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PRESIDENTIAL ADDRESS

A SURGEON AND SOMETHING MORE

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DR. GROSS, Members and Guests: I suppose it is seldom in a man's career that he can say of a single occasion that this is the greatest honor which he has ever received or can hope to attain, but certainly this is such an occasion. My election as President of this Association is an extraordinarily generous act on the part of the members and I assure you that I deeply appreciate it.

As I have read over many previous presidential addresses presented to this Association, I have found that, in general, there are three types. One is a scientific presentation similar to a regular paper on the program. Another is a review of the past accomplishments of the Association and of developments in thoracic surgery. The third is comprised of reminiscences and perhaps a bit of philosophizing. If my remarks today fit into the latter category, I am sure there are individuals here who will feel that I am too young to be reminiscing and I suspect there are those here likewise who will think that I am too old for my remarks to be noteworthy. At the risk that some of my remarks may be considered too personal in nature, I would like first to reminisce a bit regarding my entrance into thoracic surgery.

During the developmental stage of The American Association for Thoracic Surgery, it was inevitable, of course, that the members of this Association were general surgeons who had taken a particular interest in thoracic surgery,

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hoping to develop this field further. At that time I am sure there were few, if any, who visualized that the day would come when a surgeon would devote all of his time to the practice of thoracic surgery alone. Even in the early thirties I recall hearing an outstanding thoracic surgeon in Philadelphia say that he tried to keep from being known as a thoracic surgeon because he didn't think he could make a living in thoracic surgery alone. The thoracic surgeons of that day then were general surgeons who also had become thoracic surgeons by the "do it yourself" approach. Training by surgeons with an interest in thoracic surgery rapidly became available, however, and I suppose that I am among the last of the members of this Association who might be called a "do it yourself" thoracic surgeon.

I graduated from the University of Pennsylvania School of Medicine in 1931 and completed my two year internship at the University a few months after Dr. Graham did his first successful pneumonectomy. In a way perhaps it is inappropriate for me to consider myself as a "do it yourself" thoracic surgeon since during my internship I did have two months on the service of Dr. George P. Muller who was Professor of Surgery at the University and at that time was President of this Association. He presided at the meeting in Washington in 1933. His interests in thoracic surgery were largely confined then to empyema and lung abscess. Unfortunately he left the University shortly thereafter so that I had no contact with him during my surgical residency. Of the surgical residents trained by Dr. Muller at the University, Dr. Richard Overholt is best known to this Association.

In his presidential address Dr. Muller gave a brief review of the accomplishments in the field of thoracic surgery. He expressed the opinion that lung abscess "is well settled in clinical practice." He commented about the discouraging results of efforts to treat valvular heart disease at that time. He made his presidential address brief because there was "such an interesting scientific program to be presented." He pointed out that up to and including the year 1933 it had been a rule that any paper which was offered by any member of the Association was automatically put on the program. Little did he anticipate, I am sure, that in 1963 there would be 200 abstracts offered for the program. At that meeting in 1933 Dr. Howard Lilienthal gave a presentation on his unsuccessful effort at performing a pneumonectomy on a patient with sarcoma of the lung who also had tuberculosis. In the discussion of Dr. Lilienthal's paper, Dr. Graham told of his successful pneumonectomy which occurred shortly after Dr. Lilienthal's effort. In reading over Dr. Lilienthal's presentation, it would certainly seem probable that had that patient received frequent tracheal aspiration postoperatively, Dr. Lilienthal might well have preceded Dr. Graham with a successful pneumonectomy. Dr. Graham attributed his success to the fact that he did a concommitant thoracoplasty. In other words, the occurrence of a bronchial fistula was accepted, it being Dr. Graham's thought that the thoracoplasty limited the bronchial fistula so that it went on to heal. In reading over the papers presented at that meeting in 1933, I found that several were presented by men who are still distinguished members of this Association.

Dr. Muller left the University shortly after he served as President and, as far as I am aware, never performed a pulmonary resection while at the University or expanded his interest in thoracic surgery thereafter. There was a time of less concentrated interest in thoracic surgery at the University during this period after 1933, although Dr. Ravdin, having been trained by Dr. Muller, kept abreast of developments in this field and for a time did most of the thoracic surgery done at the University.

