# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL. 88, No. 12 CHICAGO, ILLINOIS MARCH 19, 1927


## THE CARE OF THE PATIENT*


FRANCIS W. PEABODY, M.D.

BOSTON


It is probably fortunate that systems of education are constantly under the fire of general criticism, for if education were left solely in the hands of teachers the chances are good that it would soon deteriorate. Medical education, however, is less likely to suffer from such stagnation, for whenever the lay public stops criticizing the type of modern doctor, the medical profession itself may be counted on to stir up the stagnant pool and cleanse it of its sedimentary deposit. The most common criticism made at present by older practitioners is that young graduates have been taught a great deal about the mechanism of disease, but very little about the practice of medicine—or, to put it more bluntly, they are too "scientific" and do not know how to take care of patients.

One is, of course, somewhat tempted to question how completely fitted for his life work the practitioner of the older generation was when he first entered on it, and how much the haze of time has led him to confuse what he learned in the school of medicine with what he acquired in the harder school of experience. But the indictment is a serious one and it is concurred in by numerous recent graduates, who find that in the actual practice of medicine they encounter many situations which they had not been led to anticipate and which they are not prepared to meet effectively. Where there is so much smoke, there is undoubtedly a good deal of fire, and the problem for teachers and for students is to consider what they can do to extinguish whatever is left of this smoldering distrust.

To begin with, the fact must be accepted that one cannot expect to become a skilful practitioner of medicine in the four or five years allotted to the medical curriculum. Medicine is not a trade to be learned but a profession to be entered. It is an ever widening field that requires continued study and prolonged experience in close contact with the sick. All that the medical school can hope to do is to supply the foundations on which to build. When one considers the amazing progress of science in its relation to medicine during the last thirty years, and the enormous mass of scientific material which must be made available to the modern physician, it is not surprising that the schools have tended to concern themselves more and more with this phase of the educational problem. And while they have been absorbed in the difficult task of digesting and correlating new knowledge, it has been easy to overlook the fact that the application of the principles of science to the diagnosis and treatment of disease is only one limited aspect of medical practice. The practice of medicine in its broadest sense includes the whole relationship of the physician with his patient. It is an art, based to an increasing extent on the medical sciences, but comprising much that still remains outside the realm of any science. The art of medicine and the science of medicine are not antagonistic but supplementary to each other. There is no more contradiction between the science of medicine and the art of medicine than between the science of aeronautics and the art of flying. Good practice presupposes an understanding of the sciences which contribute to the structure of modern medicine, but it is obvious that sound professional training should include a much broader equipment.

The problem that I wish to consider, therefore, is whether this larger view of the profession cannot be approached even under the conditions imposed by the present curriculum of the medical school. Can the practitioner's art be grafted on the main trunk of the fundamental sciences in such a way that there shall arise a symmetrical growth, like an expanding tree, the leaves of which may be for the "healing of the nations"?

One who speaks of the care of patients is naturally thinking about circumstances as they exist in the practice of medicine; but the teacher who is attempting to train medical students is immediately confronted by the fact that, even if he would, he cannot make the conditions under which he has to teach clinical medicine exactly similar to those of actual practice.

The primary difficulty is that instruction has to be carried out largely in the wards and dispensaries of hospitals rather than in the patient's home and the physician's office. Now the essence of the practice of medicine is that it is an intensely personal matter, and one of the chief differences between private practice and hospital practice is that the latter always tends to become impersonal. At first sight this may not appear to be a very vital point, but it is, as a matter of fact, the crux of the whole situation. The treatment of a disease may be entirely impersonal; the care of a patient must be completely personal. The significance of the intimate personal relationship between physician and patient cannot be too strongly emphasized, for in an extraordinarily large number of cases both diagnosis and treatment are directly dependent on it, and the failure of the young physician to establish this relationship accounts for much of his ineffectiveness in the care of patients.

