass General surgeons from Plastic Surgery (Department of Surgery) and the Department of Urology recently performed the first penis transplant in the U.S. this past May. The recipient, Thomas Manning, had undergone a penectomy (amputation of the penis) after being diagnosed with penile cancer. He continues to do well, now three months after his surgery.



Dicken Ko (left) and Curtis Cetrulo (right)

Curtis L. Cetrulo, Jr., MD, FACS, FAAP, describes the origins of the historic procedure: "I was presenting the results of our hand transplant when one of the urologists in the audience (Dicken Ko, MD, FACS) approached me and said, 'We have so many desperate patients missing genitourinary tissue. Can we transplant penile tissue?' That was 3 years ago, when we first started working on our protocol."

Dr. Cetrulo continues: "We had further inspiration from our military surgical colleagues. These hardened surgeons were distraught over the lack of adequate treatments for the many 'wounded warriors' coming back from Iraq and Afghanistan with devastating genitourinary injuries. The suicide rate in this population may be as high as 25 to 50 percent."

"It's a real problem," says Dr. Ko. "Among male combat vets, we've estimated something on the order of 1,500 blast injuries to the groin that have resulted in the loss of genitourinary tissue. You can imagine these hardened wounded warriors coming back from Iraq and Afghanistan, now that their hope for intimacy in their life has been destroyed. It's an incredibly difficult thing to talk about among men, so it's a very

insulating kind of injury. A lot of these patients have been in the shadows for years."

Mr. Manning contributed to bringing penile cancer patients and those with genitourinary injuries out of the shadows after his transplant. An unusually forth-coming patient, he spoke freely in public about his hopes and fears and urged others to follow his public example. "Speak to your doctor. There is hope. Don't hide behind a rock." Dr. Cetrulo notes, "That was actually one of the most remarkable phenomena — after this procedure was performed people came out of the woodwork to talk about a subject that was really not discussed very commonly beforehand."

Dr. Ko explains the MGH approach to the transplant procedure: "We set three goals for the procedure: restoring normal appearing external genitalia, restoring urinary function, and restoring sexual function. The first goal was accomplished soon after it was clear that the allograft would survive, and the second goal was achieved at about three weeks postoperatively, when the Foley catheter was removed and the patient's ability to urinate normally was restored. The third goal — restoration of erectile function — will require at least 6-8 months for nerves to regenerate, but we are hopeful on that front as well."

Editor's note: Curtis L. Cetrulo is Assistant Professor of Surgery, Assistant in Surgery at the MGH, and Attending Plastic Surgeon at Shriner's Hospital. He graduated from the Tufts University School of Medicine and had his training in General Surgery at the Lahey Clinic and in Plastic Surgery at the Long Island Plastic Surgical Group/Nassau County Medical Center, Department of Plastic and Reconstructive Surgery, Garden City, NY.

Dicken Shiu-Chung Ko is Assistant Professor of Surgery (Urology) and Associate Urologist at the MGH. His medical degree is from Queen's University, Ontario, Canada. His training in surgery was at the Universities of Toronto and British Columbia and his training in Urology was at the University of British Columbia.

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Articles

Taking the Logical Leap: Development and Evolution of a Drug Testing Program at Massachusetts General Hospital

By Michael G. Fitzsimons, MD

In 2002, Dr. Warren M. Zapol, the Reginald Jenny Anesthetist-in-Chief of the Department of Anesthesia, Critical Care, and Pain Medicine (DACCPM) at MGH, approached me with a decision, "I want to start drug testing." The history behind this decision was based on the experience he had acquired in the first 8 years of his tenure as department chair. Like most programs at that time, we dealt with drug problems as temporary setbacks in an individual's career. Our thinking was that a "slap on the wrist" was enough of a scare that a provider caught diverting a drug for their own use would heed the warning. Back then, we thought these were rare personal failures that could be treated by quick counseling, time off, and perhaps an organized treatment program. The overall objective was to return the individual to clinical practice quickly in order to restore their career and sense of self.

Although the intentions were good, the outcomes were poor. Eight years of experience showed that relapse was far more common than recovery. Deaths among residents continued to accumulate nationwide. Clearly, we could not manage the problem, but could we stop it? Could drug testing be the tool? Aware that prior to medical school I was a student-athlete at the University of North Carolina at Chapel Hill, when drug testing was implemented in 1986, Dr. Zapol asked me to join in this effort. My military years as a flight surgeon called for experience with drug testing in association with aviation accidents as well as in forensic examinations in cases of assault. While chief resident in Anesthesia, the death of a resident colleague had prompted us to consider drug abuse as a cause.

Drug problems are not new to the specialty of anesthesiology. Multiple studies over many years have shown the incidence of drug abuse to be between 1-2% for faculty and residents. Rates may be higher for nurse anesthesis.



Michael G. Fitzsimons

thetists. Death is the initial presentation in about 15% of cases and the percentage is the same for those who are treated and then relapse. Efforts such as improved education and external focus on improved accountability via automated dispensing machines have done little to reduce the overall incidence. The majority of anesthesiology department chairs approve of drug testing but only those in the military have drug testing programs that actually test all service members. Although drug testing became more widespread after the Drug-Free Workplace Act was adopted in the 1980s, health care systems had been reluctant to go beyond pre-placement (pre-employment) testing.

In 2002, we announced our intention to begin a random drug testing program in our Department. We assembled colleagues from hospital leadership (Brit Nicholson, MD), Graduate Medical Education, the Office of General Counsel (Sarah Arnholz), Critical Care (William Hurford, MD), Anesthesiology education leaders (Keith H. Baker, MD, PhD), and Nursing (Shiela Kaiser, CRNA) along with our two chief residents and other resident representatives. Dr. Dean Hashimoto from Occupational Medicine was instrumental in the implementation of our new plan.

Little time was spent debating the merits of drug testing since we believed that the safety culture in transportation and aviation, along with the experience with drug testing of drivers and pilots, provided sufficient evidence for both feasibility as well as benefit. To answer

the question, who should be tested, we relied on the study of causes of death among anesthetists. The highest risk of death due to drug abuse was noted among individuals during their first 5 years after medical school. The risk though never decreased to zero. Thus it was felt that all department members should be tested but that residents should be tested with greater frequency. Studies repeatedly showed that the substances of abuse were the very same substances administered to patients. We selected a very broad panel of drugs to test during the pre-placement screening in our belief that any drug abuse would portend a higher likelihood of abuse once the individual was practicing anesthesiology. For active residents, we narrowed our screening panel to drugs generally available in the operating room. Since our Occupational Health Clinic had a protocol for testing individuals through the Department of Transportation, we agreed to follow their program. The bathroom for specimen collection was already appropriately configured in the clinic.