In 1938, Dr. Eliason, under whom I received my surgical training, suggested that I devote my attention to this rapidly developing field. Although I spent eight years in formal surgical training, my "training" in modern thoracic surgery consisted of two weeks in Boston in June of 1938 when I saw Dr. Churchill perform half a dozen lobectomies for bronchiectasis by the multiple suture method and observed Dr. Overholt perform a pneumonectomy with the use of the individual ligation technique pretty much as we do today.

I came home from Boston and in the last year of my residency after doing one lobectomy by the multiple suture method abandoned it for the individual ligation technique which I had seen Dr. Overholt perform in his pneumonectomy. I was not aware that anyone else had used the individual ligation technique in performing a lobectomy in the human at that time but there seemed to be no reason why this technique could not be applied to the lobe as well as to the lung and indeed in a very short time this was being done throughout the country. In retrospect, it seems surprising that I didn't travel around the country more and see how other surgeons were doing things in thoracic surgery as the field developed. Of course, I thought that I was a pretty good surgeon after eight years of training and I believed that the technique which I had learned for one part of the body could be applied to another part of the body after adequate experience in the laboratory and autopsy room. I had been trained to use a precise technique in intestinal anastomoses as if handling fine Italian silk so that vascular anastomoses proved to be only a step further in the same direction. In short then, of all the operations now being performed in modern thoracic and cardiovascular surgery, I had witnessed only three aside from those mentioned above before doing the operation myself. For this reason I class myself as a "do it yourself" thoracic surgeon. Even so, I don't believe I have fitted that definition of the surgeon which describes him as "a man who is seldom wrong and never in doubt." Indeed, perhaps I have been too conservative in my approach to many problems, for our senior cardiologist told me once that he thought I must have been an old man when I was born. I have, in fact, tried very hard to use as my yardstick the dictum that I would never perform any operation which I would not have done on myself under similiar circumstances.

It is obvious that I got into thoracic surgery after the basic fundamental knowledge necessary to the success of pulmonary resection had been acquired. In addition I "nursed" my patients through and fought for their lives especially hard because I was trying to prove that under proper conditions the thorax could be explored as safely as the abdomen. In any event, in those

early days we learned the importance of keeping the tracheobronchial tree clear in a patient who had a thoracotomy, as indeed we had previously learned in regard to patients who underwent upper abdominal surgery. In any event, we got away without any mortality in our lobectomy series in those early days and lost only one patient of the first twenty total pneumonectomies. When I reported these twenty pneumonectomies in 1942, Dr. Graham reviewed my paper in the *Yearbook of Surgery* and wrote an editorial note longer than his review, namely to the effect that, after this young fellow had done more cases, he would have a higher mortality. It wasn't very long, however, until Dr. Graham and his group reported a series of more than a hundred resections with a similar mortality.

In the twenty-five years that have passed since I visited Boston in 1938, thoracic surgery, which includes cardiac surgery, has advanced at such a rapid pace that the life of a thoracic surgeon has been one of almost constant adventure. I have counted myself fortunate to have lived in this period. I will not make the mistake however of saying that "we have gone about as far as we can go." I have every reason to hope that the advances of the next twenty-five years will far outdistance those of the last twenty-five. It is difficult for me to believe, for example, that the mysteries of the cancer cell can evade us for another twenty-five years. Also I certainly hope to live to see the end of the race between the two groups hoping to replace the failing human heart—one by means of an artificial mechanical device, the other by a homo- or hetero-transplant. At the University of Pennsylvania we are placing our money on the mechanical device.

