

## The Impossible of Yesterday

JAMES T. PRIESTLEY, M.D., F.A.C.S., Rochester, Minnesota

*Address of the President*

*At the Convocation on October 8, 1964, during the Clinical Congress in Chicago, James T. Priestley in his first official act as forty-fifth president of the American College of Surgeons, speaks, in particular, to the Initiates, Class of 1964, referring to them as being "of prime importance": "One of the prices that you as Initiates must pay for gaining Fellowship in the American College of Surgeons is listening to a presidential address. Happily for you, this is your last requirement for admission to Fellowship. Paraphrasing words of the late Robert Dinsmore, I should remind you, however, that the significance of this occasion to mankind arises not from what you have accomplished in the past but from what is expected of you in the future. I am certain these expectations will be fulfilled."*

THIRTY-ONE YEARS AGO, in this same city, and in this same hotel,\* I was sitting where you now are, as an Initiate. William D. Haggard of Nashville, Tennessee, a colorful character, gifted orator, and superior surgeon, gave the presidential address, titled "Surgery, the Queen of the Arts." In his eloquent manner, Dr. Haggard pulled out all the stops as he extolled virtues of surgery and the nobility of surgeons.

In looking back to this occasion, one is at once impressed by the doors to surgical knowledge which have been opened during the intervening years. Advances in care of surgical patients have been tremendous. Fortunately, the ideals and objectives of our profession have remained constant and, hopefully, always will.

Although we as doctors have been reminded with some frequency during recent years of our faults and deficiencies, the monumental surgical accomplishments of the past 30 years are seldom mentioned, and at times even appear to be taken for granted. This leaves the ledger somewhat incomplete and unbalanced. It occurs to me, therefore, that a brief account of a few notable achievements which have characterized surgery during the past

\*Conrad Hilton Hotel was then the Stevens.

30 years might not be amiss. The array is particularly impressive for those who have learned by experience that nature does not reveal her secrets lightly.

As surgeons we happily acknowledge that we have contributed only part of the total effort that has made possible these advances in care of the sick. Many other members of the medical profession and a multitude of scientists and educators in a broad spectrum of basic fields have played major roles. Furthermore, only through help and co-operation from the generalist, the internist, and the medical specialist have many of the most significant improvements in care of the surgical patient become practical realities.

The basic product which is essential for continuing development of surgery is the medical student.

First, then, what is the situation in this regard?

In 1933 there were 77 medical schools in the United States with a total of slightly less than 5,000 students in their graduating classes. In 1963 there were 83 medical schools and approximately 7,300 who graduated, an increase in graduates of approximately 45 per cent—a figure virtually identical with our growth in population during the same period of time. In addition, plans are in progress, or firm

commitments have been made, for 12 to 15 new medical schools in the United States, and others are in the stage of discussion. Comparable gains have been made in Canada. The scope and depth of knowledge available to the medical student of today permit him at the time of graduation to be better informed than many who completed a residency program as recently as ten or 15 years ago.

#### WHAT ARE HIS OPPORTUNITIES FOR TRAINING?

Second, how have opportunities for surgical training changed?

In 1933 there were only 131 recognized training programs in general surgery in the United States. Today there are more than 350 such programs which provide well over 5,000 residency positions. In the nine recognized surgical specialties less than 300 training programs were available in 1933; today there are approximately 1,200 offering residency positions to almost 7,000 candidates.

Third, how does the young surgeon of today earn his mark of competency?

You initiate are earning such a mark this evening. Through the efforts of the American College of Surgeons during the past 50 years to elevate the standards of surgery, Fellowship in this College is now widely recognized as a mark of competence.

In addition, there are ten American surgical boards which serve this function—nine in the recognized surgical specialties and one in general surgery. All but three of these boards have been established in the last three decades. To the ophthalmologists goes the honor of having established the first American board in 1916, followed by the otolaryngologists in 1924, and the obstetricians and gynecologists in 1930. The dedicated labor—with no financial compensation—which literally hundreds of eminent surgical teachers have devoted to the purposes of these boards represents an outstanding example of unselfish devotion to the betterment of surgery.

Fourth, what of continuing educational opportunities following completion of initial training?

