THE INQUIRING PHYSICIAN

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It is a distinct honour for me to preside over the twenty-third annual meeting of this Society. The Central Society for Clinical Research met for the first time in Chicago in 1928 with Dr. Frank Billings acting as President. Over the intervening years the membership has adhered to the original objectives of the Society: to cultivate clinical research and to develop younger men. Although a relatively young organisation, some measure of tradition has already enveloped its annual proceedings, and one of the customs is for the President to deliver a message of his own choosing. *Though the Central Society is a regional group of Clinical in a thousand individuals register for the annual fall meeting.* This reflects the enthusiasm that many others besides myself have for this meeting. It is a time when new friendships are made and old ones renewed. Furthermore, the scientific programme always strikes at a high level, and considerable intellectual stimulus is derived from the excellency of the work of the younger members. Over the years, I have been particularly impressed by the continued enthusiasm of the older men, as they return, year after year, to find out what is new in clinical research. This perennial display of intellectual curiosity has prompted me to speak briefly to you on the subject of "The Inquiring Physician." Most of the men who return here annually have as a part of their daily responsibilty the care of sick people. This, of course, is the very keystone of clinical research. I am of the opinion, that it makes no difference whether an individual is engaged in so-called academic medicine on a full-time basis or whether he devotes all of his efforts to the private practice of medicine; if he is an Inquiring Physician he will contribute to the sum total of medical knowledge through clinical research. I am well aware of the fact that many well-trained men in the private practice of medicine make no serious attempt to engage in clinical research, although they frequently express wishful thinking along these lines. Various excuses are offered for their failure to carry through with any investigation. They say that they have no time, that they lack facilities, or that they do not have the opportunity for sharing in the intellectual stimulus of associates engaged in a similar activity. These are weak explanations. The truth of the matter is that the majority of these men would rather bend their efforts toward making people well and happy. Such men just do not have the time or desire to engage in research. And what more noble purpose can direct human endeavour than the alleviation of pain and the eradication of suffering? I must admit that with some men less ennobling motives spur them on, including that of economic gain. This is not a degrading objective in view of the general pattern of other gainfully employed individuals in society today. There does exist a more fundamental reason why some of the younger men in practice, with excellent scientific and clinical training, are not advancing medical knowledge. Many of these young men are deterred from engaging in clinical reseach because of a fatalistic philosophy toward originality that is borne in upon them the moment that they enter medical school. Right at the outset of their training they are exposed to the dogmatic discipline of a basic science, like anatomy, and from then on, *medical school* is a mad scramble to accumulate "facts". As they progress from one area to another, this factual knowledge is handed to them by authorities in their respective fields. At the conclusion of their training, armed with the authorita-

rianism of medical science, they enter confidently upon the practice of medicine and perform a good job in the care of the patient. Occasionally beyond the shadow of the medical school, some of these individuals possessing the traits of an Inquiring Physician, make clinical observations that do not agree wth the facts as presented to them by the authorities. They confirm these observations, which is so essential in clinical investigation. The unfortunate thing is that they fail to report their observations or pursue them further, because they are consumed by the fatalistic attitude: "who am I, a mere practitioner of medicine, to challenge the authority of established medical science? But some individuals have broken through from the extreme periphery of country practice to give new light to the science of medicine.

A phase of clinical research that has interested me, and it has been more than a passing interest, has been the study of the natural history of disease. The Inquiring Physician through the critical observation and study of patients may contribute valuable information to our knowledge of medicine. But his, must be a prepared mind. The challenge of naturally occurring phenomena to man has been crystallized by Emerson in his essay on "The Natural History of Intellect," in which he states:

Each man is a new power in Nature. He holds the keys of the world in his hands. No quality in Nature's vast magazines he cannot touch, no truth he cannot

see. Silently, passively even sulkily, Nature offers every morning her wealth to man. She is immensely rich; he is welcome to her entire goods, but she speaks no word, will not so much as beckon or cough; only this, she is careful to leave all her doors ajar—towers, hall, storeroom and cellar. If he takes her hint and uses her goods she speaks no word; if he blunders and starves she says nothing. To the idle blockhead Nature is poor, sterile, inhospitable. To the gardener her loam is all strawberries, pears, pineapples. To the miller her rivers whirl the wheel and weave carpets and broadcloth. To the sculptor her stone is soft; to the painter her plumbago and marl are pencils and chromes. To the poet all sounds and words are melodies and rhythms. In her hundred-gated Thebes every chamber is a new door.

It is this theme that I wish to develop.