Dr. Ravdin, who is now the Vice President of Medical Affairs at the University of Pennsylvania, and undoubtedly known to many of you, has, of course, had a profound influence upon surgery at the University. Although his active participation in thoracic surgery was limited to a short period, it was he who after the second World War placed me in charge of thoracic surgery at the University. One of his favorite sayings is that "a surgeon should be a medical man and something more." This was brought forcibly to my attention in my early days of pulmonary resection. As I am sure all of you are aware, a patient in the older age group who undergoes a pneumonectomy will not infrequently develop atrial fibrillation. The ordinary internist in those early day presented with a patient with atrial fibrillation was apt to digitalize him slowly, starting out on a program which might require several days before digitalization was complete. Not infrequently, however, a patient who suddenly goes into fibrillation following a pneumonectomy will not survive a rapid rate for so long a time. Our more aggressive cardiologists soon taught us that the patient should be digitalized rapidly in order to shorten or prevent a period of hypotension. I soon learned, therefore, that if a patient was sent to me by an internist who was not familiar with these post-operative problems and if the patient developed atrial fibrillation, it was a lot safer to go ahead and digitalize him rapidly and then mention the fact to the internist, rather than being in the position of a young surgeon arguing with an established internist regarding the method of digitalization that should be

employed. Most internists now, of course, have come to appreciate the "cardiac emergency" in the postoperative patient and indeed we now usually digitalize an older patient preoperatively when a pneumonectomy is anticipated. In the early days, however, it was amply demonstrated to me that a surgeon had to be "a medical man and something more."

It has been my privilege since World War II to be Chief of Surgical Division I at the Hospital of the University of Pennsylvania. This is a ward service which includes general surgery as well as thoracic surgery. Over the years I have attempted to train my residents to feel a personal responsibility for their patients' care, a responsibility which cannot be shed by calling in consultants. There is a great tendency on a ward service in an academic institution for a surgical resident to become a clerk who operates rather than "a medical man and something more." All too often, it seems to me, when a new patient is admitted, the surgical resident tends to put in a request for a large number of more or less indiscriminate laboratory tests and consultations rather than thinking through the patient's problem himself. The explanation given is that in an academic institution the patient should be studied in every possible detail for teaching purposes. I wonder, however, if we don't discredit our profession if we teach our students to run up the cost of medical care needlessly. I would be foolish to teach my boys never to use consultants but a surgeon cannot rid himself of responsibility by calling for a consultant. If a consultant cannot convince me of the merit of his suggested therapy, I feel no compulsion to follow his advice, for the responsibility of the patient's care is mine. If I have operated on a patient I cannot shirk that responsibility. Indeed, when an internist calls me in consultation my task is to convince him that the patient should or should not be operated upon. He must bear the responsibility as to whether to advise his patient to accept my recommendation. If I think that the patient should be operated on and the internist will not so advise his patient, I may think he is not a very smart internist but if he were to recommend that his patient follow my advice while disagreeing with it, I would think him unworthy of his patient's trust. There will undoubtedly be times when the surgeon will maintain better public relations by not calling in a consultant rather than to disregard his advice once obtained. Many of us, I am sure, do work closely with our medical men more or less as a team with a certain division of responsibility. However, in general, when a medical consultation is asked for, aside from this team type of work, I regard it as a means of furthering the education of the surgeon and feel that it does not allow the surgeon to shirk the responsibility of his patient's care.

I have considered myself to be extraordinarily fortunate to have been brought up as a general surgeon and to have grown up with the field of thoracic surgery as it has developed. I am among those who believe that surgical principles and surgical techniques may be applied with equal validity in various areas of the body and I believe strongly that "a thoracic surgeon should be a surgeon and something more." In the early days of the Board of Thoracic Surgery there was considerable disagreement with the established policy of requiring that the surgeon pass the American Board of Surgery