They have never been better or more numerous. The American College of Surgeons has had a prominent part in providing such opportunities through activities of its various committees, chapter and sectional meetings, and, notably, the annual Clinical Congress. It might be mentioned that this College introduced programs of surgical motion pictures and television and, importantly, the Forum on Fundamental Surgical Problems, which

offers comprehensive coverage of the best in surgical research.

Many other organizations, notably, of course, the American Medical Association, as well as specialty colleges, societies and associations, university medical centers and other groups, provide abundant fare for even the most voracious scientific appetite. So far as I know, it is only the generalist, however, who is required to devote a certain amount of time each year to an approved educational program in order to remain in good standing. Might not others profit by this example?

Turning now to specific advances in surgical knowledge and ability, even a sketchy account of the many significant advances made in care of the surgical patient during the past 30 years portrays a truly golden era. Ophthalmic surgeons now aided by eye banks have made transplantation of the cornea a practical and successful operation for selected patients. Only one who has had his own vision restored can appreciate the true import of this procedure. The otolaryngologist can now offer to many patients a highly successful operation to overcome loss of hearing.

Urologists have reduced certain operations previously performed in two stages and associated with weeks of hospitalization and a mortality rate in two figures to a single procedure, requiring only a few days in the hospital and associated with an operative risk of around one per cent. Hormonal studies in patients with prostatic cancer, notably by Huggins, have opened a wide new vista in the study and treatment of malignancy. Plastic surgeons have effected great improvements in skin grafting following invention of the dermatome by Padgett and Hood. Concurrently, growth of basic knowledge has greatly reduced mortality, disfigurement and disability of the burned patient.

#### SOME SIGNIFICANT CONTRIBUTIONS

Following description of a clinical entity resulting from protrusion of an intervertebral disk by Mixer and Barr in 1934, the diagnosis and treatment of "lumbago" and "sciatica" were revolutionized by the orthopedist and neurosurgeon. Neurosurgeons have reached new levels of skill in the management of patients with brain tumors, intracranial aneurysms, and hyperkinetic disorders. The development of hand surgery as a specialty, largely by Sterling Bunnell, has permitted many patients to remain useful citizens who formerly would have been relegated to dependency.

Gynecologists and others, using cytologic studies developed by Papanicolaou, are now preventing the development of advanced cancer in many pa-

tients. Using new knowledge of hemolytic and hemorrhagic diseases, obstetricians have significantly lowered mortality of both mother and child.

It was in 1933 that Evarts Graham performed the first successful pneumonectomy for cancer, an operation of increasing frequency and decreasing mortality today.

Some of the most exciting and significant developments of recent years have occurred in the field of cardiovascular surgery. In 1933 this now extremely important field of surgery consisted for all practical purposes of the occasional operation for constrictive pericarditis, pioneered in this country by Churchill. Five years later, Gross successfully ligated a patent ductus arteriosus, an event which stimulated subsequent dramatic developments leading to the successful surgical treatment of many vascular defects and diseases.

#### OF BLALOCK AND GIBBON

Approximately 20 years ago, the late beloved and esteemed Alfred Blalock reported the Blalock-Taussig operation. Soon thereafter many surgeons in this country and abroad were developing principles and techniques for correction of a wide variety of congenital and acquired cardiac lesions.

John Gibbon of Philadelphia is deserving of special recognition as, with great imagination and determination, he started work on the so-called heart-lung machine in the 1930's. His work interrupted for several years by World War II, Dr. Gibbon in 1953 reported the first successful open-heart operation in man, utilizing the heart-lung machine. Many others have contributed in developing what is now a wide array of lifesaving procedures that can be performed on the heart. Progress continues in what has truly been one of the most exciting chapters in all surgical history.

You are all aware of the start which has been made in another field—organ transplantation. Actually, the technical skills required for transferring organs from one animal to another were developed by Alexis Carrel more than 50 years ago. It is only during recent years, however, that the riddle of the biology of rejection of homografts has appeared as though it *might* be a soluble problem. Murray and his associates in Boston accomplished the first successful transplantation of an organ in the human by using identical twins for donor and recipient. Since then, numerous others have entered this field. Many questions, not all of which are scientific in nature, remain, but in this area where the waters run deep one should not be confused by ripples on the surface. At the present time transplantation of organs remains a subject for research. It should not

be considered an established clinical procedure.