### INSTRUCTION IN TREATMENT OF DISEASE

Hospitals, like other institutions founded with the highest human ideals, are apt to deteriorate into dehumanized machines, and even the physician who has the patient's welfare most at heart finds that pressure of

* One of a series of talks before the students of the Harvard Medical School on "The Care of the Patient."

work forces him to give most of his attention to the critically sick and to those whose diseases are a menace to the public health. In such cases he must first treat the specific disease, and there then remains little time in which to cultivate more than a superficial personal contact with the patients. Moreover, the circumstances under which the physician sees the patient are not wholly favorable to the establishment of the intimate personal relationship that exists in private practice, for one of the outstanding features of hospitalization is that it completely removes the patient from his accustomed environment. This may, of course, be entirely desirable, and one of the main reasons for sending a person into the hospital is to get him away from home surroundings, which, be he rich or poor, are often unfavorable to recovery; but at the same time it is equally important for the physician to know the exact character of those surroundings.

Everybody, sick or well, is affected in one way or another, consciously or subconsciously, by the material and spiritual forces that bear on his life, and especially to the sick such forces may act as powerful stimulants or depressants. When the general practitioner goes into the home of a patient, he may know the whole background of the family life from past experience; but even when he comes as a stranger he has every opportunity to find out what manner of man his patient is, and what kind of circumstances make his life. He gets a hint of financial anxiety or of domestic incompatibility; he may find himself confronted by a querulous, exacting, self-centered patient, or by a gentle invalid overawed by a dominating family; and as he appreciates how these circumstances are reacting on the patient he dispenses sympathy, encouragement or discipline. What is spoken of as a "clinical picture" is not just a photograph of a man sick in bed; it is an impressionistic painting of the patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes and fears. Now, all of this background of sickness which bears so strongly on the symptomatology is liable to be lost sight of in the hospital: I say "liable to" because it is not by any means always lost sight of, and because I believe that by making a constant and conscious effort one can almost always bring it out into its proper perspective. The difficulty is that in the hospital one gets into the habit of using the oil immersion lens instead of the low power, and focuses too intently on the center of the field.

When a patient enters a hospital, one of the first things that commonly happens to him is that he loses his personal identity. He is generally referred to, not as Henry Jones, but as "that case of mitral stenosis in the second bed on the left." There are plenty of reasons why this is so, and the point is, in itself, relatively unimportant; but the trouble is that it leads, more or less directly, to the patient being treated as a case of mitral stenosis, and not as a sick man. The disease is treated, but Henry Jones, lying awake nights while he worries about his wife and children, represents a problem that is much more complex than the pathologic physiology of mitral stenosis, and he is apt to improve very slowly unless a discerning intern happens to discover why it is that even large doses of digitalis fail to slow his heart rate. Henry happens to have heart disease, but he is not disturbed so much by dyspnea as he is by anxiety for the future, and a talk with an understanding physician who tries to make the situation clear to him, and then gets the social service worker to find a suitable occupation, does more to straighten him out than a book full of drugs and diets. Henry has an excellent example of a certain type of heart disease, and he is glad that all the staff find him interesting, for it makes him feel that they will do the best they can to cure him; but just because he is an interesting case he does not cease to be a human being with very human hopes and fears. Sickness produces an abnormally sensitive emotional state in almost every one, and in many cases the emotional state repercusses, as it were, on the organic disease. The pneumonia would probably run its course in a week, regardless of treatment, but the experienced physician knows that by quieting the cough, getting the patient to sleep, and giving a bit of encouragement, he can save his patient's strength and lift him through many distressing hours. The institutional eye tends to become focused on the lung, and it forgets that the lung is only one member of the body.

### PATIENTS WHO HAVE "NOTHING THE MATTER WITH THEM"

But if teachers and students are liable to take a limited point of view even toward interesting cases of organic disease, they fall into much more serious error in their attitude toward a large group of patients who do not show objective, organic pathologic conditions, and who are generally spoken of as having "nothing the matter with them." Up to a certain point, as long as they are regarded as diagnostic problems, they command attention; but as soon as a physician has assured himself that they do not have organic disease, he passes them over lightly.

