Rheumatology as a Subspecialty of Internal Medicine

By WILLIAM D. ROBINSON, M.D.

THIS PORTION of the conference is devoted to a consideration of the relationships between a professional career devoted to the study and practice centering in the field of rheumatic diseases, and the broad field of internal medicine as a whole. There seems to be little question that the skills and knowledge required for the diagnosis, understanding and treatment of patients with rheumatic diseases are more clearly identified with those used in the broad field of internal medicine than in any other medical discipline. I would like to ask you to spend the next few minutes in examining with me these relationships in a little more detail.

In the area of diagnosis we are frequently dealing with diseases in which there is no single pathognomic finding, either in the patient or in the laboratory. This is particularly true when we concentrate on the early stages of many of these diseases. Frequently the diagnosis is made on the basis of a combination of manifestations which must be carefully evaluated. In essence, we recognize many of the rheumatic diseases by the way they behave over a period of time. These facts place a premium on skill in history-taking, and in the evaluation of symptoms. They also emphasize the importance of precise and meticulous observation of the behavior of the disease over a period of weeks or months, which is occasionally necessary before one can arrive at a final diagnosis.

In the course of physical examination, the rheumatologist uses methods which are common to all the areas of internal medicine; in addition, he must acquire skills in the examination and evaluation of findings in the musculoskeletal system which we usually associate with the field of orthopedics, based on a sound knowledge of the anatomy and function of the musculoskeletal system. In differential diagnosis, he must be familiar with a wide spectrum of diseases which we think of as falling in the field of internal medicine. He is frequently called on to differentiate rheumatic diseases from a variety of infectious diseases. Consideration of the many organs and organ systems which can be involved in the rheumatic diseases indicates the many areas of internal medicine with which the rheumatologist must be familiar. These quite clearly include cardiology, pulmonary diseases, peripheral vascular diseases, gastroenterology, hematology, dermatology, renal disease and a wide variety of allergic and neurologic conditions. In addition he must become familiar with conditions that often are not included in the purview of internal medicine. This is particularly true of the manifestations of the non-articular forms of rheumatism, which as our medical specialties have developed seem to lie in a medical no-man's land somewhere between internal medicine, orthopedic surgery and physical medicine.

If the student of rheumatic diseases is to have any real depth of understanding of these conditions, he must draw heavily on several of the basic science disciplines. In common with most fields of medicine, he must have a clear understanding of the pathology of the diseases with which he is dealing. In an attempt to understand the pathogenesis of the "inflammatory process," he must understand basic concepts in the fields of microbiology and immunology, and the physiology of the microcirculation. He must have a good grasp of immunologic

principles if he is to use the laboratory intelligently. In order to understand the biochemistry of connective tissue and joint fluid dynamics, he must have some background in mucopolysaccharide and mucoprotein chemistry; understanding of the metabolic derangements underlying certain forms of rheumatic disease requires knowledge of purine metabolism and nucleic acid biochemistry.

Perhaps it is in the area of treatment and management that the physician concentrating on rheumatic diseases draws most heavily from the resources which we associate with the field of internal medicine. The rheumatologist shares with all fields of medicine the responsibility for prompt and accurate diagnosis and effective treatment of those conditions for which there is an effective treatment. He has to be something of a pharmacologist—or at least something of a clinical pharmacologist—in the field of analgesic drugs, if the arthritis clinic is to be something more than an "aches and pains clinic." He must also be prepared to learn the pharmacologic basis for the use of such seemingly unrelated drugs as gold and antimalarials, as colchicine and allopurinol—and undoubtedly many others yet to come. The intelligent use of adrenocorticosteroids requires more than a superficial knowledge of endocrinology and metabolism. In addition to these requirements, which have analogies in many other divisions of internal medicine, the rheumatologist must have a sufficient grasp of orthopedic principles to apply them in the prevention and correction of deformities, and a sufficient grasp of the principles of physical medicine to utilize them in the prevention of disability and preservation of joint function.

