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EDITORIAL

SURGICAL CONSCIENCE

CONSIDERING the great strides made by medical education during recent years, it must be admitted that inevitably men are graduated from medical college without adequate training, especially in surgical technic. Many of these embryonic doctors have already become obsessed with the desire to become immediately a Specialist. They probably know little of diagnostic procedures and less of laboratory medicine and its technic. They have no realization of the fact that the life of a trained surgeon begins at forty.

There are many reasons, much too complex and numerous to cite in full, for this distressing lack of preparation and inadequate knowledge on the part of our young doctors.

Sometimes small hospitals are established without adequate funds or equipment for proper medical service, to say nothing of a good surgical department. Here is another sort of opportunity for our poorly trained, inexperienced young doctor. Because he "comes cheap," he is engaged to do surgical work in such an institution.

Or in some of our larger medical institutions where, either from lack of time or laxity, or want of a "surgical conscience" on the part of those in charge, the interns are given inadequate supervision, permitted too great latitude, or admitted to service without sufficient investigation of their preparation for medical work and other qualifications.

A Case in Point. An illustration of what may happen in a high grade medical institution, and through no fault of any particular individual or group of individuals, is recounted in Dr. John Brooks Wheeler's recently published "Memoirs of a Small Town Surgeon." Although the incident occurred a good many years ago and in a great hospital which today would certainly never be guilty of the slightest lapse from its high medical standards, nevertheless the story still stands as a good example of the trouble that can arise from an

ungraded intern service when a young and inexperienced but perfectly well meaning embryonic medico has to assume responsibility in treating a patient in the absence of his superiors. The incident also illustrates the danger of experimenting with new or inadequately tested therapeutic measures.

This briefly is Dr. Wheeler's story: A ward patient who had undergone a minor operation suddenly developed acute nephritis with general dropsy. The chief surgeon was absent, also the hospital superintendent. A messenger was quickly dispatched for the former, and meanwhile palliative measures were instituted. But the patient relapsed into a comatose state followed by convulsions. Dr. Wheeler, at the time an intern in the hospital, decided that the case was desperate and immediate action necessary. He knew that profuse sweating would give more immediate relief than anything else, so decided to administer a hypodermic injection of one-tenth of a grain of pilocarpin, a drug at that time but recently introduced and little used, and about which not much was known. In a few moments the patient emerged from his coma, began to perspire profusely, and seemed on the point of rallying a bit in spite of great weakness and a poor pulse.

When the chief surgeon had been reached by the messenger, and had returned to the hospital after more than an hour's absence, he was taken by young Wheeler to see the patient. Doctor Wheeler writes:

As we stood by the bedside in the open ward, with the nurses and all the patients in plain sight and clear hearing, he asked me to tell him all about it. I proceeded to do so, but when I got to the pilocarpin he exclaimed, 'What! You took it upon yourself to give him pilocarpin?' 'Yes, sir,' I said. 'There was no one here for me to refer to, and the patient's condition seemed so very bad that I thought he would die unless the promptest relief was given.'

Thereupon, before all the audience and close to the patient himself, who was perfectly conscious by this time, he gave me a tremendous

call-down, asking if I didn't know that pilocarpin was a powerful heart depressant, saying that any one so young and inexperienced as I was had no business to administer such a dangerous drug, that house-pupils were not to take it upon themselves to prescribe anything beyond cathartics and anodynes, and that there were other things that I could have done instead of giving the pilocarpin. . . .

I suppose he feared that if he didn't sit on me pretty hard, I might be prescribing anything and everything that came into my head for all the patients, for whose treatment he and not I was responsible. I realized that fact, and I don't think there was much danger of my doing as he may have feared, for it was only on account of the extremeness of the emergency that I ventured to give the pilocarpin. Nevertheless, it was well enough to impress upon me that the patients under my care were Dr. Porter's and not mine, and that it was for him to order the treatment and for me to carry out his orders to the best of my ability. . . . This is a good example of the trouble that can arise from an ungraded intern service. Dr. Porter's statement that I was too inexperienced to be giving drugs like pilocarpin was perfectly correct. But if the service had been better organized, such a case would not have been left entirely in the hands of so inexperienced a man. If there had been a senior intern and a house surgeon ahead of me in the service, such a patient would have been in their charge, and their longer hospital experience would have taught them what their chief wanted them to do in such an emergency.