Take the case of a young woman, for instance, who entered the hospital with a history of nausea and discomfort in the upper part of the abdomen after eating. Mrs. Brown had "suffered many things of many physicians." Each of them gave her a tonic and limited her diet. She stopped eating everything that any of her physicians advised her to omit, and is now living on a little milk with a few crackers; but her symptoms persist. The history suggests a possible gastric ulcer or gallstones, and with a proper desire to study the case thoroughly, she is given a test meal, gastric analysis and duodenal intubation, and roentgen-ray examinations are made of the gastro-intestinal tract and gallbladder. All of these diagnostic methods give negative results; that is, they do not show evidence of any structural change. The case is immediately much less interesting than if it had turned out to be a gastric ulcer with atypical symptoms. The visiting physician walks by and says "Well, there's nothing the matter with her." The clinical clerk says "I did an awful lot of work on that case and it turned out to be nothing at all." The intern, who wants to clear out the ward so as to make room for some interesting cases, says "Mrs. Brown, you can send for your clothes and go home tomorrow. There really is nothing the matter with you, and fortunately you have not got any of the serious troubles we suspected. We have used all the most modern and scientific methods and we find that there is no reason why you should not eat anything you want to. I'll give you a tonic to take when you go home." Same story, same colored medicine! Mrs. Brown goes home, somewhat better for her rest in new surroundings, thinking that nurses are kind and physicians are pleasant, but that they do not seem to know much about the sort of medicine that will touch her trouble. She takes up her life and the symptoms return—and then she tries chiropractic, or perhaps it is Christian science.

It is rather fashionable to say that the modern physician has become "too scientific." Now, was it too scientific, with all the stomach tubes and blood counts and roentgen-ray examinations? Not at all. Mrs. Brown's symptoms might have been due to a gastric ulcer or to gallstones, and after such a long course it was only proper to use every method that might help to clear the diagnosis. Was it, perhaps, not scientific enough? The popular conception of a scientist as a man who works in a laboratory and who uses instruments of precision is as inaccurate as it is superficial, for a scientist is known, not by his technical processes, but by his intellectual processes; and the essence of the scientific method of thought is that it proceeds in an orderly manner toward the establishment of a truth. Now the chief criticism to be made of the way Mrs. Brown's case was handled is that the staff was contented with a half truth. The investigation of the patient was decidedly unscientific in that it stopped short of even an attempt to determine the real cause of the symptoms. As soon as organic disease could be excluded the whole problem was given up, but the symptoms persisted. Speaking candidly, the case was a medical failure in spite of the fact that the patient went home with the assurance that there was "nothing the matter" with her.

A good many "Mrs. Browns," male and female, come to hospitals, and a great many more go to private physicians. They are all characterized by the presence of symptoms that cannot be accounted for by organic disease, and they are all liable to be told that they have "nothing the matter" with them. Now my own experience as a hospital physician has been rather long and varied, and I have always found that, from my point of view, hospitals are particularly interesting and cheerful places; but I am fairly certain that, except for a few low grade morons and some poor wretches who want to get in out of the cold, there are not many people who become hospital patients unless there is something the matter with them. And, by the same token, I doubt whether there are many people, except for those stupid creatures who would rather go to the physician than go to the theater, who spend their money on visiting private physicians unless there is something the matter with them. In hospital and in private practice, however, one finds this same type of patient, and many physicians whom I have questioned agree in saying that, excluding cases of acute infection, approximately half of their patients complained of symptoms for which an adequate organic cause could not be discovered. Numerically, then, these patients constitute a large group, and their fees go a long way toward spreading butter on the physician's bread. Medically speaking, they are not serious cases as regards prospective death, but they are often extremely serious as regards prospective life. Their symptoms will rarely prove fatal, but their lives will be long and miserable, and they may end by nearly exhausting their families and friends. Death is not the worst thing in the world, and to help a man to a happy and useful career may be more of a service than the saving of life.

