side, as is so successfully done at Sea Breeze on Coney Island, and in many places on the coast in Europe.

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SYMPOSIUM ON CLINICAL PATHOLOGY.*

THE RELATION OF CLINICAL PATHOLOGY TO ACTUAL PRACTICE.

BY LOUIS FAUGERES BISHOP, A.M., M.D., NEW YORK,
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By actual practice we mean the work of the general practitioners who make up the great majority of the profession of medicine, who are not engaged in the practice of an exclusive specialty and who are not connected with teaching institutions or active laboratory work. These are the men who actually take care of the greater part of the community. It is a frequent experience to find that men not at all widely known to the medical profession have large practices among influential and important people, and it is a well-known fact that many men whose names are well known in medical literature and who are active in hospital work have but little practice among persons outside of the dispensary class.

The problem is to make clinical pathology available to the men who actually do the bulk of the practice of the city. Clinical pathology has been too much in the position of a consultation branch rather than a help in every-day work. Too many men call in technical examination only when the case seems obscure or when the patient is very ill.

Laboratory work is really only an extension of the physical examination employing the microscope as we employ stethoscope, and testing the composition of the blood as an extension of the same operation that was begun when we looked at the color of the mucous membranes. The bacteriology of the human body in health and disease should become a matter of routine observation rather than one laid aside for special occasion. The systematic examination of patients over a considerable period of time thus ascertaining the physiologic and bacteriologic habit of the individual should become a more common practice.

The most obvious solution of the problem that immediately presents itself to any man is that he should take a course in laboratory work, and then make a practice of carrying on these observations for himself.

There come to mind several men who have taken the course and no doubt it was greatly to their benefit, but not one of them has actually carried on the work. The practice of medicine is too complicated an occupation to allow of the proper atmosphere for laboratory work. There

is too much of the social and personal required to allow the combination of the two kinds of work in the general practitioner. The only element in practice that interests the patient is the one factor of treatment and recovery from disease. And the most successful men from the point of view of having satisfactory practices are those who concentrate most of their attention upon the treatment of their patients, keeping the rest much in the background.

So it is practically impossible for these men to do clinical pathology themselves. Thus they have fallen into the habit of neglecting it, except in cases where it was evidently important and then sending single specimens or two to an eminent authority for an opinion. The whole procedure is too expensive to be employed in a routine way with all the patients. To do this for all his patients it is necessary to obtain the co-operation of men who have neither reached the height of reputation as pathologists nor who have obtained the position of established practitioners. These men are found in these days among the graduates of our hospitals, particularly those who have had a pathologic service. These men are glad for a time to continue the work they have been doing for the hospital for the benefit of practitioners. The health department has placed several operations of clinical pathology at the free disposal of the profession, but can only concern itself where infection is involved.

The trouble now is that the men in actual practice, the men who are treating the majority of the people who live on the same block that you or I do, are not at all awake to the value of clinical pathology used in a routine way, particularly in obscure and chronic cases. The obscurity has sometimes been increased by examinations made by druggists and commercial chemists, whose reports are often useless for clinical purposes.

My own conclusions are, and I speak from personal experience as an actual practitioner, that the relation of clinical pathology to private practice has not been satisfactory. Until a year or more ago, when I decided definitely to go back to the study of the purely technical side of medicine, having been deeply absorbed in clinical work, I really did not know, as I do now, of how much practical value laboratory work has come to be.

The cure for the present unsatisfactory relation is found first in dissemination among practitioners of the knowledge of the actual value of the findings of the laboratory in indicating treatment of patients. Second, it is found in building up the confidence of the profession in the work of the younger graduates of the pathologic services of our hospitals and in separating routine work, such as these men are perfectly capable of doing, from the higher class of work which calls for the expert knowledge and opinion of established specialists in clinical pathology.

The established specialist whose life is given up to investigations, to teaching and consulting,

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should and does stand in the position of higher authority that he deserves. He must always be called upon to pass judgment upon obscure questions that arise in great abundance from the routine work of the younger men. The man in active practice should be in touch with the group of recently trained workers, who should carry on routine examination of all his patients. He should also be in touch with a pathologist of established reputation to pass upon such questions as arise, when an opinion as to the significance of findings is necessary.