Several elements of the program were promptly contested. The sample collection technique most likely to prevent alteration or urine substitution is direct witnessed collection. However, to maintain individual privacy and dignity, we did not feel we should routinely witness the collection. We recognized that this could potentially allow for alteration, but adulteration detection methods as well as other sampling fail-safes decreased this likelihood. The issue of whether to sample for marijuana was the subject of considerable debate. Those in favor of testing argued that marijuana was an illegal drug, its presence was intended to alter one's mental state, and that anyone utilizing marijuana was at risk for diversion or misuse of other drugs. Those opposed to the idea believed that its use was widespread and that the potential long half-life in the body with frequent use could allow detection well beyond the period of impairment. In the end, we agreed to exclude marijuana from the pre-placement and random panels, but to include it in the "for-cause" or "reasonable suspicion" panel.

The last issue we faced was how and when to initiate the first tests to individuals who had joined the Department before the policy was in place, especially trainees who had matched into our residency without prior knowledge of our drug testing program. The decision was made to require all current faculty members as well as nurse anesthetists to undergo testing each time they were recredentialed regardless of their tenure in the

Department. A policy of "voluntary and anonymous" testing allowed residents to decide on their own whether or not to accept testing. This removed the pressure to comply from residents who disagreed with testing and thus avoided fear of reprisal or lack of selection for chief resident. Our policy was distributed to all prospective residents during the 2004 interview season with the understanding that drug testing would be a required component of their education upon matriculation into our residency. Our policy was presented and distributed to all department members in 2003 and testing began in January 2004. Testing was mandatory for all incoming residents beginning in 2005.

We have observed several benefits from this program. Importantly, we have changed our attitude. We recognize that "substance abuse," "misuse," "diversion," and "dependence" are all components of a family of diseases known as substance use disorders (SUDs). We recognize that many factors within medicine including production and clinical pressure, drug availability, curiosity, as well as life changes and genetics may predispose our colleagues to this occupational disease.

The threshold to stage an intervention, when any individual in the department exhibits performance suggestive of SUD, is very low. We no longer look the other way or find excuses for abnormal performance such as tardiness, sleeping on duty, abnormal drug accountability, or unusual personal interactions. Such issues could indicate a SUD and result in a formal structured intervention. The individuals participating in the intervention include the department chair or designee, program director, resident mentor if appropriate or the head CRNA, and a psychiatrist in every case. The individual is presented with our concerns and a "for-cause" drug test is performed. A medical leave of absence is arranged while we wait for the test results. We have staged over 20 interventions since 2004.

The drug testing program is now in its 13th year. It is the original and longest running program in the country with over 2000 tests performed since 2004. We have detected 2 individuals with SUD via our program and have had no events among residents. Testing is an accepted component of our efforts to reduce this disease. Slowly, more programs are joining us in this effort. The Cleveland Clinic Foundation modeled their program directly on ours and now all of their employees are subject to testing. The other Harvard anesthesia departments are considering adding testing to their programs as well.

Substance use disorders are not limited to anesthesiologists by any means. Among the various specialties within nursing, the highest rate of SUD occurs in the individuals who directly administer drugs, such as nurses in critical care and emergency medicine. This may lead to the logical conclusion that accessibility is a risk factor for diversion.

Medicine is an industry tasked with the safety of the public. Industries equally charged, such as aviation and ground transportation, have instituted drug testing to assure that their critical personnel are free of impairment by substances. We believe medicine should embrace drug screening with the same intent.

Editor's note: Michael G. Fitzsimons, MD, is the Director of the Division of Cardiac Anesthesia at the Massachusetts General Hospital. He completed medical school at the Bowman Gray School of Medicine of Wake Forest University. He spent four years in the United States Army including stints in Korea and at Fort Lewis, Washington where he was Chief of Aviation Medicine. He has been at the MGH since 1997 as a resident and chief resident in Anesthesiology as well as for fellowships in Critical Care Medicine and Cardiac Anesthesia. He has also served as Clinical Competency Committee Chairperson and as director of the Fellowship in Adult Cardiothoracic Anesthesiology.

Minimally Invasive Mitral Valve Surgery via Mini-Thoracotomy

By Serguei Melnitchouk, MD

In recent years, minimally invasive mitral valve surgery (MIMVS) has been established as an alternative and increasingly useful option for patients with mitral valve (MV) pathology. Most patients with degenerative MV disease are otherwise healthy adults with very few comorbidities. Although such patients understand the need for surgical MV repair, they also express apprehension about the extended recovery that follows a full sternotomy approach. Understandably, many patients seek less invasive approaches that will allow them to return sooner to an active lifestyle and work environment. This is reflected by a growing demand among patients and referring physicians for minimally invasive procedures. Likewise, minimally invasive mitral valve surgery has gained increasing acceptance within the cardiac surgi-



Serguei Melnitchouk

cal community. According to recent data from Europe, close to a half of all mitral valve surgeries there are performed via a minimally invasive approach.

The term MIMVS refers to a constellation of surgical approaches and techniques that minimize surgical trauma through the use of smaller incisions compared with conventional sternotomy. A number of approaches are currently branded as minimally invasive and a number of incisions including parasternal, transternal, and left posterior thoracotomy, amongst others, have been attempted in the past. However, the most common and widely used approach to MV repair currently entails peripheral cardiopulmonary bypass and a small right anterolateral mini-thoracotomy. The other well established alternatives include robotically assisted fully endoscopic port access and the partial sternotomy approach. MIMVS is associated with a very low perioperative morbidity and mortality rate in appropriately selected patients, comparable to a full sternotomy approach. Aside from superior cosmetic aspects and patient satisfaction, MIMVS facilitates expedited postoperative recovery and an earlier resumption of normal activities, while reducing postoperative pain, blood loss, and overall length of stay in the hospital.

Development of Minimally Invasive Mitral Valve Surgery

With the success of laparoscopic and thoracoscopic techniques in general surgery and thoracic surgery procedures, enthusiasm for minimally invasive cardiac surgery developed with the goal of avoiding full median sternotomy and sternotomy-related complications. With the innovation of the port-access approach in the late 1990s, it was shown that minimally invasive closed-chest cardiopulmonary bypass (CPB) with cardioplegic arrest was as feasible, safe, and effective as conventional open CPB. The use of peripheral CPB, long endoscopic instruments, and either transthoracic aortic clamping or endo-aortic balloon occlusion led several pioneering groups around the world to develop a safe mini-thoracotomy platform, which constitutes the most common approach for MIMVS currently in use. Some select centers use robotic technology to perform MIMVS via even smaller incisions and have achieved mortality and morbidity results comparable to both conventional sternotomy and mini-thoracotomy. However, such operations tend to be longer and the technology is more expensive than the thoracoscopic platform.