### PHYSIOLOGIC DISTURBANCES FROM EMOTIONAL REACTIONS

What is the matter with all these patients? Technically, most of them come under the broad heading of the "psychoneuroses"; but for practical purposes many of them may be regarded as patients whose subjective symptoms are due to disturbances of the physiologic activity of one or more organs or systems. These symptoms may depend on an increase or a decrease of a normal function, on an abnormality of function, or merely on the subjects becoming conscious of a wholly normal function that normally goes on unnoticed; and this last conception indicates that there is a close relation between the appearance of the symptoms and the threshold of the patient's nervous reactions. The ultimate causes of these disturbances are to be found, not in any gross structural changes in the organs involved, but rather in nervous influences emanating from the emotional or intellectual life, which, directly or indirectly, affect in one way or another organs that are under either voluntary or involuntary control.

Every one has had experiences that have brought home the way in which emotional reactions affect organic functions. Some have been nauseated while anxiously waiting for an important examination to begin, and a few may even have vomited; others have been seized by an attack of diarrhea under the same circumstances. Some have had polyuria before making a speech, and others have felt thumping extrasystoles or a pounding tachycardia before a football game. Some have noticed rapid shallow breathing when listening to a piece of bad news, and others know the type of occipital headache, with pain down the muscles of the back of the neck, that comes from nervous anxiety and fatigue.

These are all simple examples of the way that emotional reactions may upset the normal functioning of an organ. Vomiting and diarrhea are due to abnormalities of the motor function of the gastro-intestinal tract—one to the production of an active reversed peristalsis of the stomach and a relaxation of the cardiac sphincter, the other to hyperperistalsis of the large intestine. The polyuria is caused by vasomotor changes in renal circulation, similar in character to the vasomotor changes that take place in the peripheral vessels in blushing and blanching of the skin, and in addition there are quite possibly associated changes in the rate of blood flow and in blood pressure. Tachycardia and extrasystoles indicate that not only the rate but also the rhythm of the heart is under a nervous control that can be demonstrated in the intact human being as well as in the experimental animal. The ventilatory function of the respiration is extraordinarily subject to nervous influences; so much so, in fact, that the study of the respiration in man is associated with peculiar difficulties. Rate, depth and rhythm or breathing are easily upset by even minor stimuli, and in extreme cases the disturbance in total ventilation is sometimes so great that gaseous exchange becomes affected. Thus, I remember an emotional young woman who developed a respiratory neurosis with deep and rapid breathing, and expired so much carbon dioxide that the symptoms of tetany ensued. The explanation of the occipital headaches and of so many pains in the muscles of the back is not entirely clear, but they appear to be associated with changes in muscular tone or with prolonged states of contraction. There is certainly a very intimate correlation between mental tenseness and muscular tenseness, and whatever methods are used to produce mental relaxation will usually cause muscular relaxation, together with relief of this type of pain. A similar condition is found in the so-called writers' cramp, in which the painful muscles of the hand result, not from manual work, but from mental work.

One might go on much further, but these few illustrations will suffice to recall the infinite number of