Qualifications of a Surgeon. These are too well known to warrant detailed discussion, but how often is their vital need disregarded or recognition of their lack in a particular individual clouded by a "pull," or by a brilliant but superficial personality, or perhaps a clever ability to "get away with it" in the matter of securing a responsible position on the part of our untrained and inexperienced young Dr. Medico. Because all these things do happen in the profession, physical fitness, proper temperamental qualifications for doing surgical work, adequate education and practical training, hospital experience, records of internship, assistantship, and

institutional residency, are the only reliable bases for judging candidates for their fitness to take up that great branch of medical science, specialization in surgery.

Meditation before operating on the part of the surgeon who is to perform the operation is another procedure no less important than proper operative technic or suitable postoperative care. By meditation before operating we mean the taking, and careful study and interpretation, of all possible diagnostic steps, their employment as laboratory aids before operation, and the drawing of logical conclusions as to the best methods, procedures, and probable contingencies in the operation to come. Radiographic students should be made, an exhaustive physical examination if necessary, and all other means employed to enable the surgeon to acquire a complete understanding, so far as is possible, of the condition to be operated, in its pathological, anatomical and physiological aspects. Do your findings show that there will be expectancy of a clean wound?— or otherwise? Upon the completeness of these findings, and the conclusions you draw from them, will rest the success or failure of your chosen operative procedure, each individual step of which should be anticipated by you before you begin to work on the patient. One of the most important of these considerations, it goes without saying, is choice of the proper anesthesia, general, spinal, local or what?

The Operating Room. Largely as the human element enters into the requirements for successful operating, they are not the only considerations in the problem. The conditions under which the operation takes place are of the utmost significance, not only to the patient, but also to the surgeon, nurses, and other staff assistants whose presence at the operation may be necessary.

First, the operating room must provide the proper physical conditions, environment and atmosphere. For convenience, it should be near the surgery and anesthesia department. Adequate central lighting

directly above the operating table is a prime necessity. Most of all, the room must be quiet and undisturbed by the passing to and fro of persons on duty. Hearing and seeing doctors and nurses hustling about in their white uniforms, always rather forbidding-looking to the poor patient, is sure to excite, then depress him, and also make for nervousness and lack of poise on the part of the staff. The period immediately preceding an operation should be for all concerned a time of quiet, relaxation and self control to insure the best results in the task to come.

Personnel. The service of a trained anesthetist in the operating room is indispensable to the surgeon. Without such assistance, how often is he disturbed and distracted, his patience tried, his valuable time wasted, his technic hampered, and other obstacles encountered, such as faulty anesthetic procedure, incomplete relaxation of the patient, reflex vomiting, etc., until not only the surgeon but all his helpers work in a state of nervous tension and irritability which may be detrimental to the outcome of the operation and the recovery of the patient.

Another most important functionary essential to every good operating room is the operating room nurse. We might almost say that upon her fitness and ability depends largely the success or failure of the operation. She must inspire confidence and the necessary feeling of ease, sureness and relaxation in her chief by providing him with the underlying certainty that *everything* has been prepared under her competent supervision to make for the best possible operating conditions. The room and all its furnishings are spotless, shining and sterile, the linen, drapes, instruments and other details. Every step of the operative procedure has been foreseen and arranged. She makes herself the surgeon's calm, intelligent and competent helper, anticipating his every need, standing at his side, a very spirit of immaculate cleanliness, wholesomeness and poise. In this day and time it goes without saying

that the cult of cleanliness and its application to every detail of medical practice, including the scrupulous care of the person, especially the hands, the sterilization of gloves, instruments, masks, garments and other accessories of the hospital, has assumed almost a religious significance in the mind of the conscientious surgeon. He believes and practices the belief, that cleanliness in truth is next to godliness.

Prevention of Preoperative Infections. The keynote to such prophylaxis is to give all respect to tissues. In joint surgery, including the long bones, hip, knee, elbow joints, the most rigid asepsis is essential and more speed is required than in general surgical procedures. Every step of surgical operations on joints should be planned ahead so as to cause the least possible trauma. Open operations require exercise of the keenest judgment on the part of the surgeon. Again let us emphasize the great importance of careful preliminary contemplation of the case in all its aspects, including the kind of anesthesia to be employed, the time risk, the various surgical steps of the operation to come, etc. A splendid rule is to select true and tried methods and scrupulously follow them. Be very careful about experimenting with new ideas and doubtful procedures.