Operative Setup of MIMVS via Mini-Thoracotomy

The patient is positioned supine with the right chest slightly elevated off the operating table to optimize the exposure of the right lateral chest. A small groin incision is made for femoral arterial and venous cannulation, while the patient is systemically heparinized. A two-stage venous cannula is positioned to enable the tip of the cannula to be advanced into the superior vena cava under transesophageal echocardiographic (TEE) guidance. The arterial cannula is placed into the femoral artery and secured. Peripheral cardiopulmonary bypass is initiated and a small (5 cm) right anterolateral minithoracotomy is performed through the 4th intercostal space. Using endoscopic instruments, the pericardium is opened 3 cm above the right phrenic nerve. A pursestring is placed on the anterior aspect of the ascending aorta and a small cannula for antegrade delivery of cardioplegia and venting of the aortic root is inserted and secured. The aorta is then cross-clamped with a transthoracic clamp and myocardial protection is achieved with the antegrade delivery of cardioplegia. The left atrium is opened through the interatrial groove and a left atrial retractor is positioned to provide optimal visualization of the mitral valve.

The remainder of the procedure can be performed either under direct vision through the mini-thoracotomy or with total endoscopic technique with the aid of a high-definition camera. Using long endoscopic instruments, the MV is inspected and assessed in a standardized stepwise fashion. Essentially, the entire armamentarium of MV repair techniques can be utilized via the minimally invasive approach. After the leaflet repair is completed, a full or partial prosthetic ring is implanted to restore and remodel the size and shape of the mitral annulus. The annuloplasty sutures are knotted with the help of a knot pusher or an automatic suture-knotting device. The left atrium is closed while de-airing maneuvers are performed. The crossclamp is removed and the patient is weaned from CPB after adequate rhythm and stable hemodynamics have been restored. Repeat TEE imaging is then performed to assess the results of the mitral valve repair. The patient is decannulated and incisions are closed in a standard manner.

Mitral Valve Repair Techniques

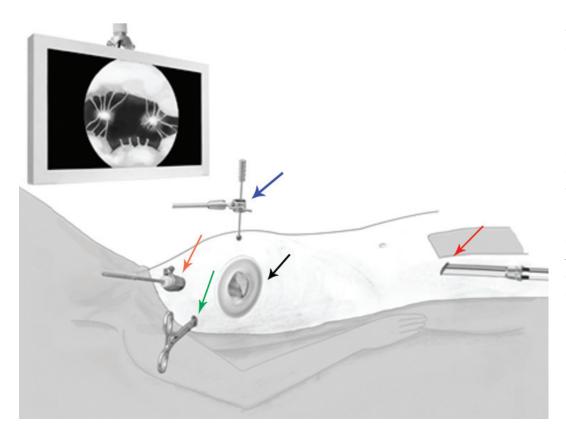
Reconstructive mitral valve surgery aims to restore physiological leaflet motion with a sufficient surface area of leaflet coaptation to provide effective valve orifice and stabilization of the mitral annulus. As introduced by Carpentier in 1983, common techniques for correcting myxomatous leaflet disease involve either a triangular leaflet resection or a quadrangular resection with a sliding annuloplasty. These resectional techniques have demonstrated good results with excellent longterm freedom from valve-related reoperations. Newer techniques involving neochordae made of Gore-Tex polytetrafluoroethylene (ePTFE) suture have been proposed with the aim of preserving MV leaflet tissue. The phrase "respect rather than resect" was even coined to stress the importance of conserving as much MV leaflet tissue as possible by limiting the leaflet resection to a bare minimum in order to achieve maximum leaflet coaptation. The rationale of this approach follows several principles of reconstructive MV surgery: provide the largest possible orifice area, maximize the leaflet coaptation area, preserve ventriculo-annular continuity by avoiding changes to annular geometry, and minimize leaflet tension.

Widespread adoption of the "respect" method came after Fred Mohr of Leipzig, Germany introduced the use of premeasured ePTFE loops of equal length ("Leipzig loop technique") which greatly facilitated implantation of the neochordae. Briefly, the artificial chords consist of a set of two-to-four loops of ePTFE attached at one end to a felt pledget. The pledget is fixed to the corresponding papillary muscle that opposes the prolapsing segment of MV leaflet. The length of the neochordae is determined intraoperatively using a caliper. The ends of the loops are then sutured to the rim of the prolapsing segment of the MV leaflet. Although essentially all of the various MV repair techniques can be performed successfully using a minimally invasive approach, a growing number of minimally invasive MV surgeons have embraced the "respect" approach because of its reproducibility, simplicity of application, and excellent results.

Patient Selection and Perioperative Course

The majority of MV pathologies repaired via minimally invasive surgery involve isolated prolapse of the posterior or anterior leaflet. However, even very complex MV pathologies can be addressed effectively by an experienced minimally invasive MV surgeon. Relative contraindications include severe mitral annular calcification, dilated ascending aorta over 4 cm, dense adhesions in the pleural space, severe pectus excavatum, and excessive surgical risk. Significant aorto-iliac atherosclerosis, as detected on CT angiography in older and higher risk patients, precludes peripheral cannulation and supports either a sternotomy approach or axillary cannulation. Certain subgroups of high-risk patients (i.e., previous sternotomy, low ejection fraction, octogenarians) can be safely operated via a mini-thoracotomy as well, although for patients who have had prior sternotomy one would usually need to utilize moderate hypothermia and a fibrillatory arrest technique.

Preoperatively, MIMVS patients need to undergo either a coronary artery catheterization or an ECG-gated cardiac CT angiography to assess the coronary anatomy and to rule out significant coronary artery disease. Additionally, higher risk or older patients (age over 65 years) undergo a supplemental CT angiography of the abdomen and pelvis to rule out significant aorto-iliac atherosclerosis, which would preclude peripheral cannulation. Postoperatively, patients are transferred to the floor after a night in the ICU and are generally discharged home on postoperative day four. The majority of patients return to their normal daily and professional activities 2 to 6 weeks following their mitral valve surgery.



Schematic representation of the setup for minimally invasive mitral valve surgery and of the neochordae repair technique for degenerative mitral valve prolapse. Cardiopulmonary lines are placed via the femoral artery and vein (red arrow). A working incision is made in the 4th intercostal space and covered with a soft-tissue retractor (black arrow). The camera (orange arrow) port is connected to a monitor (above) and is also utilized for CO2 insufflation. A transthoracic aortic clamp (green arrow) is placed via a separate 5-mm incision in the axilla. The left atrial roof retractor (blue arrow) exposes the mitral valve. The neochordae are visible on the monitor.

