The Boston Medical and Surgical Journal

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The New England Surgical Society.

PRESIDENTIAL ADDRESS.

SOME CHANGES IN MEDICAL TEACHING AND SURGERY.*

By C. A. PORTER, M.D., BOSTON.

THE custom of having an annual presidential address, before such societies as ours, must occasionally result in much suffering to its members. To-night, therefore, the address will be short, for I shall only give my personal experience, with a few of the surgical changes which have taken place since men of my age graduated.

I want to call your attention to certain tendencies, now showing themselves, all, of course, marking progress, though at times this may seem to be sidewise, if not backwards. It is hard, even for those of us who are in close contact with surgical teaching, to realize how much more knowledge is required of the student now than thirty years ago. We had our didactic lectures and weekly visits of thirty or forty students, following the professor through the wards. Some out-patient work was demanded, also bandaging on models, and the application of splints and apparatus. Once a week, operations were performed in the large amphitheatre, attended by

students from all the classes. As most of these operations were external, the student obtained a fair understanding of their general conduct and technique, and learned to admire the resourcefulness and brilliant operations of the master surgeons. Anatomy was considered of great importance, and was closely linked with surgery at the Harvard Medical School. A fourth-year course in anatomical landmarks and operative surgery, although an elective, was eagerly chosen. There were surgical clinics, in which the diagnosis was made by the history, symptoms, and physical examination, aided by a few simple tests. None of the more modern methods of investigation were then known. To become a successful teacher, long experience and a strong personality were necessary. There was very little surgical research, and practically no animal work. I was present when the late Professor Halsted of Baltimore came to the school and demonstrated the advantages of learning intestinal suture on dogs rather than on human beings. These were the days when surgeons came from far and near to see Dr. John Homans perform ovariectomies with a large trocar, pedicle clamp and the Staffordshire knot; and hysterectomies with Koeberle's wire clamp, a turn a day, until the stump slipped back, at the end of a week.

From that time until now, certain tendencies have become more and more clear. Anatomy, exceedingly well taught, has become, with one exception, largely divorced from surgery, and the surgeons no longer work and teach in the ana-

*President's address before the New England Surgical Society meeting, Burlington, Vt., September 20, 1922.

tomical department. Operative surgery has been omitted. Work on animals for technique and research has much increased. The huge ward visits of the second and third year have been replaced by small sections, and in the fourth year, under personal supervision, the student, for two months, spends the day in the ward, laboratory and operating-room, in intimate contact with patients. The big amphitheatres have come to be less and less used, as internal operations increased, and were performed in small rooms. No longer do we see the silent group about the table, but in most clinics, the case is discussed, the steps of the operation are explained, and the surgeon must *operate and teach*, at the same time, in order to maintain attendance and attention.

With the gradual development of sub-departments of surgery, such as genito-urinary surgery and orthopedics, with the still further division into such specialties as brain and nerve surgery, etc., with the still more refined methods of diagnosis and special operative technique, it became impossible for a student to acquire the necessary knowledge in four years.

In addition, came the innumerable methods of investigation in the laboratory, and all sorts of special tests, with all of which he must have some familiarity. Instead of graduating for practice at the end of four years, not a few, but a large majority of the students now add an internship of one or two years; at the large hospitals, a paid resident surgeon's appointment is sought by an increasing number of hospital graduates. Year by year, a change has come over medical teaching. The younger man, without great experience, but with enthusiasm and knowledge of modern scientific research, is giving much of the instruction to small groups of students.

Commencing this year, the Harvard Medical School is to make a definite change in its curriculum. The Faculty has become convinced that the students' hours are too much occupied, and emphasis is to be placed on the fundamental subjects. Accordingly, the number of hours devoted to didactic lectures, and to a less extent to the clinics, has been reduced about one-third in the major subjects, and still more in the specialties. Two afternoons a week are left free for study or a choice of voluntary courses, offered by the various departments. If the making of a thoroughly competent surgeon is to require all these years of undergraduate, hospital, and post-graduate work, there must be established some standard in the future, by which such an ethical and qualified man may become known to the community; a standard, which in time, will be insisted upon by the general practitioner and other surgeons. For this reason, in spite of inevitable mistakes, I believe all of us should do our utmost to aid the work of the American College of Surgeons.

During the last ten years, in the large hospi-

tals, special assignments of a group of similar cases, where unsolved surgical problems existed, have been given to one or more individuals for a specified time. After an intensive study has been carried on, and the end-results of the treatment determined, the plan is to return these cases to the general service, or to reassign them to other individuals. At the Massachusetts General Hospital under this system, we formed the fracture service, and have assigned such rare cases as cancer of the cervix, pulmonary surgery, peripheral nerve surgery and toxic goitres, believing that more advance would thus be made, than if a member of the general staff had only an occasional case. Such specialization must, however, be limited, otherwise the general service suffers, while the individual may acquire an undeserved reputation as the only man who can do a certain kind of work. I suggest that this same system is even more valuable in hospitals of moderate size where, in addition to a few months of regular service, an individual would have a small series of cases for a year.

Throughout the country, less and less surgery is done in the private house. The day of the emergency appendix with the pocket knife, spoon retractor, candle snuffer, and a bit of twine has passed forever, unless it be in some remote farmhouse (if such exists), where the Ford car cannot penetrate, and bring the patient to the hospital. Gasolene transportation and the remarkable growth of the small hospital, both public and private, have entirely changed the aspects of modern surgery, and introduced new questions to which the answer is very difficult. In almost every large town in New England, there is now a hospital, with a regular staff in attendance.