A CONCEPT OF CLINICAL RESEARCH

It is essential that the Inquiring Physician should have a basic concept as to what he means by clinical research. The foundation of all clinical research is the patient. He is Nature's enigma constantly challenging the mind and skill of the physician. The initial stage of clinical research is the observation of patients, repeated observations, and the documentation of those observations. The observations of others or the analysis of clinical charts cannot act as substitutes. But to stop with observations alone will lead only to sterility. The clinical notes of Hippocrates still retain their authenticity, but even Hippocrates with his astute observations never attempted to unravel the mystery of disease beyond the establishment of shallow theories. The repeated and confirmatory observations of the natural history of a disease should lead the physician to inquire into the fundamental mechanisms by which the disease expresses itself. As a result of reflective thought a multitude of questions will be posed, and out of this will rise a theory, which is so indispensable in the evolution of clinical research. But observation and the development of a hypothesis of disease mechanisms may terminate in erroneous and dangerous conclusions. A theory must be proved or disproved by the experimental method. And by the experimental method it is not necessarily meant that the physician should scurry off to the laboratory and begin the manipulation of chemicals in test tubes or attempt the duplication of the disease process in a lower animal. The experimental method is invoked the moment that the physician attempts to alter the natural history of disease. This occurs when but a single tablet of aspirin is administered at the bedside of a febrile patient. It is reckless to attempt an explanation for the mechanism of disease on the basis of theory alone, particularly when that theory is not based upon long and continued clinical observation. But the greatest error of all in clinical research is to hang on to a theory when experiment will not support it. It was Thomas Huxley who said: "The tragedy of science is the shattering bereavement of seeing a beautiful hypothesis slain by an ugly fact."

The greatest single step in the progress of medical science was made when clinical observation was reinforced by the experimental method. This is a basic concept that is taken for granted today, but evolution occurred only after centuries of mental apathy. Hippocrates was followed by Galen, who at the dawn of the Christian era attempted to introduce the experimental method by means of anatomic dissection. But the mind was ill prepared for this step, and our civilization rested on the dogmatism and vanity of the Galenic tradition for almost fourteen hundred years. Even as late as the seventeenth century the Regius Professor of Medicine at Oxford had the duty of re-

ing twice a week from the works of Hippocrates and Galen. But there were rumblings here and there which were to lead eventually to the cracking of the Galenic discipline. It is well to recall briefly some of the giants responsible for the change in medical thought. In the sixteenth century, Vesalius was among the first to rout the dogma of Galen with his *De Humani Corporis Fabrica*. In the following century, William Harvey clearly established the experimental method with his work on *Motion of the Heart and Blood*. I should like to call attention to the fact that in this volume there are many illustrative cases of circulatory disease which were encountered by Harvey in the beds of St. Bartholomew's Hospital in London. But Hippocrates still had his followers at the time of Harvey, and none was more brilliant than Thomas Sydenham. The Inquiring Physician should be particularly interested in him because Sydenham believed that every disease had a natural history of its own. The eighteenth century brought among others the great John Hunter, the founder of experimental and surgical pathology. But it was in the nineteenth century that clinical research was to advance by leaps and bounds, because clinicians were not content with observation and theory only but pursued the natural history of disease right through to the autopsy table. The French School had its Laënnec, who confirmed his clinical impressions of pulmonary disease by precise anatomic dissection. In England, Richard Bright, at Guy's Hospital, was delineating disease in a similar manner, along with Thomas Addison. The New Vienna School had the courageous Semmelweis. These men, then, among many others, were clinicians who defined disease more accurately and completely because their shrewd clinical observations were combined with imagination and verified by pathologic anatomy. The nineteenth century was to be closed out by one of the greatest exponents of the experimental method, Claude Bernard, author of the medical classic, *An Introduction to the Study of Experimental Medicine*.

SOME MODERN EXAMPLES OF THE STUDY OF THE NATURAL HISTORY OF DISEASE

The Inquiring Physician of today has a rich heritage in those men, who by studying the experimental method, made significant additions to medical knowledge. But the modern clinician might conclude that Laënnec, Bright, and Addison in their day could study the natural history of disease and thereby advance medicine, but that such opportunities are now very limited. He probably is overly impressed by modern medical research with its teams of scientific workers ensconced in lavishly equipped laboratories. Disease processes are extremely complicated, and many basic disciplines must join forces to seek out the hidden mechanism of disease. This does require the presence of highly trained personnel and intricate scientific equipment. This is a part of the evolution of modern scientific inquiry. But there are still opportunities for the clinician to weave together what may first appear to be unrelated clinical phenomena. This synthesis may then provide the spark for an idea so that further observation or experiment will solve some of the mysteries embracing the nature of human disease. It would not be difficult to select many recent examples of this type of clinical research. Only the lack of time prevents an elaboration of this aspect of the subject.