ways in which physiologic functions may be upset by emotional stimuli, and the manner in which the resulting disturbances of function manifest themselves as symptoms. These symptoms, although obviously not due to anatomic changes, may, nevertheless, be very disturbing and distressing, and there is nothing imaginary about them. Emotional vomiting is just as real as the vomiting due to pyloric obstruction, and so-called "nervous headaches" may be as painful as if they were due to a brain tumor. Moreover, it must be remembered that symptoms based on functional disturbances may be present in a patient who has, at the same time, organic disease, and in such cases the determination of the causes of the different symptoms may be an extremely difficult matter. Every one accepts the relationship between the common functional symptoms and nervous reactions, for convincing evidence is to be found in the fact that under ordinary circumstances the symptoms disappear just as soon as the emotional cause has passed. But what happens if the cause does not pass away? What if, instead of having to face a single three-hour examination, one has to face a life of being constantly on the rack? The emotional stimulus persists, and continues to produce the disturbances of function. As with all nervous reactions, the longer the process goes on, or the more frequently it goes on, the easier it is for it to go on. The unusual nervous track becomes an established path. After a time, the symptom and the subjective discomfort that it produces come to occupy the center of the picture, and the causative factors recede into a hazy background. The patient no longer thinks "I cannot stand this life," but he says out loud "I cannot stand this nausea and vomiting. I must go to see a stomach specialist."

Quite possibly the comment on this will be that the symptoms of such "neurotic" patients are well known, and they ought to go to a neurologist or a psychiatrist and not to an internist or a general practitioner. In an era of internal medicine, however, which takes pride in the fact that it concerns itself with the functional capacity of organs rather than with mere structural changes and which has developed so many "functional tests" of kidneys, heart, and liver, is it not rather narrow minded to limit one's interest to those disturbances of function which are based on anatomic abnormalities? There are other reasons, too, why most of these "functional" cases belong to the field of general medicine. In the first place, the differential diagnosis between organic disease and functional disturbance is often extremely difficult, and it needs the broad training in the use of general clinical and laboratory methods which forms the equipment of the internist. Diagnosis is the first step in treatment. In the second place, the patients themselves frequently prefer to go to a medical practitioner rather than to a psychiatrist, and in the long run it is probably better for them to get straightened out without having what they often consider the stigma of having been "nervous" cases. A limited number, it is true, are so refractory or so complex that the aid of the psychiatrist must be sought, but the majority can be helped by the internist without highly specialized psychologic technic, if he will appreciate the significance of functional disturbances and interest himself in their treatment. The physician who does take these cases seriously—one might say scientifically—has the great satisfaction of seeing some of his patients get well, not as the result of drugs or as the result of the disease having run its course, but as the result of his own individual efforts.

Here, then, is a great group of patients in which it is not the disease but the man or the woman who needs to be treated. In general hospital practice physicians are so busy with the critically sick, and in clinical teaching are so concerned with training students in physical diagnosis and attempting to show them all the types of organic disease, that they do not pay as much attention as they should to the functional disorders. Many a student enters practice having hardly heard of them except in his course in psychiatry, and without the faintest conception of how large a part they will play in his future practice. At best, his method of treatment is apt to be a cheerful reassurance combined with a placebo. The successful diagnosis and treatment of these patients, however, depends almost wholly on the establishment of that intimate personal contact between physician and patient which forms the basis of private practice. Without this, it is quite impossible for the physician to get an idea of the problems and troubles that lie behind so many functional disorders. If students are to obtain any insight into this field of medicine, they must also be given opportunities to build up the same type of personal relationship with their patients.

### STUDENT'S OPPORTUNITY IN THE HOSPITAL

Is there, then, anything inherent in the conditions of clinical teaching in a general hospital that makes this impossible? Can you form a personal relationship in an impersonal institution? Can you accept the fact that your patient is entirely removed from his natural environment and then reconstruct the background of environment from the history, from the family, from a visit to the home or workshop, and from the information obtained by the social service worker? And while you are building up this environmental background, can you enter into the same personal relationship that you ought to have in private practice? If you can do all this, and I know from experience that you can, then the study of medicine in the hospital actually becomes the practice of medicine, and the treatment of disease immediately takes its proper place in the larger problem of the care of the patient.

When a patient goes to a physician he usually has confidence that the physician is the best, or at least the best available person to help him in what is, for the time being, his most important trouble. He relies on him as on a sympathetic adviser and a wise professional counselor. When a patient goes to a hospital he has confidence in the reputation of the institution, but it is hardly necessary to add that he also hopes to come into contact with some individual who personifies the institution and will also take a human interest in him. It is obvious that the first physician to see the patient is in the strategic position—and in hospitals all students can have the satisfaction of being regarded as physicians.