In our present stage of evolution, no special qualifications are necessary for the practice of surgery. At such a hospital, there is almost always a good operating-room, in charge of an excellent nurse. According to its size and endowment, there is an x-ray apparatus and a laboratory, with more or less scientific equipment. To such a hospital are now brought two types of cases,—the emergencies, to be operated upon by the local surgeon or a consultant, and many chronic cases for diagnosis, and perhaps too often for surgical treatment. These cases were previously taken by the general practitioner to a larger medical center, often to the chief cities.

There is a marked difference between a case of appendix peritonitis and one brought in with a questionable diagnosis of chronic ulcer or cancer of the stomach. In the first, the diagnosis is obvious, and immediate treatment is indicated. A reasonably qualified man should be successful. In the second case the diagnosis and treatment may be doubtful, and will often require either very special methods of examination, an unusual experience in similar cases, or a technique learned by long practice only. The question,

"Should the operation be done?" depends often for its answer on another, "Who is going to do it?" This same question arises sometimes within the walls of large hospitals. The Utopian ideal that the patient should always have the most competent surgeon will never come true, but it is to such societies as ours that the community looks for guidance. Quietly, tactfully, but firmly, we should do all in our power to influence the general practitioner, with whom the final decision rests, to send his patients only to ethical and qualified men. We should ourselves realize, furthermore, that with all the modern refinements in diagnosis and technique it is no disgrace for a general surgeon to refer a patient to another man, unusually qualified in a particular field.

I have spoken of the long course of study and hospital work, which a modern surgeon must take. To this, fortunately, there are exceptions. Such is the energy in this country of many men, that they give up practice for a time, travel, visit clinics, take post-graduate work, and owing to natural ability, make of themselves competent, practical surgeons. So long as such men recognize their limitations, the community is safe.

Far too many laparotomies are done without preliminary study; many a so-called interval appendix has been removed because the operation was easy and safe. Further study showed ureteral calculi. It is appalling how many cases of cancer of the rectum are diagnosed, and occasionally operated upon for hemorrhoids, without even a high rectal examination. Many of these errors come from improper interpretation of x-ray plates, unreliable technique in carrying out laboratory work, and in taking as a fact, the results of special investigation, in which the worker lacks both training and experience. On the other hand, we have nothing but admiration for the surgeon who, finding unexpectedly a condition beyond his ability to treat, closes the wound, and refers the patient to a more experienced consultant. It would take too long to discuss other important changes. Without further comment, I will mention the increasing activity of the State and Public Health Service, Industrial Surgery, with its rapidly increasing efficiency, the Workman's Compensation Board, Social Service, Diagnosis Clinics at the hospitals, and Group Medicine in private practice. All these and other problems must work out salvation.

Before closing, I wish to thank you for the honor you have done me, and to assure you of my continued interest in our society. May I add a thought in a lighter mood? For centuries the cause of lues was sought, and sought in vain. When found at last, it proved to be a *corkscrew*, thus justifying the time-honored association of Bacchus with Venus.

Original Articles.

FACTORS IN DYSPEPSIA.*

By FRANCIS W. PALFREY, M.D., BOSTON.

DYSPEPSIA is commonly understood to mean discomfort connected with gastric digestion in cases where the diagnosis of organic disease such as ulcer or cancer cannot be established. Since it occurs in different types, it is desirable to recognize these by speaking in the plural of dyspepsias. These figure prominently in general medical practice, but our knowledge of them is not yet such that we can treat them either rationally or empirically with complete success.

The subject of the dyspepsias has interested me from the fact that it has baffled us in the past, in spite of the many hints that seem as if they ought to offer solutions, if only we could read them. It is a tantalizing situation, since so much seems to lie so little beyond our grasp. But the hopeful factor to me has been the feeling that the more searchingly I have gone into individual cases, or groups of cases, the more suggestions I have obtained tending to connect clinical symptoms with deviations from the normal physiology.

My method of attacking the subject has been different from that of most recent investigators, in that they have devoted themselves more largely to objective tests, whereas I have attempted the more uncertain and less scientific method of trying to identify and analyze the patients' subjective symptoms. I must admit that I am attempting to build on insecure foundations, and that my structures are not safe against falling to the ground. Still I feel that there is a chance that by ascending these insecure structures I may get a wider view than if I were to put all my material into foundations. We must remember that dyspepsias are complexes of symptoms, rather than objective cachexias. Most patients do not complain primarily of undernutrition, but rather of discomforts connected with digestion. Many patients who complain of dyspepsia are found on objective tests to have no deficiency of nutrition. Also in routine tests individuals are found whose digestive processes deviate markedly from the normal, both in the directions of deficiency and of excess, but who, in spite of these deviations, have no symptoms of dyspepsia. It seems to me, therefore, that, both in investigation and in clinical dealing with the individual case, we should deal primarily with symptoms, and with other abnormalities only as they may contribute to symptoms. The patients come to us for relief of certain discomforts, and it is only by learning to identify symptoms from the patients' descriptions, or from other evidence, and by

*Read before the Fall River (Mass.) Medical Society, March 22, 1922.