In the north of England, in Yorkshire, a small cluster of villages is nestled in a little valley called Wensleydale. Dr. William Norman Pickles chose to practice in this valley. He was an Inquiring Physician and the isolation of his country practice did not restrain his curiosity. He kept daily records of what he saw among his patients, and just before World War II he published a book summarizing his findings, *Epidemiology in Country Prac-*

tice. This small volume has already achieved the stature of a medical classic. The introductory sentence reads: "A gypsy woman driving a caravan into a village in the summer twilight, a sick husband in the caravan, a faulty pump at which she proceeded to wash her dirty linen, and my first and only serious epidemic of typhoid, left me with a lasting impression of the unique opportunities of the country doctor for the investigation of infectious disease." Because Dr. Pickles knew his people and their individual background, and because they comprised a stable and isolated population, he was able to make a group of basic epidemiologic studies on epidemic catarrhal jaundice, bacillary dysentery, chicken pox and shingles, and other infectious diseases. By 1930, he had established that the incubation period of epidemic jaundice was about one month. It is fascinating to read how he joined together the epidemiologic data on jaundice. His observations have attracted world-wide attention and he was honoure by Harvard University in 1948 when he was asked to deliver the Cutter Lecture on Preventive Medicine. "Let me recommend as a hobby," writes Dr. Pickles, "particularly to those young men entering country practice, this observation of the natural history of epidemic disease."

One could readily review the achievements of many members of this Society, which have resulted from the study of the natural history of disease. Since time does not permit such a dissertation, I would like to draw your attention momentarily to one of the founders of the Central Society for Clinical Research. His life and his achievements embody many of the traits and accomplishments of the Inquiring Physician. The delightful and stimulating autobiography, *Memories of Eighty Years*, by Dr. James B. Herrick of Chicago, describes a medical life that can be divided into three phases: general practice, internal medicine, and cardiology. His most fundamental contribution to clinical research can almost be summarized in two papers presented at meetings of the Association of American Physicians. His first paper was given in 1912 on "Certain Clinical Features of Sudden Obstruction of the Coronary Arteries," and the second presentation in 1918 was on "Concerning Thrombosis of the Coronary Arteries." This unusual man was asked to give another paper before the same august body of physicians at the annual dinner in 1931, and he responded with 'Why I Read Chaucer at Seventy." Though he was engaged in the private practice of medicine all his life, Dr. Herrick found time for teaching and for clinical research. This Society has other Physicians among its founders, and among illustrative examples of the Inquiring its younger members.

THE INQUIRING PHYSICIAN HIMSELF

Finally, I would like to devote a moment or two to the underlying philosophy motivating the everyday life of the Inquiring Physician. William Osler in one of the most inspiring of all medical essays, "The Master-Word in Medicine," singled out *WORK* as the key word. A willingness to perform work is a noble and essential virtue for any physician. But, too often, the doctor threshes about with ceaseless physical activity in seeing one patient after another so that he becomes utterly fatigued, and, in addition, he has no time remaining for reflective thinking and restful meditation. Though Charles Lamb remained only a clerk for thirty-three years with the East India Company, his name is perpetuated as one of the great literary geniuses. Each year he had but a single week for a vacation, and he spent it either with his friend Coleridge or at an English University. In the evening after the day's work was done, he was able to pen the famous *Essays of Elia*. In his essay, "The Superannuated Man," he concluded: "A man can never have

too much time to himself, nor too little to do — I am altogether for the life contemplative."

A requisite virtue for the Inquiring Physician as he pursues his clinical research is that of sustained enthusiasm. Too much of the world's work today is being done by grumbling artisans who rarely, if ever, have experienced the emotional glow that goes with a job well done. One of the most devastating sentences in the English language is to be found in Thoreau's *Walden*, "The mass of men lead lives of quiet desperation." But the Inquiring Physician, with a deep and abiding passion for his work, will find that his enthusiasm will sustain him through failure as well as success. His efforts will not be motivated by academic honours or prizes, nor by public acclaim. These are but by-products of a deeper yearning for the inner peace that comes to a man who has had work to do and who knows, when it is accomplished, that he has done it well. And when he reaches the end of the road, may he have the equanimity of soul, that buoyed up the great Laënnec as he lay dying of tuberculosis at the age of 45. He had published his monumental treatise on auscultation, which was met with ridicule and contempt on the part of his contemporaries. It is stated that he received only two letters of praise from the medical world for his effort. But he was still able to say, "I shall consider ample, nay more than year sufficient reward for my labour, if it should prove the means by which a single human being is snatched from untimely death."