Here, for instance, is a poor fellow who has just been jolted to the hospital in an ambulance. A string of questions about himself and his family have been fired at him, his valuables and even his clothes have been taken away from him, and he is wheeled into the ward on a truck, miserable, scared, defenseless and, in his nakedness, unable to run away. He is lifted into a bed, becomes conscious of the fact that he is the center of interest in the ward, wishes that he had stayed at home among friends, and, just as he is beginning to take stock of his surroundings, finds that a thermometer is being stuck under his tongue. It is all strange and

new, and he wonders what is going to happen next. The next thing that does happen is that a man in a long white coat sits down by his bedside, and starts to talk to him. Now it happens that according to our system of clinical instruction that man is usually a medical student. Do you see what an opportunity you have? The foundation of your whole relation with that patient is laid in those first few minutes of contact, just as happens in private practice. Here is a worried, lonely, suffering man, and if you begin by approaching him with sympathy, tact, and consideration, you get his confidence and he becomes your patient. Interns and visiting physicians may come and go, and the hierarchy gives them a precedence; but if you make the most of your opportunities he will regard you as his personal physician, and all the rest as mere consultants. Of course, you must not drop him after you have taken the history and made your physical examination. Once your relationship with him has been established, you must foster it by every means. Watch his condition closely and he will see that you are alert professionally. Make time to have little talks with him—and these talks need not always be about his symptoms. Remember that you want to know him as a man, and this means you must know about his family and friends, his work and his play. What kind of a person is he—cheerful, depressed, introspective, careless, conscientious, mentally keen or dull? Look out for all the little incidental things that you can do for his comfort. These, too, are a part of "the care of the patient." Some of them will fall technically in the field of "nursing" but you will always be profoundly grateful for any nursing technic that you have acquired. It is worth your while to get the nurse to teach you the right way to feed a patient, change the bed, or give a bed pan. Do you know the practical tricks that make a dyspneic patient comfortable? Assume some responsibility for these apparently minor points and you will find that it is when you are doing some such friendly service, rather than when you are a formal questioner, that the patient suddenly starts to unburden himself, and a flood of light is thrown on the situation.

Meantime, of course, you will have been active along strictly medical lines, and by the time your clinical and laboratory examinations are completed you will be surprised at how intimately you know your patient, not only as an interesting case but also as a sick human being. And everything you have picked up about him will be of value in the subsequent handling of the situation. Suppose, for instance, you find conclusive evidence that his symptoms are due to organic disease; say, to a gastric ulcer. As soon as you face the problem of laying out his regimen you find that it is one thing to write an examination paper on the treatment of gastric ulcer and quite another thing to treat John Smith who happens to have a gastric ulcer. You want to begin by giving him rest in bed and a special diet for eight weeks. Rest means both nervous and physical rest. Can he get it best at home or in the hospital? What are the conditions at home? If you keep him in the hospital, it is probably good for him to see certain people, and bad for him to see others. He has business problems that must be considered. What kind of a compromise can you make on them? How about the financial implications of eight weeks in bed followed by a period of convalescence? Is it, on the whole, wiser to try a strict regimen for a shorter period, and, if he does not improve, take up the question of operation sooner than is in general advisable? These, and many similar problems arise in the course of the treatment of almost every patient, and they have to be looked at, not from the abstract point of view of the treatment of the disease, but from the concrete point of view of the care of the individual.

