UROLOGY AS A SPECIALTY*

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A little over twenty years ago, Hugh Cabot, in his presidential address before the American Urological Association, used the topic, "Is Urology Entitled to be Regarded as a Specialty?" He defined very clearly the meaning of the word specialty: "A department of medicine becomes a specialty when our knowledge of the diseases of this department becomes so far developed that it requires the whole time of any individual to keep abreast of the accumulating knowledge and still have time to devote to study of the problems presented." During the span of our own medical life, the knowledge of diagnosis and treatment of diseases of the genito-urinary tract has emerged from a comparatively obscure field into the realm of an almost exact science, through the efforts of those devoting their entire time to this special field of endeavor.

But without the rapid growth and development of other sciences, especially of chemistry and physics, and without the ingenious inventions and improvement in mechanical technology which has made our modern world what it is, urology would have gone little beyond the narrow limits which characterized the functions of the wandering lithotomists and uroscopists of olden times.

Diseases of the genito-urinary tract are not new. We have simply found ways of recognizing and distinguishing them. The Hindus are said to have "cut for stone" as early as 600 B. C. Lithotomists were mentioned by Hammurabi, and Hippocrates in his famous code on medical ethics, mentioned that only a trained lithotomist should "cut for stone." In certain families, the art of this particular operation was handed down from father to son through many generations. We urologists of the twentieth century are not the first to practice genito-urinary surgery as a means of livelihood.

The ancients were also skilled in the passing of sounds and catheters, and their prowess in this particular field probably has not been equalled, certainly not excelled, since their time. Uroscopy, that is, diagnosis by examination of the urine, was a favorite practice in the middle ages. Its protogonists claimed to be able to detect in the urine the presence of almost any physical abnormality or derangement, especially pregnancy. Practitioners of this art were repudiated as charlatans by more exact workers, but their claims may be regarded as a quaint prophesy of the modern method of diagnosis of pregnancy by a biologic test of the urine.

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The work of the anatomists constituted the foundation stone for the whole science of modern medicine and surgery, and their findings paved the way for those who came later. After the men who studied the structure of organs came the physiologists and clinicians who began to investigate and to study the functions of organs—a step really more important than a study of their structure.

Renal functional tests were not unknown to the earlier physician. Those clever medics who fed their patients asparagus or chicory, and then watched for the time of the appearance by odor of these substances in the urine, were using the same principles which was later employed in the dye tests of kidney function, and which have had such a prominent and important place in recent urologic practices.

Skilled surgeons operated on the genito-urinary tract long before the era of modern surgery, asepsis and anesthesia, and long before the dawn of modern urolgy as we know it. We still marvel at their skill and speed. Their shortcomings were not due to a lack of surgical technic, but to insufficient means of diagnosis of diseases of the genito-urinary tract.

Modern urology may be said to have begun with Nitze, whose cystoscope revolutionized the approach to the study of diseases of the kidneys and bladder. But without Edison's invention of the incandescent lamp, and the subsequent contribution of the x-ray by Röntgen, urology would still be relegated to the limbo of darkness. The development of our specialty literally has been entirely dependent on the light which these great scientists shed on the situation. Visualization of the entire urinary tract by means of the cystoscope and roentgenogram has made accurate diagnosis possible, and this has resulted in the development of the science of genito-urinary surgery to a high degree of perfection.

Following Nitze's original cystoscope, many mechanical devices were introduced into the practice of urology, and the mechanical evolution of instruments and the development of renal functional tests have contributed to placing this specialty on a sound and solid basis.

Thus the makings of a specialty were thrust upon the medical profession by the anatomists, physiologists, physicists, chemists, inventors, mechanicians and lens grinders, but the status of urology has been made secure by those practitioners of medicine, who have devoted their entire time and attention to a study of this special field and to using and perfecting the instruments and means which have been placed in their hands. To keep abreast of the natural growth and development in the field has necessitated a limitation of interest.