before being given an opportunity to take the examination of the Thoracic Board. Those of us who were taken into the founding group did not all see eye to eye regarding this problem. It was the opinion of some that it was an undue hardship for the young man who expected to go into thoracic surgery alone to make him go through a long and arduous surgical training period. During the five year period that I served on the Board of Thoracic Surgery, I along with the other members stoutly defended the view that a man should be well grounded in general surgery and should be required to pass the American Board of Surgery before taking the Thoracic Boards. I am glad to say that this policy has been sustained until this time and I am hopeful that the efforts to persuade the Board to do otherwise have ceased so that the thoracic surgeons of this country can continue to be known as "surgeons and something more." The Thoracic Board is the only Board in this country which has this requirement. It may be that this is one of the reasons why this is such a dynamic field at this time. I would hate to find the thoracic or even the cardiac surgeons of this country set aside as an entirely separate and autonomous group in a fashion similar to that of certain other surgical specialties in which the individuals who operate are not conceded by most of us to be surgeons in the broad sense of the term. It may be contended that it is too expensive a process to require a man to go through general surgical training and thoracic surgical training. I contend it is not our duty to turn out technicians only but to turn out surgeons. Dr. Charles H. Frazier who, during my period of training, was Chairman of the Department of Surgery at the University, confined his practice to neurosurgery and thyroid surgery. He used to say that he could take a plumber and teach him how to do a thyroidectomy in two months. I have no doubt that any of us given an adequate number of patients could take a plumber and teach him how to do a mitral commissurotomy with a transventricular dilator in two months, but that would not make him a surgeon and certainly it would not make him a thoracic surgeon. I would be foolish to contend that it would not be possible to shorten the course of training for an individual technically competent to carry out many thoracic surgical procedures but I contend that thoracic surgery as a specialty will do well to continue its present practice of demanding a broad base of surgical knowledge, for only in so doing can we hope to continue to expand our field and avoid the tendency to stagnate. Certainly thoracic surgery has made tremendous progress. In many of the major centers, as in our own hospital, cardiac surgery now overshadows all other thoracic surgery combined, and, yet in some areas, such as acquired heart disease, the results closely approximate the results obtained in pulmonary resection twenty-five years ago. We have a long way to go! Whether the final solution will be vastly improved artificial valves with additional refinement of the present approach or whether the entire heart will be replaced remains to be seen. Moreover, we as surgeons have hardly scratched the surface of the problem of coronary artery disease, and yet this is a problem which is far greater in scope than that of all other heart disease combined. The problems still to be solved by the thoracic surgeon are as numerous as the imagination will allow. Take for example a seemingly simple

thing such as the replacement of the esophagus after its resection for cancer. At a time when we use artificial protheses to replace almost any part of the arterial tree, it seems ridiculous that it should be necessary for us to mutilate other parts of the gastrointestinal tract to build a new esophagus when it would seem that almost any kind of simple conduit would suffice. The problems to be solved are indeed many. If they are to be solved by thoracic surgeons, the thoracic surgeon must be "a surgeon and something more."

I was disappointed recently to hear a young man say that when he was appointed to a hospital staff he found himself labelled as a "cardiac surgeon." Apparently by common consent he was not even conceded the title of "thoracic surgeon," much less general surgeon, although he was well trained in all. I have also been disappointed to find that some of the individuals emerging from the training programs in cardiac surgery have had more than average difficulty in passing the American Board of Surgery examination. I hope that these individuals and their preceptors will not try to take a short cut to this magnetic field for it is my hope that the cardiac surgeon of the future will be "a thoracic surgeon and something more."

I have been pleased during the last few years with the large number of the members of this Association who have taken an important place in American surgery. Many have become Professors of Surgery and Department Heads in various medical schools throughout the country. By and large, these men have maintained a broad interest in the field of surgery. Although they are more active in the field of thoracic surgery because of their special interest in this field and in its dynamic development at the present time, they have not, by and large, limited their interest to thoracic surgery. I contend that if we should reverse our stand and allow a man to train in thoracic surgery without a fundamental knowledge of general surgery, the position of the thoracic surgeon in American surgery would deteriorate and the time would come when a man who would be Head of a Department of Surgery of one of our great institutions and also a thoracic surgeon would be an exception. For I am sure you are all aware that a man who limits his interest to one of the narrower surgical specialties is seldom appointed as the Head of a Department of Surgery today.

I would not contend for a moment that I object to a person limiting his practice to thoracic surgery if he so desires but I would decry the alteration of our training program in such a way as to narrow the base, and, in an effort to short cut fundamentals, the development of a technician who is not well founded in surgical principles. I have no objection to a person limiting his interest to thoracic surgery but I do object to the practice which has grown up in this country, particularly in some of the smaller hospitals, of requiring a man to limit his practice to thoracic surgery in order to become a member of the staff. The young surgeon who is well trained in general and thoracic surgery is frequently invited to go to a smaller hospital or a smaller community because the physicians there are desirous of having a thoracic surgeon but they don't want any more competition in the field of general surgery. Surely it is below the dignity of our profession that such motivations should

influence the decisions in regard to the future of our specialty and, in turn, of this Association.