Outcomes after MIMVS Compared to Conventional Sternotomy

As the minimally invasive approach has evolved in terms of technology and surgical experience, certain initial challenges such as de-airing and limited surgical field exposure have been largely overcome. In addition, emergency conversion to sternotomy is a very uncommon event, quoted to be in the range of 1-2% in most observational studies. It is not surprising, therefore, that the largest and most recent comparative studies report outcomes of MIMVS equal to those of conventional sternotomy. A recent meta-analysis representing more than 20,000 patients from 45 studies compared outcomes between a right lateral mini-thoracotomy and conventional sternotomy in patients undergoing MV surgery. The results demonstrated comparable 30-day all-cause mortality, stroke rate, rates of re-exploration, and postoperative renal failure between both surgical techniques. As expected, CPB time, cross-clamp time, and procedure time were somewhat longer in the MIMVS group. In contrast, MIMVS patients had significantly shorter hospital stay, length of stay in the intensive care unit, and respirator dependence. Mini-thoracotomy patients were also found to have less blood drainage volume and fewer blood transfusions, as well as lower rates of new postoperative atrial fibrillation. Moreover, some recent

observational studies found a significant reduction in mean total hospital cost in patients undergoing MIMVS, primarily the result of shorter hospital stays. Importantly, multiple studies show that minimally invasive access is not associated with a reduced rate of MV repair.

Adoption of Minimally Invasive Mitral Valve Surgery

The major advantages of the minimally invasive approach extend far beyond the surface of the skin. A smaller cut means a smaller scar which, of course, diminishes the surgical insult inflicted on the patient's body. All of the cutting, burning, and stretching of tissues necessary to remodel and repair the MV induces a repair process that consumes energy and physiologic reserves. There is no doubt that with less surgical trauma, the recovery should be quicker and more comfortable for the patient. Also, aside from the cosmetic aspect, once patients know their mitral valve surgery can be performed just as well via a non-sternotomy approach, they express a strong preference to preserve the stability and continuity of the sternum. Finally, from the surgeon's perspective, the right lateral mini-thoracotomy permits a more direct view of the mitral valve which translates into somewhat easier handling of tissues and placement of sutures.

Needless to say, the right lateral mini-thoracotomy approach requires an entirely different surgical skill set. Integrating video images into the visual feedback and using long endoscopic instruments in a narrow and deep surgical field requires intense training on the part of the surgeon and a specialized team. The technique must be performed with perfection to minimize the risks associated with minimally invasive MV surgery. Nevertheless, mitral valve surgeons can achieve excellent results with a minimally invasive approach after appropriate and adequate training. The fundamental basis for success stems from a full understanding of MV pathophysiology, sufficient prior experience in conventional MV repair surgery, command of various repair techniques, and then gradual transition to the minimally invasive approach. Therefore, in experienced hands minimally invasive access does not lower the threshold for MV replacement and MV repair rates remain over 90%.

Minimally invasive mitral valve surgery has gained increasing popularity among patients and widespread acceptance within the cardiac surgical community. In the hands of an experienced MV surgeon and team, this operation can be safely and effectively performed with minimal morbidity and excellent short- and long-term outcomes. MV repair rates and durability are very high via the minimally invasive approach. In addition to experiencing a superior cosmetic result, patients who undergo MIMVS experience shorter recovery times and earlier resumption of a full and active lifestyle.

Editor's note: Dr. Melnitchouk is a cardiac surgeon at the Massachusetts General Hospital and an Instructor in Surgery at the Harvard Medical School. A native of Ukraine, he received his medical degree from Ruprecht-Karls-University in Heidelberg, Germany and his Master's in Public Health from the Harvard School of Public Health. Dr. Melnitchouk completed his general surgery residency at Brigham and Women's Hospital and Mass General and a cardiothoracic surgery residency at New York Presbyterian Hospital/Columbia University Medical Center. Prior to joining the staff at MGH in 2013, he completed an additional fellowship in minimally invasive mitral valve repair at the Leipzig Heart Center in Germany. Since joining the MGH faculty, he has established a robust program in minimally invasive mitral valve repair.

Retrospective

Navy Surgeon

By Thomas J. Vander Salm, MD

In 1966, the Viet Nam war was in high gear, and all medical school graduates ended up serving the government in some fashion. A few went to the NIH, the Indian Service, or the Public Health Service. But most of us were headed for one of the military branches via a sorting mechanism called the Berry plan. We were divided, by random allocation, to enter after a year of internship or after full completion of training. This provided the military with the anticipated requisite number of general medical officers, and of specialists. I was assigned to the US Navy in the fully deferred limb. By the time I finished as the East Surgical Chief Resident at the end of 1973, Viet Nam was behind us but my Navy obligation was not.

After the ardors of the residency, I was rather looking forward to serving my two-year stint. Although I had done nothing to merit it, other than being of a certain age, I was unexplainably proud of entering as a Lieutenant Commander with 2½ stripes on my sleeves. And then, I was excited about my duty assignment as the surgeon on the USS Independence, one of the giant attack aircraft carriers.

But when I joined her crew of 5000 men and officers in Portsmouth, Virginia, this monster was in dry dock getting refitted. My excitement was quickly quashed. In fact, I was miserable and desperate to be assigned somewhere else until the ship was back in the water. The ship in dry dock seemed no longer to be a ship: acrid fumes, dust, grease, and generalized filth replaced the usual Navy neatness. It was no place for patients. And indeed, there were none since the very large Portsmouth Navy hospital sat only a couple blocks away and every sailor with a medical problem went directly there. But worse for me personally was that I was not allowed to practice the surgery I had spent so many years learning. The only medically interesting event was immensely tragic and depressing: four sailors died of asphyxia before they could be rescued from their task of cleaning a giant tank within the ship. Repeatedly, I asked for transfer to the hospital where I could operate. The answer was consistently, "No."

A few weeks had passed when the head of naval aviation medicine for the Atlantic Fleet (ComNavAirLant), a Captain (one rank below Admiral) happened by.

"Well Commander, how do you like being in the Navy? How do you like the Indy?" he asked.

"Well sir, begging your pardon, but not very well," I said, as his face turned vivid red and his lips limestone white, as he compressed one against the other. He seemed not pleased and said, condescendingly, "Doctor, what do you mean? This is one of the finest ships in the Navy."

"Yes," I said, "but I'm a surgeon, and there's nothing for me to do here. I get more stale every day while a few blocks away sits the Navy's largest hospital where I could be of some value. I have asked, repeatedly, for a transfer but to no avail."

"Oh, Commander," he said, "you do not understand your value to the USS Independence. For example, if the ship's captain dies, the XO (executive officer) can take over. And if the XO dies, the weapons officer can take over. And if he, too, dies... Well, you get the picture, doctor. There are more than a hundred line officers who can step up. But if the surgeon dies, there is no one to take his place. You are the only irreplaceable officer on this ship."

"Well, that's just dandy, "I said with obvious rancor.

"Doctor, the Navy does not care a rat's ass about your opinion," he said, and stiffly walked away.