Abdominal surgery requires the suitable gentle approach, inspection of the condition to be operated, and removal of diseased tissue with no excess trauma, not forgetting to conserve specimens for culture and biopsy. Such operations, because of their elaborate character demand the greatest respect for the organs involved, especially the viscera, which should always be handled, if at all, with the greatest care and tenderness, such as shown toward a newborn baby. Never run undue risks or jeopardize the life of the patient by prolonged explorations, especially in cases of malignancy, which absolutely preclude all slashing or other methods provocative of trauma.

Nerve and tendon surgery requires the utmost patience, as well as a complete

knowledge of and acquaintance with nerve and blood vessel anatomy. In such procedures also respect for end results and careful preliminary consideration of future contingencies are of paramount importance.

Orthopedic surgery permits a slightly different approach and preparation for action. Here, the type of operation is often elective and so can be better planned. In such operations, time is frequently abundant, each step leading logically to the next, being the sequel of the preceding one. Also there is usually a profusion of laboratory material as roentgenograms, photographs, casts, etc., for consideration of the case. To orthopedic surgery, particularly, may be applied that telling phrase recently originated by the famous British surgeon, Lord Moynihan, "Surgery to prevent surgery," which has become one of the watch words of the profession. The current progress toward improvement of surgical procedures for the purpose of forestalling future operations which may be of a more serious or complicated nature is obvious to every member.

Yet let us not forget that, although orthopedic surgery may sometimes present different and somewhat less difficult problems for the operator, nevertheless it too has its particular pitfalls. For instance, the difficulty in making a differential diagnosis between acute osteomyelitis in its initial stages and acute rheumatism; or the ease with which the surgeon may fail to recognize fractures, or the onset of ischemic contracture.

Genitourinary Surgery. It need not be necessary to remind our readers that this specialty requires careful preoperative preparation, including radiography, cystoscopy, urinalysis, blood tests, etc., for correct diagnosis is imperative to success.

In this connection may we refer to a recent most encouraging and growing tendency on the part of progressive obstetricians to adapt the methods of surgery, especially in its efforts to combat sporadic postoperative sepsis of intrinsic origin. In an article published in the *British Medical*

Journal, Dr. Victor Bonney, gynecological and obstetrical surgeon to Middlesex Hospital, comments upon this change, and outlines these methods of surgery which apply especially to the practice of gynecology and obstetrics. They are, he writes, "the sterilization, or, if sterilization be impossible, the exclusion from the field of action, of the approaches to the operation area; the avoidance of unnecessary trauma and unnecessary hemorrhage in that area; and the removal beforehand of septic foci in other parts of the body." Dr. Bonney adds hopefully that the future will probably increase the number of these methods by the addition of reliable immunization of the patient before operation.

In summary these few suggestions are offered for consideration:

1. Try to anticipate every surgical step, sticking to a true and tried technic, and following through each step with the most careful observation, based upon painstaking contemplation and a scrupulous preliminary consideration of all the aspects and potentialities of the case in hand, the operative results, and the probable prognosis.

2. Let the welfare of the patient be your prime consideration. Be careful not to expose him to serious risks, remembering that the tissues of the human organism are tender and easily injured beyond repair. Do not make exploratory operations for simple surgical procedures, nor extensive excisions, cuts, or other mutilations of tissue, nerve or muscle.

3. Last but not least, never forget that adequate training, suitable temperament, true prowess, physical fitness, the power of vision, much as you may associate them with the precepts of medical college days or your early researches into medical literature, are not at all out worn or out dated by the magnificent advances of modern medical science; but on the contrary have assumed a new and more vital significance than ever held in the olden days. Belief in these qualities as pass-words to success is as old as Hippocrates and as young as the latest winner of the Nobel Prize in Medicine. So cling to them, and cultivate them, for they are the seeds which will develop into that most essential and ennobling characteristic of every great specialist in surgery, the surgical conscience.

HENRY J. KOHLMANN.