It is in the management of those forms of rheumatic diseases for which we do not have a specific method of treatment that the greatest challenge is met. Here the physician must direct his attention to all the factors that can have a deleterious effect on the general health of the patient affected. This cannot end with a thorough appraisal of the physical factors involved. It must also include appraisal of psychological and emotional factors, family and economic considerations and knowledge of community resources which can be brought to bear in resolving the problems of the individual patient. It is impossible to counsel with a patient regarding diet and a rest regimen without knowing and taking into consideration the economic and family responsibilities of the individual patient. Perhaps as important as anything else is the establishment of a physician-patient relationship which permits the patient to look to his physician for counsel and guidance, with the assurance that, come what may, his doctor will be available and prepared to mobilize all the medical and social resources that can be brought to bear in resolving or ameliorating the patient's problems.

It is difficult indeed to visualize the care of patients with rheumatic diseases in terms that do not include the concept of the responsibility of the physician for comprehensive medical care and continuity of medical care, terms of which we have recently been reminded by the report of the Millis Commission. You can also call this psychotherapy in the broadest sense of the word. Or, if you prefer, you can call it the art of medicine. Call it what you will, it is an indispensable ingredient of the resources which the physician must have who elects to concentrate in the field of rheumatic diseases.

It is considerations of this sort which emphasize the very meaningful interrelationships between internal medicine and the field of rheumatic diseases. Indeed, from such considerations it is not unreasonable to conclude that rheumatology *is* internal medicine. The field of rheumatic diseases is an expression of internal medicine which provides, for the physician who chooses to concentrate his efforts in this area, a chal-

lenge as great as any other—a challenge to him as a physician, as a student of human biology and as a responsible member of society.

It is when we begin to call the internist with a special interest in the field of rheumatic diseases a rheumatologist, and when we begin to talk about rheumatology as a subspecialty of internal medicine, that I become a little uneasy. Such terms carry with them a connotation of self-sufficiency and independence as a discipline. I question whether this is realistic or desirable. It seems obvious that, at least at this point in time, too sharp a separation of rheumatology from the broader field of internal medicine would be a real loss both to the field of rheumatic diseases and to the field of internal medicine. I personally question whether a sharp separation ever will be desirable.

There is also another implication which we must keep in mind when we talk about the recognition of rheumaotlogy as a subspecialty. Since the founding of the American Rheumatism Association, we have been concerned with improving the care of the patient suffering from rheumatic diseases. One perfectly valid way of doing this is by increasing the number of physicians with special interest and experience in the field, and improvement of the facilities for training of physicians in this area. An equally valid approach is the provision of authoritative information to *all* physicians who are concerned with the management of patients with rheumatic diseases. This has been an important effort of the American Rheumatism Association and The Arthritis Foundation in the past, directed primarily at the broad field of internal medicine and also hopefully influencing other areas of medical practice. Obviously, these two approaches to improving the care of the arthritic patient are not mutually incompatible. However, we quite clearly should not become so preoccupied with the status of rheumatology as a subspecialty that we lose sight of or weaken our efforts in improving the ability and resources of every physician who cares for the arthritic patient.

Some of these considerations are thrown sharply into focus when we come to consider the desirability of establishing a subspecialty board in rheumatology as a subspecialty of the American Board of Internal Medicine. The American Board of Internal Medicine evolved, as did other specialty boards, in response to a need for the development and maintenance of standards whereby patients and other doctors could recognize individuals qualified by training and experience in the special fields. In the ultimate analysis, the need for such definition of qualifications was on the part of society. The response was that of a medical profession willing to assume the responsibility of establishing and maintaining such standards. The ultimate test of any board is its effectiveness in improving the medical services to society as a whole, and specifically to the individual members of that society who require these medical services—the patients.