The interchange festered over the next few weeks, but at the same time, excitement aboard ship was increasing; the time left in dry dock grew short. In late April, the ship slipped back into the water and it quickly became once more what I had anticipated and hoped for. I was actually having a good time at sea.

Then we learned that a Madison Avenue advertising firm was assigned to the Independence to take photos that would be used in a recruiting brochure intended to lure physicians into a career in the Navy. In all its misplaced wisdom, the Navy designated me to be the star with a front and back cover photo of the surgeon on the Indy in action. When the two photographers came aboard off the coast of Florida, my pique at being ill-treated by Capt. ComNavAirLant must have reemerged; I went up to the navigation department to borrow an instrument even then rarely used for navigation by the Navy. On the way back to the OR, I named the instrument.

In one of our two operating rooms, the cameras and lighting were being set up. "We would like," one of the ad agency photographers said, "to take some shots of you working in the OR. Something realistic. Maybe examining a patient on the operating table."

"Perfect," I said. I slowly pulled the gleaming brass and muted black instrument from its burnished wood case lined with soft green velvet.

"What's that?" asked one of the photographers.

"An opthalmodynamotonometer."

"A what?"

"It was recently invented at the Massachusetts General Hospital where I trained. It enables one to look for brain injuries by looking into an injured patient's eyes."

"But it looks like a sextant," said one of the photographers. "Very perceptive," I said. "In fact, it was built on the same principles."

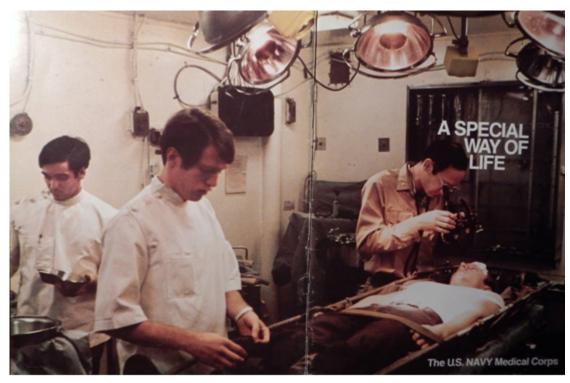
After writing out the name of the instrument for the two photographers who had never heard of it (as was also true for everyone in that operating room), the shooting began. They banged out a couple hundred shots with the motor driven Nikons. Beginning to feel guilty for deceiving the photographers, and for wasting their time and celluloid, I suggested switching to another instrument, and another several hundred shots were taken of me using an ophthalmoscope. And then, after thanks all around, a helicopter ferried them back to the coast.

I was a bit worried, but assumed that the photos with the proper instrument would be used for the final magazine cover. I assumed incorrectly.

In October, I received a copy of the professionally produced 30-page book. Spread out over both front and back covers, sextant in hand, I was holding the instrument up to the corpsman's eyes. My laugh was replaced by anxiety. I could be court martialed. And receive a dishonorable discharge.

The inside back cover of the magazine had an approval signature by a Captain, a line officer — not a doctor — who had surely used a sextant in his training.

Torn between amusement and trepidation, I wrote my father, asking for more copies. He wrote his US Congressman who succeeded in obtaining several more that were mailed to me on the ship. The magazine was totally unchanged except for the cover picture. It was of a flight surgeon on another carrier looking into a corps-



"Opthalmodynamotonometer"

man's eyes in the same pose but holding an opthalmoscope. The Navy had found and expunged the cover with the opthalmodynamotonometer — or sextant as the Navy called it — from the brochure.

July of the next year came and passed and I had not been disciplined. But I still felt a cloud of possible doom over me. But instead of a court martial, I was unexpectedly given three stripes and a promotion to Commander, and within a month came an honorable discharge, five months shy of my two-year commitment to the Navy. The only way I could put these happenings together was that with a line officer/Captain approving the magazine, the Navy must have been too embarrassed to initiate a court martial, which would acknowledge that a Navy officer did not know what a sextant was, the most traditional and hallowed of marine navigational tools. And the carrot of promotion implicitly asked that I cooperate in not broadcasting what would certainly embarrass the Navy.

: :

In the Mediterranean, any patient requiring a significant operation would be airlifted to a shore-based hospital. But crossing the Atlantic, that option was not available and led to the world's record appendectomy. The record, I am sure, still stands. Nausea, mid-abdominal pain, elevated WBC, localized pain and tenderness at McBurny's point: the marine was a page from Sir

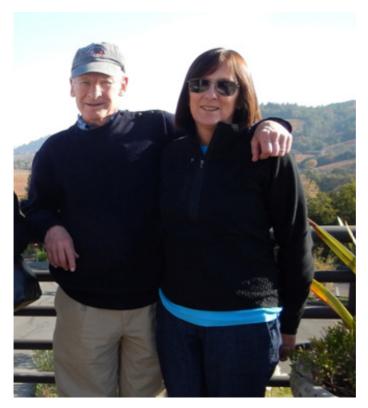
Zachary Cope's book, *The Early Diagnosis of the Acute Abdomen*. Prepare the OR. My "anesthesiologist" was our well-trained oral surgeon. We decided on a spinal. I turned the patient on his side, obtained spinal fluid, and injected the hypertonic solution to settle low in his canal. Flip him over; he was already anesthetic below the umbilicus.

"I can't breathe, doc," he said.

"Of course you can breathe. You are talking; you must be breathing."

"I can't breathe," he barely whispered. And he stopped. Breathing. The anesthetic had gone up to his cervical level, and higher. No problem: it made for an easy intubation. After inflating the endotracheal tube balloon, I went back to begin prepping. And then a similar refrain, this time from the oral surgeon, "I can't ventilate him." I looked at the bulging ambu bag on the anesthesia machine and saw that the ET tube was totally obstructed. And, it was stuck in the trachea. After cutting across the entire tube, it came out and we realized that the old rubber of the balloon had herniated over the end of the tube, totally occluding the trachea below the tube. The next tube worked.

Next, I noticed the corpsman to my left had scrubbed with his wedding ring on. I chastised him, told him to take it off and rescrub, but instead, he passed out. Someone dragged him away from the OR table and a replace-



Tom and Addie Vander Salm

ment stepped in, and scrubbed with *his* wedding ring on. Same chastising, same result: he too was unconscious on the floor. Two corpsmen who could not stand criticism or the sight of blood, I thought. Then I smelled it. The anesthesia machine leaked; a pool of Halothane was working down the table and had anesthetized my two corpsmen. The leaks were plugged.

That sorted out, the retrocecal appendectomy appeared to be a routine denouement. Such luck was not to be. I asked for a sponge count before closing.

"Fifty-seven," said the scrub tech corpsman who had replaced our usual scrub tech.

"What do you mean?" I said. "The answer should be either correct, or we are missing a certain number of sponges." The answer was a blank look, followed by "What do *I* mean? What do *you* mean?"