Specialization has met the requirements and demands of modern life and medicine. Patients have given their approval to specialized departments of medicine and surgery, because of the superior service that has been rendered. Advancement in urology could never have come about so rapidly if certain men of great ability had not devoted their entire time and attention to a study of its problems. The public has been quick to recognize the resultant benefits of specialization, and to demand this type of service. Diseases which formerly were undiagnosed and untreated now fall into the category of more or less routine practice. In our own specialty, as an example, special study has resulted in much better service to elderly men suffering from hypertrophy of the prostate, a condition which formerly took a much greater toll in life and suffering.

But on the other hand, we have sometimes been accused, I think justly, of drawing the fine wires of specialization almost to the breaking point. In our enthusiasm and zest for supreme ability in our chosen field, we sometimes seem to lose sight of the fact that the genito-urinary system is, after all, a part of the human body, and that its function cannot be entirely isolated from the functions of the other parts of this complex organism.

Not only should the relationship of the special organs to the body as a whole be carefully studied and evaluated, but the cause of the symptoms should be thoroughly investigated in each case. Symptoms referable to the gastro-intestinal tract often occur when lesions of the upper urinary tract are present, and this fact must constantly be borne in mind, for, not infrequently, the cause of the symptoms will be sought by mistake within the peritoneal cavity. This common error has caused about 30 per cent of patients with right-sided ureteral and kidney stones to be subjected to appendectomies which failed to relieve the symptoms. The diagnosis of acute pyelitis also is often confused with that of appendicitis. Intestinal obstruction and ileus requiring surgical treatment have occurred as the result of kidney or ureteral stones, and hematuria, secondary to gall stones, has been recorded.

In the presence of some renal lesions, pain may be referred to the knee and the source of the trouble may be entirely overlooked. The relation of venereal and non-specific infections of the prostate to severe arthritis and joint symptoms is continually evident in practice. The presence of chronic sciatica in men past forty-five years of age should always suggest the possibility of the presence of malignant disease of the prostate and demands direct examination of this organ. Many infections originating in the genito-urinary organs manifest a variety of symptoms in other parts of the body. Hence the importance in genito-urinary practice of accessibility to prac-

titioners in other departments of medicine for consultation is obvious At all times, the urologist must keep in mind that he is treating patients, not merely diseases.

Hence a good urologist must be qualified by training and experience to take a broad general view, not only of his own specialty, but also of the entire problem presented by the patient suffering from genito-urinary disease. He must be familiar, not only with his own diagnostic methods, but with the interrelationship of his specialty with roentgenology, general surgery, internal medicine, and endocrinology.

Some recent investigations have shown us that certain genito-urinary diseases, especially those of the prostate and testes, must be considered in relation to the general endocrine system. It would appear that future developments and knowledge in our field are likely to be based to a large extent on the advancement of biochemistry and of endocrinolgy. We already have shown experimentally a relationship between the testes and the prostate and the endocrine system which seems likely to be of great clinical significance.

Even within the limitations of the special field, too much emphasis on one phase of the work may prejudice or inhibit one's ability in another direction. Some devote all their time to diagnostic work and as a result are not capable of appreciating or coping with the surgical problems which present themselves. Others who know little else but venerology consider themselves trained urologists.

Then there are those who really are not specialists at all, and are not qualified either by training or experience to call themselves urologists, yet they pose as experts, in order to reap financial benefit. A qualified specialist in genito-urinary diseases can become so only at the expense of much time, money and work, and these pseudo-specialists can but bring our specialty into disrepute.