Some of the arguments advanced for the establishment of a subspecialty board in rheumatology center around the need for establishing standards whereby people especially qualified in this field can be recognized. Other arguments center around the need for subspecialty identification in order to attract younger men to the field and to establish the prestige of rheumatology as a subspecialty. It is stated that a board is needed as a recruiting device, particularly if we are to compete with the fields of cardiovascular disease, pulmonary diseases, gastroenterology and allergy, which already have subspecialty boards. It is also alleged that some type of formal recognition in the form of a subspecialty board is needed to permit the medical profession to identify those individuals particularly skilled in the

area of rheumatic diseases; and with the increasing influence of third-party payment and governmental agencies in the economic aspects of medical care, it is believed some type of such identification will become absolutely necessary. Some of these reasons are disturbingly reminiscent of what we could label as the "guild philosophy" which tends to creep into our thinking when any board is considered.

You will recall that the guilds, which probably reached their peak in medieval times, represented the first banding together of individuals with common interests for purposes other than defense or politics. The members of any guild were usually all residents of the same town and included both merchants who bought and sold and artisans who made their own products. The guild was often granted a monopoly of the retail trade in its town, with the privilege of taxing outsiders who brought in goods. In those days, the manufacturers were skilled workmen as well as owners of the goods which they produced. In each town, all those who shared in a certain craft or trade, such as weaving or gold working, banded together to advance the standard of their work. Their members were divided into three classes according to their skill. First were the masters, who alone were entitled to buy material and sell manufactured goods. They bought and sold at prices fixed by the organization, and their establishments were under the supervision of the guild so that no inferior product might be turned out. The second grade was composed of journeymen, who received wages from the masters and lived with them. When their education was completed, each was required to construct a masterpiece before being declared a master. The analogy of the board examinations is obvious. The beginners at the craft were apprentices; for their work they received board and lodging.

At one time such guilds served a very useful purpose in the establishment and maintenance of standards and in the training of skilled artisans. After reaching their peak in medieval times, their influence as an effective social instrument waned, partly because of preoccupation with the perquisites and privileges of the guild masters, and partly because as social structures became more complex the city-state component became incorporated into larger social units. In essence, they outlived their usefulness when they no longer served the best interests of the society of which they were a component.

In conclusion, I would submit the proposition that the field of rheumatic diseases is an integral part of internal medicine, and that the points of identity are far more numerous and compelling than the points of differences. It would be a disservice both to internal medicine and to rheumatology to insist on a sharp distinction. With the increasing trends toward subspecialization, we should not lose sight of our objective of improving the care of the patient with rheumatic diseases, regardless of whether he chooses to consult a rheumatologist, an internist or a general practitioner. I would urge that the decision with respect to a subspecialty board of rheumatology be made on the basis of professional responsibility. If this is made on the basis of arguments reflecting a "guild philosophy" it will serve no useful purpose. If we can identify a body of knowledge and experience—beyond that needed in the broad field of internal medicine—which constitutes rheumatology, and are satisfied that there is a need for setting a standard by which people having such skills and experience can be recognized, then we clearly have a responsibility for the development of such a subspecialty board. The acid test should be whether such a development will really improve the care of patients with rheumatic diseases. And, finally, we should make this decision as

members of a profession sufficiently responsive to the needs of society so that we continue to deserve the privilege of determining our own professional destinies.

Discussion

By RICHARD H. FREYBERG, M.D.

DR. ROBINSON has presented a sound program for training rheumatologists. My comments will be directed to some aspects of this training, and to pointing out what I have learned from thirty years spent in rheumatology as a clinician, clinical investigator and teacher, acting always in a department of internal medicine.