This grossly incomplete list of surgical accomplishments does not include many important advances in allied fields which have added so much to care of the surgical patient, such as anesthesiology, blood banking, hypothermia, antibiotic therapy, radioisotope studies of all kinds, new radiologic techniques, chemotherapy for malignant conditions, fundamental biochemistry of disease processes, immunization, and a wealth of new knowledge in basic physiologic processes and biochemical phenomena of cellular ultrastructure. Only through exchange of ideas with and co-operation of innumerable scientists in a wide variety of fields, including physics, engineering, biochemistry and electronics, have these remarkable improvements in care of the surgical patient been made possible. Through continued combined effort of this type further advances will be made.

#### YESTERDAY'S IMPOSSIBILITY IS TODAY'S REALITY

The heart of the matter is that many procedures which were considered impossible only a brief time ago are practical realities of today. There is not a single operation that can not be done with greater safety than in former years. Development by hospitals of postoperative recovery rooms, intensive care units, and other facilities have contributed significantly to safety of surgical patients. The spirit which is stimulated rather than satisfied by past laurels assures continuing progress.

There is no type of human endeavor in which further improvement can not be made. Medicine is no exception. In many areas we have no doubt but scratched the surface. We should never believe that any treatment or operation is the best that can be accomplished. Conversely, it seems unwise to abandon accepted methods of treatment merely because of a new proposal which has not been adequately evaluated.

The sophisticated processes which are essential to much of current research are expensive in talent, time and money. Philanthropic individuals, charitable societies, private foundations and, especially, the taxpayer have contributed the major part of the needed financial support. It is incumbent on us to see that these dollars are expended wisely and fruitfully.

In one area, that of informing the public regarding medical matters, the pendulum has taken a full swing in recent years. Gone are the days when the doctor frequently hesitated to inform even the

patient and would never think of making a public utterance. This change, I am sure, has been for the good. On the other hand, anything carried to extremes can have undesirable results.

Premature public reporting of new procedures of unestablished value may bring individual or institutional attention but may not serve the public interest. The long established practice of reporting scientific advances initially in scientific journals still seems to have merit.

Not every innovation survives the test of time. Final judgment on many that do places them in the category of a one-yard gain rather than a long end run. A period of evaluation is necessary. During this period, there are distinct advantages to accurate assessment of true worth and possible associated hazards by a few who are prepared to make these impartial observations rather than by a wide-scale method of trial and error. Similarly, if time and additional experience alter or eliminate early enthusiasm for a procedure, responsibility rests with the original proponent to let this fact be known. Those who are renowned for their accomplishments, and justly so, must exercise particular care in speaking or writing about new procedures, especially their own.

In a group as large as the medical profession in this country, numbering approximately 250,000, it is obvious that differences of opinion will exist. In fact, the nature of many doctors is such that with just a half dozen present you may end up with six different opinions. This is fine and good so long as we all have common ideals and objectives. With few exceptions, I am sure that we do. So long as we reach each decision against the background of the question "Is this best for the patient?" we will not go wrong.

Decisions that are based on personal, group, or institutional motives, or just what seems best for doctors, fall short of the mark if they are not also best for patients. After all, patients are the only reason for the existence of doctors. We must assess, admit, and endeavor to correct our frailties and shortcomings with the same honesty and candor with which we proclaim our virtues and accomplishments. To this end we are all responsible individually and collectively through this College and other organizations of which we are members.

We should all be concerned with consistently rising costs of medical care. As doctors, or more specifically, surgeons, there are many factors involved in these costs over which we have no control. There are some that we can influence. Of these we should be ever mindful, realizing that in the end it is largely the patient who in one way or another foots the bill. We should spend his money more carefully than our own.

Science is not everything in caring for the sick. Human interest, understanding, and compassion are still important words in our profession. Equally important are the desire and ability to lighten the load of the afflicted and instill hope where there has been despair.

In closing, I would like to say to you Initiates that you have attained Fellowship in a college of surgeons dedicated to one objective: improving care of the surgical patient in every possible way. It is the hope of us who are older in the College that you will derive the personal pleasure, the mental stimulation, and the scientific rewards of Fellowship which are now available to you. They are yours for the asking if desire and hard work accompany the request.

Opportunities of today become responsibilities of tomorrow. Yours is the torch. Steadfast and unselfish devotion to the surgical patient and the betterment of his care will permit you to carry the torch high and will make its light bright.