The urologist, or the genito-urinary surgeon, as I prefer to think of him, should be skilled in all the diagnostic methods, and also should be able to treat the patient adequately. A fundamental foundation of good general training in diagnosis and surgery is absolutely essential to any specialist. Some do not build on this strong foundation and fail because of this fundamental lack. Occasionally we hear criticism, and often rightly so, of the performance of operations on the genito-urinary tract by a general surgeon, but it is no worse for a general surgeon to operate unnecessarily because of a mistaken diagnosis, than it is for a urologist to make a correct diagnosis and fail to perform a successful operation because of lack of training in the proper surgical technic. A wide experience in the diagnosis and treatment of venereal diseases and in the clever use

of the cystoscope does not mean that a person is qualified to undertake difficult operations on the genito-urinary tract.

Moreover, the specialist in genito-urinary surgery must have sufficient general surgical training to be able to cope with pathologic lesions in proximity to his field. A vesical tumor may be secondary to a growth in the intestine. In such a case, the operation can not be divided between an abdominal and a genito-urinary surgeon. Either should be equal to the task before him.

No specialty is going to advance to its fullest extent if its practitioners are content to practice only the routine measures connected with it. Although our profession has been advanced by the evolution and perfection of mechanical instruments and appliances, perhaps too much attention has been paid to this phase of the work, with the result that other more important factors have been overlooked. Is there not a tendency among urologists to make some slight modification in an instrument or table, and to attach a new name to this equipment, rather than to devote the time to more fundamental and important investigations? The multiple modifications of genito-urinary implements add to the high cost of medical care. The expense of all these special gadgets, which bring an additional tax upon us, must be added to the patient's expense. This is true not only in urology but in all the specialties. I appreciate fully the rapid changes that are constantly being made in electrical equipment and that older models are becoming obsolete, but unless the change greatly benefits the patient, there should not be too great haste to adopt the newer models and modifications.

Fortunately for the advancement of our calling, with all our knowledge and instruments and tests and explorations, we can not always make a correct diagnosis or determine accurately the cause of a given lesion. If this were possible we should soon lose interest and there would be little or no incentive for further study, investigation and hard work.

But there remain as many problems to be solved as have ever been conquered. Urology has reached its present staunch position through the intelligence and hard work of a great many diligent devotees. And if the specialty is to be advanced further, we who are practicing urology must keep everlastingly at work, not only in employing what we already know, but also in reaching out constantly toward new facts and discoveries which may benefit the patient suffering from genito-urinary disease. I feel that too much time is devoted to technic and to modification of special instruments, and not enough to investigation of causes. We are well qualified to care for patients with urinary lithiasis, but we still know too little about the production of stones and the methods of preventing their forma-

tion. We should study the causes of prostatic hypertrophy and be able to anticipate its ocurrence. We should learn more about the causes of urinary infections and why, in certain cases, in spite of every precaution, there is such a severe systemic reaction following cystoscopic examination.

However, much as we may desire to perform operations, the real task of the surgeon, according to Lord Moynihan, is to know how to cure diseases without operation. Such a time may be in the offing; my vision is not strong enough to see it as yet, but I am an optimist and I predict a great future in preventive medicine, and if urology advances as rapidly in the next twenty years as it has in the past, it will still be in the very front rank of medical achievement in this direction.

But in spite of Lord Moynihan's ultimatum, and of the trend toward fewer operations, many surgical problems still confront the genito-urinary surgeon. I feel certain that the surgical treatment of malignancy of the bladder could be extended and improved; that, perhaps, cystectomy should be performed more frequently, as the technic of transplantation of the ureters evolves and is perfected. There will always be the congenital anomalies and abnormalities to challenge the intelligence and skill of the surgeon; the problems presented by epispadias, hypospadias and exstrophy of the bladder will always confront us.

If the lofty structure of urology is to endure, we must be alert and ready to embrace the new knowledge which is sure to come. Urology has become a specialty because of the vast amount of knowledge which has been made accessible to us by the scientists and inventors of a past generation and by the industry and application of our contemporaries, and if it is to live and grow, as I know it will, it must keep pace with modern trends and discoveries. If those of the coming generation will light their candles from the torches carried by those who have brought the specialty to its present status, there will be no break in the steady progress of urology as a special branch of medicine.