I have pointed out then that it seems to me that a surgeon should be "a medical man and something more" and that a thoracic surgeon should be "a surgeon and something more." In like manner, I must add that I think a Professor of Surgery should be "a surgeon and something more." In earlier days the barber surgeon was considered merely a technician and nothing more. Even at the turn of the century a surgeon was known primarily for his technical skill. In recent years the surgical profession, particularly at the academic level, has changed radically from this concept, led by such men as Drs. Ravdin and Wangensteen. As a result of this influence in many institutions, the research program carried out by the Department of Surgery exceeds that of any other department. All of this is to the good. There can be no question that the greater number of competent individuals working toward the advancement of knowledge in the field of medicine, the sooner many of the difficult problems which confront us will be solved. I do not question the wisdom of placing great emphasis on research but I do question the wisdom of abandoning that which makes a surgeon stand out and apart from the medical man, namely his proficiency in surgical skill. In one system which has expanded considerably around the country in recent years, there has been a great tendency to appoint so-called "full time" men in the department of surgery. In some circumstances this has worked quite well, whereas under other circumstances it has not. I know of one young surgeon who on a "full time" basis advanced to the post of Associate Professor of Surgery in one of our institutions. In this particular school the young surgeon's activities were confined to the City Hospital which was associated with the medical school. In addition to his research he supervised the surgical residents and frequently "scrubbed in" to assist his surgical residents in the more difficult operations. Over the years, however, he seldom personally performed more than a dozen operations a year. I find it difficult to believe that it is possible to become a mature capable surgeon under these circumstances. I am fearful that if this particular trend continues we may find ourselves with a group, designated as Professors of Surgery, who are medical men and good investigators but not good surgeons. I abhor any system in our medical schools which makes it difficult for a young man going into academic surgery to grow in stature as a surgeon. I feel strongly that our Professors of Surgery should be "surgeons and something more."

In picking a man for the post of Professor of Surgery and Head of the Department of Surgery, we expect many things of him. We would like for him to be a good surgeon, a good teacher, a good investigator, and a good administrator. We would like for him to have the ability to inspire young men with whom he comes in contact to grow, at least in the first three of these four aspects. However, let us agree that the qualities of being a good surgeon comprise the principal feature which sets him apart from the candidate for the Chairmanship of the Department of Medicine. I fear that unless we remain aware of this important distinction there may grow up in our society

a group of Professors of Surgery who operate seldom if ever. I fear that we may foster the belief that the technical side of surgery is unimportant. I can't help but feel that it is inappropriate to have a Professor of Surgery who does not operate and, indeed, I can't help but feel that it is inappropriate to have a Professor of Surgery who is not, at least, an acceptable technical surgeon. It is inevitable that some individuals will be more deft with the use of their hands than others and I would certainly be the last to say that the person who is the cleverest technician should necessarily be the head of the department of surgery. I believe just as strongly, however, that it is ridiculous to have a Professor of Surgery whom we wouldn't be willing to have operate on the President of the University if he needed an operation.

A few years ago one of my surgical residents told me that he agreed with the importance of postoperative care but it had been his experience that when I did a good operation he didn't have any problem with postoperative care. It was when I had made some mistake in the operating room that he had to stay up all night with the patient. All of us should heed the importance of this observation. Surely there are many conditions for which we operate these days which require the most intense postoperative care even in the presence of the very best surgical technique which we have to offer, but, if one substitutes a poor surgical technique, the problems of postoperative care may be insurmountable.

Dr. Gross, my hope as President of The American Association for Thoracic Surgery is that this Association may continue to exert its influence in bringing about general acceptance of the importance of a broad medical background and thorough training in fundamental surgical principles in the making of a thoracic surgeon. Indeed may we strive to be able to say with justifiable pride that a thoracic surgeon is "a surgeon and something more."