I said, "You counted the number of sponges when we started, and by counting them now, you know if any are missing." He just pointed to a dirty pile of sponges in the corner, and sheepishly said, "Oh. I never counted. But here is what I have on the field." What he showed me was a pile of sponges, some with a radiopaque thread marker, some without. With no hope of a sponge count, it was X-ray time, even though some of the sponges were lacking radiopacity. Without contaminating the op-

erative field, we lifted the patient and slid in an X-ray cassette, as a corpsman scrambled to find developing solution and a tank to process the celluloid X-ray film. The X-ray machine was on a pole stuck into a very heavy base, too heavy to lift over the bulkhead beneath the watertight door (it was, after all, a ship, not a hospital) into the OR. Happily, the pole could be extracted from the base so a corpsman jammed the bottom of the pole onto the floor and positioned the head over the patient, the head of the machine weaving back and forth with the motion of the ship. The trigger button was depressed. A soft explosion emanated from the X-ray machine followed by flames that didn't take more than about five minutes to extinguish. So, no sponge count, no X-ray, and it was back to basic exploration of the wound looking for miscreant sponges. Finding none, we closed in time to see the two sleeping corpsmen awake. So, too, was the patient who was transferred to a sick bay bed.

I heard a noise as the patient was carried out. The oral surgeon was on the floor. Anesthetized him, I thought. He hadn't been, though. Instead, he had fallen off his anesthesia stool because he was laughing so hard. "That," he said between guffaws, "was the worst appendectomy I have seen in my whole life." Me too. It took, from diagnosis to moving the patient out of the OR, seven hours.

Editor's note: Dr. Vander Salm, a graduate of Carnegie Institute of Technology (1962), received his MD degree from Johns Hopkins School of Medicine in 1966. He trained in surgery at the Massachusetts General Hospital during which he took a year in orthopedic surgical residency back at Hopkins as he wrestled with his choice of surgical specialty. Completing his general and thoracic surgical residency at the MGH, Tom joined the surgical faculty of UMass Medical Center after serving in the United States Navy. He initiated the cardiac surgical program at UMass, along with his colleague, Bruce Cutler and the MGH team. He served as Chief of Cardiac and Thoracic Surgery at UMass for 17 years, and directed a successful training program in cardiac and thoracic surgery as Professor of Surgery. In 2003 he was recruited to initiate the new cardiac surgical program at Salem Hospital where he served as Chief of Cardiac Surgery and Clinical Professor of Surgery, Harvard Medical School until his retirement in 2011. Throughout his career, Tom made notable contributions in research of operative techniques for mitral valve surgery, myocardial protection, and prevention of wound infections.

Announcements

Honors & Awards—Faculty

Patricia K. Donahoe MD, former Chief of the MGH Hospital for Children and Pediatric Surgery, received the Distinguished Service Award at the annual meeting of the American Pediatric Surgical Association, the association's highest honor. This award is given in recognition of a lifetime commitment to and wide-reaching impact on the field of pediatric surgery. Awarded on only eight occasions in the 50-year history of the organization, it is a great honor that two of the eight prior recipients have come from the MGH—Pat and Dr. Hardy Hendren.

Francis Delmonico MD of *Transplant Surgery* has been appointed by Pope Francis to membership in the Pontifical Academy of Sciences (Prot. N. 0062), which promotes international exchange and recognizes and encourages excellence in science.

Andrew Warshaw MD '71, Surgeon-in-Chief Emeritus, has been appointed by Governor Charlie Baker as a member of the Special Commission to Study Pancreatic Cancer in the Commonwealth of Massachusetts.

The first Global Health Service Award for Excellence in Research and Humanitarianism ever awarded to an MGH faculty member was presented to **Susan M. Briggs MD '80**.

At the 2016 MGH Colorectal Postgraduate Course, The Inaugural **Paul Shellito** Lectureship was given by Dr. Robert Madoff from the University of Minnesota. This is a great recognition for Paul ('83), who made many contributions to the colorectal surgery program at the MGH.

Richard Swanson MD '87 has been appointed Chief of Surgery at Cambridge Health Alliance.

Joren C. Madsen MD DPhil '90, Center for Transplantation Sciences, has been named the Paul S. Russell/Warner-Lambert Professor of Surgery. His predecessor, David H. Sachs MD '70, has moved to Emeritus status as he is now working part-time at the MGH.

Steven Zeitels MD, Chief of Laryngeal Surgery, has been awarded the DeRoaldes Medal from the American Laryngological Association (ALA). The medal, established in 1907, is awarded annually to an individual who has made outstanding lifetime academic contributions in the field of Laryngology and Laryngeal Surgery. He has previously received the Casselberry and Newcomb Awards from the ALA for academic achievements in Laryngology. With this award he becomes the 4th surgeon in the organization's history to receive all three awards.

Kenneth Tanabe MD, Chief of *Surgical Oncology*, was named to the American Board of Surgery–Board for Surgical Oncology.

James Allan MD '95 of *Thoracic Surgery* completed his term as President of the American Society of Transplantation at

their annual meeting in Boston in June. The American Society of Transplantation represents nearly 4,000 transplant professionals across many disciplines.

Congratulations to **Tom MacGillivray MD '95**, *Cardiac Surgery*, for his recent election as Treasurer of the Society of Thoracic Surgeons. This is a five-year major leadership position in one of the most prestigious and predominant cardiothoracic surgical specialty societies in North America.

Thor Sundt MD, Chief of *Cardiac Surgery*, has begun his term as President of the American Association for Thoracic Surgery. He will complete his term at the 100th Annual Meeting next Spring in Boston.

Sareh Parangi MD, General and Gastrointestinal Surgery, has been elected Treasurer of the American Association of Endocrine Surgeons.

Amy Colwell MD of *Plastic and Reconstructive Surgery* and Barbara Smith MD PhD of *Surgical Oncology* were inducted into the Committee on Women in Medicine Honor Roll from the Massachusetts Medical Society for their leadership and contributions to health care in women.

Since 1996, the Association of Women Surgeons Foundation/Ethicon Fellowship has supported a number of women surgeons by funding original research in topics of flexible GI endoscopy, laparoscopy, minimal access techniques, and related emerging technology. The 2016 AWSF/Ethicon Fellowship Recipient is **Genevieve M. Boland MD PhD '01.** Her project is "Analysis of circulating exosomal RNA profiles in melanoma."

Honors & Awards—Residents

Jarrod Predina MD PGY5 was selected as the winner of the 2016 Association of Academic Surgery Fellowship Award.

Derek Erstad MD PGY4 received the American Hepato-Pancreatico-Biliary Association (AHPBA) Research Award. Derek, who will be working in the research lab of Dr. Kenneth Tanabe, started his research in July.