At the International Conference on the Rheumatic Diseases held in Mar del Plata, Argentina, in 1965, differences were found to exist in the forms of education and in methods of providing care for patients suffering from rheumatic diseases. In the United States, rheumatology usually is considered an important area of internal medicine. I think this is the correct concept. Rheumatology should be an integral part of internal medicine, for although the rheumatic diseases involve connective tissues, primarily of the musculoskeletal system, pathologic changes often exist in other systems and organs considered to be in the province of internal medicine. Especially trained internists should be most capable of managing these multi-system diseases. Thus considered, training of the rheumatologist should begin after he has had experience in general medicine. Then he should have at least two years of concentrated training in all aspects of the rheumatic diseases. An excellent rheumatologist should first of all be a good internist, possessing knowledge of all phases of internal medicine.

I wish to focus on the rheumatologist as a clinician, the physician providing care for patients with rheumatic diseases. The chief problems confronting the clinical rheumatologist are diagnosis and therapy. About half of the patients referred to me as a consulting rheumatologist present problems of diagnosis.

To become expert in diagnosis, the young rheumatologist must actively participate in the study and management of patients in rheumatic disease clinics and in hospital wards, always under supervision and in cooperation with senior rheumatologists. I favor close personal teaching in this subspecialty; this is done best in a large medical center where there is an abundance of patients suffering from all varieties of rheumatic disease, and where stimulating teachers actively participate in an integrated program of clinical investigation.

Experience in the management of patients in clinics and in the hospital is equally important in training the rheumatologist as a therapist, so he can learn the benefits of medicines and other therapeutic modalities, such as physical therapy, occupational treatment, rehabilitation, and so on.

It is important that the rheumatologist collaborate with therapists trained in other areas. I have become convinced of the importance of teamwork in the management of patients with rheumatic diseases. In our Center, a separate division has recently been established, designated as the Comprehensive Arthritis Care Unit, in which severely ill patients are studied in depth by a team composed of senior rheumatologists, skilled orthopedists, experts in physical medicine, occupational therapy, social service, psychiatry, vocational training and

rehabilitation and, when needed, other consultants. A plan for long-range management is made by the team which then takes over responsibility of this comprehensive treatment program. The entire care is thereafter given by the same professional team. This Comprehensive Arthritis Care program provides an excellent learning experience for rheumatologists in training.

It is important that the clinical rheumatologist have some experience in clinical investigation to make him critical, scientifically skeptical and inquisitive, so that he constantly strives for improving diagnostic and therapeutic ability. This research work should come after clinical training, preferably in the second year in the rheumatologic study and preferably concentrated in a block of six or more months.

If the trainee aspires to an academic career, longer experience in research is desirable, especially if he has some training in a basic science, such as biochemistry, immunology, pathology or the like, which he can apply in this research. This active experience with career scientists, while training in research, should be sufficient to enable him independently to conceive, plan and pursue a meaningful research program.

During training, the developing rheumatologist should attend meetings of rheumatism societies, such as the American Rheumatism Association scientific sessions, workshops sponsored by The Arthritis Foundation, conferences for postgraduate training, and even international congresses on rheumatology.

It is well for the trainee in rheumatology to take a month or two at the end of formal training to visit other rheumatology study centers, to see other rheumatologists and investigators at work in their own laboratories.

Throughout his life he should keep abreast of new developments by attending seminars and other scientific meetings on rheumatic diseases. The young clinician must learn to apply new knowledge whenever practical.

In closing, I make a strong plea for greater interest in expert training of the *clinical rheumatologist.* Emphasis recently placed upon research as qualification for academic appointment unfortunately has been at the expense of developing expert clinicians and, particularly, future teachers of clinical rheumatology. In my opinion, this area of training should be bolstered and considered of at least equal importance to training investigators. I hope that more emphasis will be placed on *clinical* training and *clinical* investigation in rheumatology. True, we need to know much more about the nature of rheumatic diseases, knowledge that could be gained only by intensive laboratory research; but it is also true that there are millions of people sick with chronic rheumatic diseases who need better care. To provide this care, well-trained physicians are needed in increasing numbers. The severly ill patient with chronic rheumatic disease will receive the best care from a team of medical and paramedical specialists, collaborating as a group at the center of which there should be a superbly trained clinical rheumatologist.