Suppose, on the other hand, that all your clinical and laboratory examinations turn out entirely negative as far as revealing any evidence of organic disease is concerned. Then you are in the difficult position of not having discovered the explanation of the patient's symptoms. You have merely assured yourself that certain conditions are not present. Of course, the first thing you have to consider is whether these symptoms are the result of organic disease in such an early stage that you cannot definitely recognize it. This problem is often extremely perplexing, requiring great clinical experience for its solution, and often you will be forced to fall back on time in which to watch developments. If, however, you finally exclude recognizable organic disease, and the probability of early or very slight organic disease, it becomes necessary to consider whether the symptomatology may be due to a functional disorder which is caused by nervous or emotional influences. You know a good deal about the personal life of your patient by this time, but perhaps there is nothing that stands out as an obvious etiologic factor, and it becomes necessary to sit down for a long intimate talk with him to discover what has remained hidden.

Sometimes it is well to explain to the patient, by obvious examples, how it is that emotional states may bring about symptoms similar to his own, so that he will understand what you are driving at and will cooperate with you. Often the best way is to go back to the very beginning and try to find out the circumstances of the patient's life at the time the symptoms first began. The association between symptoms and cause may have been simpler and more direct at the onset, at least in the patient's mind, for as time goes on, and the symptoms become more pronounced and distressing, there is a natural tendency for the symptoms to occupy so much of the foreground of the picture that the background is completely obliterated. Sorrow, disappointment, anxiety, self-distrust, thwarted ideals or ambitions in social, business or personal life, and particularly what are called maladaptations to these conditions—these are among the commonest and simplest factors that initiate and perpetuate the functional disturbances. Perhaps you will find that the digestive disturbances began at the time the patient was in serious financial difficulties, and they have recurred whenever he is worried about money matters. Or you may find that ten years ago a physician told the patient he had heart disease, cautioning him "not to worry about it." For ten years the patient has never mentioned the subject, but he has avoided every exertion, and has lived with the idea that sudden death was in store for him. You will find that physicians, by wrong diagnoses and ill considered statements, are responsible for many a wrecked life, and you will discover that it is much easier to make a wrong diagnosis than it is to unmake it. Or, again, you may find that the pain in this woman's back made its appearance when she first felt her domestic unhappiness, and that this man's headaches have been associated, not with long hours of work, but with a constant depression due to unfulfilled ambitions. The causes are manifold and the manifestations protean. Sometimes the mechanism of cause and effect is obvious; sometimes it becomes apparent only after a very tangled skein has been unraveled.

If the establishment of an intimate personal relationship is necessary in the diagnosis of functional disturbances, it becomes doubly necessary in their treatment. Unless there is complete confidence in the sympathetic understanding of the physician as well as in his professional skill, very little can be accomplished; but granted that you have been able to get close enough to the patient to discover the cause of the trouble, you will find that a general hospital is not at all an impossible place for the treatment of functional disturbances. The hospital has, indeed, the advantage that the entire reputation of the institution, and all that it represents in the way of facilities for diagnosis and treatment, go to enhance the confidence which the patient has in the individual physician who represents it. This gives the very young physician a hold on his patients that he could scarcely hope to have without its support. Another advantage is that hospital patients are removed from their usual environment, for the treatment of functional disturbances is often easier when patients are away from friends, relatives, home, work and, indeed, everything that is associated with their daily life. It is true that in a public ward one cannot obtain complete isolation in the sense that this is a part of the Weir Mitchell treatment, but the main object is accomplished if one has obtained the psychologic effect of isolation which comes with an entirely new and unaccustomed atmosphere. The conditions, therefore, under which you, as students, come into contact with patients with functional disturbances are not wholly unfavorable, and with very little effort they can be made to simulate closely the conditions in private practice.