Congratulations are in order for members of *Plastic and Reconstructive Surgery*. At the annual regional meeting of The New England Plastic and Reconstructive Surgery Society, the MGH walked away with two of the society's most prestigious awards. First, **Robert N. Goldstone MD PGY4** received the "Joseph E. Murray MD Award for Best Presentation by a Resident or a Fellow" for his research presentation: "Photochemical Tissue Passivation Attenuates Intimal Hyperplasia in an Arteriovenous Fistula Mode." Rob is mentored by **Jay Austen MD**, Chief of *Plastic Surgery*. In addition, Jay received the "Founders Award for Best Presentation by a Mentor" entitled: "Invention in Plastic Surgery."

Dan Hashimoto MD PGY4 was recently selected to serve on the Board of Directors of the Association of American Medical Colleges (AAMC). Dan has served the organization

as one of its resident representatives and now will be the sole resident representative on the Board.

On May 19, 2016, **Brandon M. Wojcik MD PGY4** was elected to be the Resident/Fellow Delegate to the Massachusetts Medical Society (MMS) Board of Trustees. Dr. Wojcik is one of 22 voting Trustees across Massachusetts to serve on the board this year. Dr. Wojcik will represent the interests of all residents/fellows within the state of Massachusetts to the MMS Board of Trustees throughout the coming training year.

Additions to the Faculty

We are delighted to announce that **Duke Cameron MD**, the James Dresher Sr. Professor of Surgery and Chief of *Cardiac Surgery* at Johns Hopkins Medicine, will be joining our group as of January 1, 2017. His focus will be in the areas of adult congenital heart disease and the surgical treatment of Marfan Syndrome in addition to the treatment of other acquired cardiac conditions in the adult. Dr. Cameron is President-elect of the American Association for Thoracic Surgery and is a master educator inside and outside the operating room.

Jonathan Friedstat MD joined the faculty of *Burn Surgery* in July 2016. He received his medical degree from the University of Illinois College of Medicine, graduating as a James Scholar. He completed his general surgery residency at the University of Washington and then was initially part of the MGH Burn Service as the Burn/Critical Care Fellow. He then completed his plastic surgery residency at the University of North Carolina and a microsurgery fellowship at the University of Texas MD Anderson Cancer Center. He holds board certifications in General Surgery and Surgical Critical Care. In addition to acute burn care, Dr. Friedstat has an interest in burn reconstruction. To improve outcomes for burn patients, he is also concurrently working toward a master's degree in public health from the Harvard T.H. Chan School of Public Health.

On August 1, **Arminder Jassar MD** joined the staff of *Cardiac Surgery*. A graduate of the cardiothoracic training program at the University of Pennsylvania, Dr. Jassar spent a year in an advanced aortic surgery fellowship at Penn and now is in Freiburg, Germany adding additional endovascular and hybrid open/endo skills to his repertoire. Dr. Jassar will focus his clinical activities on aortic surgery in addition to the full spectrum of adult cardiac surgery. He also has an interest in transcatheter valve therapies and plans to participate in the structural heart program.

Vinod Narra MD, a long time active member of the staff at North Shore, has recently joined the Department of Surgery, *Division of Community Surgery*.

Salewa Oseni MD joined *Surgical Oncology* in September 2016. Dr. Oseni received her medical doctorate from Case Western Reserve University and her general surgery residency

training at the National Naval Medical Center in Bethesda. She completed a fellowship in Surgical Oncology at Fox Chase Cancer Center before serving as a staff general surgeon and staff surgical oncologist for the United States Navy. Since 2011 she has served as Department Head of the Breast Health Center at the Naval Medical Center San Diego (Commander, US Navy). She will join the MGH breast surgery team and will practice both at Southern New Hampshire Medical Center and at MGH.

Motaz Qadan MD PhD joined Surgical Oncology in September 2016. Dr. Qadan received his medical doctorate from the University of Edinburgh, Scotland and a PhD in physiology and biophysics along with a master's degree in medical science from the University of Louisville before completing general surgery residency training at Stanford University. He recently completed a fellowship in Complex General Surgical Oncology at Memorial Sloan-Kettering Cancer Center. Dr. Qadan will commit approximately 50% of his time to clinical research. His clinical practice will cover general surgical oncology broadly at MGH, MG West, and possibly Newton-Wellesley Hospital.

Noelle N. Saillant MD joined the *Trauma*, *Emergency Surgery*, and Surgical Critical Care faculty in September 2016 as an Assistant Professor of Surgery. Dr. Saillant arrived at MGH from Beth Israel-Deaconess Medical Center where she trained as a resident and served as an attending physician. She completed her Trauma and Critical Care fellowship at the University of Pennsylvania. She will be actively involved in the Clerkship Program and her research will focus on bleeding and coagulopathy in trauma.

Elan Witkowski MD joined General and Gastrointestinal Surgery on July 1. Dr. Witkowski completed his medical school training and general surgery residency at the University of Massachusetts Medical School. He also received a master's degree in epidemiology from the Harvard T.H. Chan School of Public Health. Most recently, Dr. Witkowski completed a fellowship in minimally invasive GI and bariatric surgery at MGH. Dr. Witkowski's academic interests include health services research, technological innovation, and measurement of quality in bariatric and general surgery. His clinical interests include minimally invasive weight loss surgery, foregut surgery, and repair of abdominal wall hernias. Dr. Witkowski will be seeing patients at the MGH Weight Center and in the General Surgery Clinics.

Departing Faculty

Anca Barbu MD, Center for Laryngeal Surgery and Voice Rehabilitation, has moved to Cedars Sinai Hospital in Beverly Hills, California.

Kathryn Butler MD '12 left *Trauma, Emergency Surgery, and Surgical Critical Care* to spend full-time with her family.

Nancy Cantelmo MD retired from Vascular Surgery.

Philip Chang MD of *Burn Surgery* has moved to a position at the Shriners' Hospital for Children in Cincinnati, Ohio.

Janey Pratt MD '98 of *General and Gastrointestinal Surgery* has moved to a part-time position at Stanford University School of Medicine.

John Wain MD '85 of *Thoracic Surgery* has moved to St. Elizabeth's Hospital as the Chief of Thoracic Surgery.