I speak from the point of view of a practitioner and not of a pathologist, and I leave it for those who follow to point out the details of cases, in which clinical pathology is important in actual practice. I would merely add, for the benefit of any general practitioner who may be still deep in the purely clinical rut, that the free use of clinical pathology will add new interest to his professional work.

THE PRESENT ATTITUDE OF BLOOD EXAMINATION FOR DIAGNOSTIC PURPOSES.*

BY FREDERIC E. SONDERN, M.D., NEW YORK.

THE evolution of hematology during the last decade has been so pronounced, that at the present time an accurate knowledge of the blood condition is considered essential in the diagnostic and prognostic conclusions in all but the most trivial cases. While an enumeration of the blood changes noted in the different diseases and an opinion concerning their significance are not possible in the time at my command, there are quite a number of pathological processes in which an examination of the blood is of much practical value to the clinician.

The present more intimate knowledge of the minute differences as well as of the relative changes noted in the various forms of anemia has unfortunately shed little or no light on the etiology of these diseases, but has greatly facilitated their diagnosis, as well as the differential diagnosis. Thus, simple anemia, secondary anemia, pernicious anemia, splenic anemia and Hodgkins' disease can be differentiated with greater precision than the former less accurate knowledge of the blood changes allowed.

In the different forms of acute and chronic leukemia, recent work has taught much and justifies dissatisfaction with the present clinical classification of these conditions. Acute lymphatic leukemia as well as the recently described acute myeloid form of the disease, present a clinical picture simulating an acute infectious process, and it is by means of the routine blood examination that the differential diagnosis is now most frequently made, improper surgical procedures prevented and the fatal prognosis learned at the earliest possible moment.

It is not only in the blood diseases proper, if they may be so termed, that the examination of

the blood is useful. In acute febrile conditions, when the clinical picture is not yet sufficiently pronounced to justify a diagnosis, a routine examination of the blood is often a guide and always a comfort. This examination shows the degree of anemia if any, and a search for plasmodia, a Widal test, an enumeration of leucocytes and a differential count of the latter, while they may not establish the diagnosis, they at least confine it within narrower limits and often exclude feared grave conditions.

The value of finding the characteristic organisms in malaria, filariasis, tripanosomiasis and relapsing fever needs mere mention. The increase in the relative number of large lymphocytes noted in malaria is an additional stimulus to repeated search if plasmodia are not found at once. In the event of coma, the knowledge that meningitis and brain abscess are always accompanied by a leucocytosis and relative polynuclear increase, that uremic, post-epileptic and diabetic coma sometimes show leucocytosis and that narcotic or alcoholic poisoning, hysteria and tumor have no accompanying leucocytosis, is also of diagnostic value when combined with the clinical observation.

The early stages of scarlet fever often present diagnostic difficulty; but when it is recalled that this disease always shows a pronounced leucocytosis and relative polynuclear increase, it is more readily distinguished from several other eruptive conditions most easily confused which do not present this characteristic.

In typhoid fever, we had hoped that the early diagnosis would have material aid from the Widal serum reaction. While this anticipation has been but partly fulfilled, owing to the delayed response to this test in many cases, the fact that uncomplicated typhoid shows no leucocytosis and a relative lymphocytosis on differential count of leucocytes is an aid not to be overlooked.

In pneumonia, a consideration of the blood picture is often of the greatest value in both diagnosis and prognosis. It has long been conceded that in central pneumonia and in other cases where the general symptoms are present but the physical signs are not characteristic or wanting, the existence of a pronounced leucocytosis often justifies the diagnosis. While scarlet fever or a suppurative process will present the same blood characteristics, the clinical aspect of the case seldom admits confusion on this account.

In the prognosis of pneumonia, it has long been known that the absence of a leucocytosis is a very grave and usually fatal sign. For several years not only the leucocyte count, but also the differential count of leucocytes in pneumonia have had my particular attention. I will not enumerate the details of these observations, but simply quote the conclusions they seem to justify.

The increase in the relative number of polynuclear cells is a direct indication of the severity of the toxic infection and the degree of leucocytosis an absolute indication of the body resistance toward the infection. In other words: (1) Slightly

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