### IMPORTANCE OF PERSONAL RELATIONSHIP

It is not my purpose, however, to go into a discussion of the methods of treating functional disturbances, and I have dwelt on the subject only because these cases illustrate so clearly the vital importance of the personal relationship between physician and patient in the practice of medicine. In all your patients whose symptoms are of functional origin, the whole problem of diagnosis and treatment depends on your insight into the patient's character and personal life, and in every case of organic disease there are complex interactions between the pathologic processes and the intellectual processes which you must appreciate and consider if you would be a wise clinician. There are moments, of course, in cases of serious illness when you will think solely of the disease and its treatment; but when the corner is turned and the immediate crisis is passed, you must give your attention to the patient. Disease in man is never exactly the same as disease in an experimental animal, for in man the disease at once affects and is affected by what we call the emotional life. Thus, the physician who attempts to take care of a patient while he neglects this factor is as unscientific as the investigator who neglects to control all the conditions that may affect his experiment. The good physician knows his patients through and through, and his knowledge is bought dearly. Time, sympathy and understanding must be lavishly dispensed, but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine. One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient.

Boston City Hospital.

# THE EFFECTS ON THE HEART OF LONG-STANDING BRONCHIAL ASTHMA*

HARRY L. ALEXANDER, M.D.
DREW LUTEN, M.D.
AND
WILLIAM B. KOUNTZ, M.D.
ST. LOUIS

The literature of heart disturbances associated with asthma begins at an early date and is voluminous. It deals largely, however, with cardiac dyspnea or what is now called "cardiac asthma," wherein asthma is an expression of underlying cardiac injury. Einthoven,[1] von Basch,[2] Dixon and Brodie[3] and others[4] induced bronchospasm in animals and noted the circulatory effects. Although in these experiments the pulmonary mechanism of bronchial asthma probably was simulated in part, the results are at wide variance with one another. Only one detailed study was found concerning the effect of true bronchial asthma on the heart, a report by Götzl and Kienböck,[5] who observed the heart radioscopically in two cases. A perusal of many of the modern textbooks reveals considerable lack of uniformity of opinion on this subject. In 1920 two of the great American systems of medicine were published; in one, Walker[6] writes: "Although the elasticity of the lung in an asthmatic after a time becomes impaired and thus makes the prognosis more unfavorable, integrity of the myocardium is rarely weakened." In the other, Miller[7] asserts that "as the result of repeated heart strain associated with the attack and the cardiac changes attending on chronic emphysema, evidence of cardiac incompensation is very apt to appear early. Dyspnea on moderate exertion is common in the asthmatic when free from asthma. The appearance later in life of cardiac incompensation should serve as a warning that bronchial asthma is to be taken seriously and every effort made to prevent a recurrence of the attacks." Most other writers maintain that after bronchial asthma has lasted a long time and the consequent emphysema has become well developed, hypertrophy or hypertrophy and dilatation of the right ventricle ensues.

An examination of the few available postmortem reports of this condition does not show a constant lesion of the heart, but right ventricular hypertrophy is mentioned more than any other. This information, however, is difficult to interpret as too little clinical data are available. Moreover, the immediate cause of death was often an intercurrent disease, and descriptions of the pathologic examinations of the heart are seldom adequate, as the emphasis of the reports centers on the lungs.

The plan of this investigation is to make a detailed study of the heart in bronchial asthma, and the present report deals with the first part of the work. Cases were selected that fulfilled two conditions; namely, that they represented true bronchial asthma, and that the

* From the department of internal medicine, Washington University School of Medicine, and the Barnes Hospital.

1. Einthoven, W.: Arch. f. d. ges. Physiol. **51**: 367, 1892.
2. Von Basch, S.: Arch. f. d. ges. Physiol. **52**: 417, 1892.
3. Dixon, W. E., and Brodie, T. G.: J. Physiol. **29**: 97, 1903.
4. Cloetta, M.: Arch. f. exper. Path. u. Pharmakol. **73**: 233, 1913. Weber, E.: Arch. f. d. ges. Physiol. **142**: 63, 1914.
5. Götzl, A., and Kienböck, R.: Wien. klin. Wchnschr. **21**: 1261, 1908.
6. Walker, I. C., in Oxford Medicine, New York, Oxford University Press **2**: 217, 1920.
7. Miller, J. L., in Nelson's Loose-Leaf Medicine **3**: 454, 1920.