Promotions

To Professor of Surgery Glenn LaMuraglia MD, Vascular Surgery

To Associate Professor of Surgery

James Heaton MD PhD, Center for Laryngeal Surgery and Voice Rehabilitation

Daniel Irimia MD PhD, Burn Surgery Harald Ott MD, Thoracic Surgery

To Assistant Professor of Surgery

Anca Barbu MD, Center for Laryngeal Surgery and Voice Rehabilitation

Sandeept Karajanagi MD PhD, Center for Laryngeal Surgery and Voice Rehabilitation

David Lawlor MD, Pediatric Surgery
Ashok Muniappan MD, Thoracic Surgery
David Pepin MD PhD, Pediatric Surgery

In Memoriam

Dr. Anthony L. Imbembo died in February 2014 at the age of 72. A native of New York City, he graduated from Columbia College and Medical School and completed the residency in Surgery, including the Chief resident year, at the MGH in 1973. After going initially to the Baltimore City Hospital, he joined the faculty of Johns Hopkins in 1978. In 1983 he was recruited to the Case Western Reserve University School of Medicine as Vice Chairman of the Department of Surgery, then to return to the Maryland School of Medicine as Chairman and Professor of Surgery in 1988. After becoming Executive Associate Dean at the University of Maryland in 1997, he retired to Cockeysville, Maryland in 2001. Throughout his long career he was continually recognized for his particular excellence as a mentor and teacher for students and residents, but also for his clinical expertise and skill as an administrator. A quiet and private person, his passions included rare books, antiques, and especially, the Metropolitan Opera in New York. He is remembered with great affection and appreciation by two generations of students and surgeons.

Dr. Harry Boaz Ditmore died at age 84 on February 22, 2015. His death followed a long battle with Parkinson dis-

ease. Harry was born in San Antonio, TX, graduated from the Tennessee Military Academy, and in 1953, from HMS. Following completion of the residency in Surgery at the MGH, he had additional training in thoracic surgery in Chicago and in pediatric surgery in Colorado. Much of his career was spent as a pediatric and thoracic surgeon in Portland, OR. While serving in the Army Medical Corps in Korea he met and subsequently married Rosanne Young Ha Roh, one of the first Korean woman pediatricians. She preceded him in death in 2012.

Dr. Judson Graves Randolph, born July 19, 1927 in Macon, GA, passed away on May 17, 2015 at his home in Nashville, TN, surrounded by his family. Judd grew up in Nashville, where he attended Hillsboro High School and was an Eagle Scout. He served in the US Navy from 1945-1946 aboard the USS Alabama. He returned to Nashville where he graduated from Vanderbilt University and then from Vanderbilt Medical School in 1953. Dr. Randolph's wife of many years, Comfort Adams Randolph, died in 2001. Judd is survived by his five children and many grandchildren. Judd trained in general surgery at the MGH and in pediatric surgery at the Boston Children's Hospital. He remained in Boston on the faculty of HMS and the Children's Hospital until he accepted the position of Surgeon-in-Chief of the Children's National Medical Center in Washington, DC, a post he held for nearly thirty years. Throughout his career, Dr. Randolph, a brilliant clinical surgeon and teacher of surgery, received numerous honors including membership in the American and Southern Surgical Associations and he served as Director of the American Board of Surgery. He was awarded the LADD Gold Medal by the American Academy of Pediatrics for his surgical service to children and the presidency of the American Pediatric Surgical Association. He was awarded the Distinguished Graduate Medal by Vanderbilt Medical School and served as a member of the Board of Trustees of Vanderbilt University from 1981 to 2004 at which time he was named permanent Emeritus Board Member. It was a source of great satisfaction to Judd that he trained over 40 of the finest surgeons in Pediatric Surgery who have practiced their specialty both here and abroad.

Dr. Joseph M. Civetta died March 30, 2016 at his home in the Florida Keys. An honor graduate of both College of the Holy Cross and Boston University School of Medicine, he completed the residency in Surgery at MGH in 1968. After two years in the Air Force he returned to the MGH as Director of the Surgical Intensive Care Unit. In 1972 he moved to the University of Miami Jackson Memorial Medical Center where he rose to the rank of Professor of Surgery and Director of the SICU. In 1997 he left Miami to become the Chairman of Surgery at the University of Connecticut Health Center and Director of Surgery at the Hartford Hospital. He retired from there in 2012. He was notably distinguished for his many contributions to critical care medicine and the nu-

merous fellows who trained with him, many of whom have gone on to important careers in the field.

Dr. John C. Baldwin died April 3, 2016 at the age of 67 following a swimming accident. John was born in Fort Worth, TX, and grew up in Las Cruces, NM. He graduated from Harvard College, completed a Rhodes Scholarship at Oxford, and graduated from Stanford Medical School. He completed both a medical and surgical residency at the MGH and the cardiothoracic training program at Stanford. During his remarkable career, he served as Chief of Cardiothoracic Surgery at Yale, Chairman of the Department of Surgery at Baylor College of Medicine, Dean of Dartmouth Medical School, President of the Immune Disease Institute at Harvard, and President of the Health Services Center at Texas Tech University. His wide knowledge of medicine and surgery and his profound interests in the delivery of healthcare and in human rights enabled him to make major contributions to a large number of medical institutions and organizations in the US and abroad. He is survived by his two sons and one grandson. Dr. Robert L. Replogle died of metastatic cancer on May 9, 2016 at University of Chicago Medical Center. Bob, or "Rep" as he was known to many of his friends, was born in Ottumwa, IA, and entered Cornell College in Mount Vernon, IA in 1949. He interrupted his education to join the US Navy during the Korean War. There he met Dr. Ralph Ally who urged him to go to medical school and became a lifelong mentor and friend. Bob returned to Cornell College, but because he had been accepted by Harvard Medical School for the fall of 1956, he never formally completed undergraduate school. Cornell granted him an honorary doctorate in 1972. Bob graduated from HMS in 1960, and served a

surgical internship at the University of Minnesota Hospital. Subsequently, he did research with Dr. Robert E. Gross at Boston Children's Hospital, and following completion of his residency in pediatric surgery at Children's, Bob spent the year 1965 as an assistant resident in surgery at MGH. He joined the surgical staff at Children's in 1966, and in 1967 was recruited by the University of Chicago to direct their congenital heart surgery program. Bob's professional leadership included a number of posts in the Society of Thoracic Surgeons, culminating in the honor of election to the presidency of STS in 1996. To our and our patients' great benefit, with persistence (and before spell check) Bob dragged the cardiothoracic surgical community into the computer internet era. Without his leadership we in CT surgery likely would have spent at least a decade more before entering the world of modern communication. Rep's forceful and enlightened leadership never allowed him to forget where he came from, but rather balanced humor with humility. He always greeted me (as I suspect many others in his wide circle of friends) with the same opening, "You taught me everything I know!" — a joke of course, as we were uniformly the recipients of Bob's knowledge and wisdom. In addition to Bob's well known operative skills, research, and judgment, he was appreciated as a devoted mentor and teacher. Bob was very involved in developing and supporting Opportunity Village back in Clear Lake, IA, a home for adults with disabilities, including his late brother Ralph who suffered from cerebral palsy. Founded in the 1960s Opportunity Village now cares for more than 600 residents. Bob is survived by his wife Carol, PhD; two daughters, Edith Sheffer and Dr. Jennifer Bremmer; a son, Dr. Robert Replogle; and nine grandchildren.

Annual Resident/Faculty Softball Game

