CLINICAL PATHOLOGY IN GENERAL PRACTICE

FACILITIES UNDER THE NATIONAL HEALTH SERVICE

BY

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This century has seen enormous progress in the application of pathology to the elucidation of clinical problems. Fifty years ago the pursuit of pathology was largely academic. It was, of course, recognized as being fundamental to the science of medicine, and morbid anatomy and histology were used to a limited extent for the purpose of solving clinical problems in retrospect. But a diagnostic service of hospital pathology such as we have to-day, in which microbiology, biochemistry, and haematology take their place with the more ancient discipline of histopathology, had hardly been conceived. By the outbreak of the second world war the teaching hospitals and the larger voluntary hospitals had built up departments of pathology which not only provided a diagnostic service but served also in many instances, and particularly in the case of the teaching hospitals, as active centres of research. But this was not the case in many municipal or small voluntary hospitals which at that time either lacked completely, or were ill supplied with, such an essential aid in the treatment of their patients. And nothing had been done to supply the wants of the general practitioner in this respect, if one excludes one or two commercial or local authority ventures which in the main provided a limited postal pathology service of a most undesirable kind.

The consequences of war are not invariably evil, and one of the good things achieved by the recent war was the raising of the standard of medicine in the more isolated and less advanced hospitals of this country. This was the outcome of the Emergency Medical Service with its transfer of staff, equipment, and ideas from the efficient hospitals of our large cities to the more lowly and sometimes rather primitive institutions in the less congested parts of the country. Upgrading these hospitals was not merely a question of implanting in them a leaven of good clinicians; all the other services had to be installed or improved, and that meant setting up adequate departments of pathology, because, as all are agreed, a good service in pathology is essential to a high standard of achievement in medicine. And when in 1948 the National Health Service came into being it was very largely on the pattern evolved during the war that the service was fashioned, at any rate so far as pathology was concerned. There was, however, this difference, and a very important one at that: the pathology service envisaged by the designers of the health service was to be just as readily available to general practitioners as to the clinical staff of the hospitals.

One ought, perhaps, to say that the general practitioners did at times make use of the Emergency Laboratory Service, and in this they were not discouraged either by the local authorities or by the Ministry—in fact, in some parts of the country the service was thrown open to them. For example, the county laboratory service with which I was associated in the

war was made freely available to the practitioners, and very popular it proved. But this is a different matter from the nation-wide service in pathology which, in theory at any rate, became available to the general practitioner with the passing of the National Health Service Act. There can be no two opinions about the value of such a consultant service to those engaged in general practice, but it should be clearly understood that what one has in mind in saying this *is* a consultant service and not just the provision of laboratory aids for general practitioners.

Scope of the Service

One knows, of course, that general practice can be carried on without any help from the laboratory at all, and Duncan (1952), who practises in Portsmouth and who, incidentally, is an enthusiastic advocate of a general-practitioner service in pathology, reckons that about three-quarters of his patients can be satisfactorily treated without recourse to laboratory aid. There is little help, for instance, which the laboratory can give in the diagnosis of the exanthemata, with the exception of smallpox, of mumps, or of the common cold, and, as Duncan rightly says, there is no need to seek the aid of the pathologist in connexion with the diagnosis of influenza when this condition is epidemic. The sporadic case would, however, present an entirely different problem, for without the context of similar cases it might be difficult to distinguish it from pyrexias of undetermined origin, and in the investigation of such febrile states the help of the laboratory can be invaluable. And there are many other conditions in the diagnosis and the treatment of which the general practitioner will find consultation with the pathologist and the resources of the laboratory an advantage and sometimes a necessity: urinary tract infections, disturbances of renal function, renal failure, the many forms of anaemia, hepatitis, the virus pneumonias, and the control of the therapeutic use of such preparations as liver, vitamin B₁₂, thiouracil, and the antibiotics are some of these.

In addition to these investigations of a more or less routine type there are certain special ones which should be mentioned. Selective weed-killers of the dinitro-ortho-cresol (D.N.O.C.) type are much used these days for the various corn crops. They are applied to the growing crops in the late spring, and, although they are highly toxic for man, their continued use is widespread because of the greatly increased yield per acre which they make possible. The wearing of masks and protective clothing reduces the risk of poisoning to negligible proportions, but cases of poisoning have occurred and knowledge of the level of D.N.O.C. in the blood is helpful diagnostically, and also as a warning of impending intoxication. Hospital laboratories situated in strategic positions throughout the country undertake this investigation.

Another agricultural hazard comes from the use of organic phosphorus insecticides, such as diethyl-*para*-nitrophenyl-thiophosphate ("parathion"), by the fruit growers. Poisoning by these preparations results in destruction of cholinesterase, and the estimation of the blood level of this enzyme is useful to the doctor both in the diagnosis of parathion poisoning and in its prevention. Four laboratories undertake this particular investigation; they are

situated in Worcester, Peterborough, South-east London, and Portsmouth, near to the important fruit-growing districts where these particular insecticides are most used.

A third special investigation concerns the diagnosis of pregnancy. There are several tests available for this purpose, and of these the Hogben test, which makes use of the *Xenopus* toad, is probably the most satisfactory. Not infrequently it is necessary for medical reasons to know at the earliest possible time whether or not a woman is pregnant, and pregnancy-test centres have been established, at Watford and at Sheffield, to investigate these cases.

A Consultant Service

The description of the pathological service available to the general practitioner has been made in very general terms; specific mention of what to send, and when or how and to whom, has been avoided. This has been done deliberately. For one thing this article is to be followed by others dealing in a more detailed way with particular aspects of the general-practitioner laboratory service, and the answers to some of these questions will be found in them. But it has been done for a much more important and fundamental reason: to emphasize that this service in pathology offered by the National Health Service to the general practitioner is a consultant service and not a penny-in-the-slot business; for that would be no better than the postal services of the past. If a general practitioner wishes to make use of the service he should get in touch with the nearest pathologist and tell him what his problem is. It may be that it will suffice to send a specimen to the laboratory, or possibly it may require sending the patient, in which case an appointment can be made. If the patient cannot be moved it may necessitate a domiciliary visit, or, of course, it may be one of those cases in which the pathologist cannot be of help. The important thing is that the general practitioner should consult with the pathologist about his case, for only in that way will he get full value from this service.

There is another aspect to this. The general-practitioner service and the hospital service are both parts of the National Health Service equal in importance with the third component, the public health service, and, as Sir Allen Daley (1953) has pointed out in his Croonian Lectures, these three parts of the Service will make a more effective contribution to the health of the nation if they work together as closely as possible. There is a definite risk of the general practitioners and the hospitals drifting apart, so that any contacts between the two should be fostered. And here is a natural link, between the practitioner and the pathologist; it could only be to the mutual benefit of the two and of the Health Service that this link should be forged and strengthened.

Will the Pathologist be Overwhelmed?

It is common knowledge that the extent to which the pathology service is being used by the general practitioner varies greatly in different parts of the country. In some areas it flourishes, whereas in others it has hardly made a beginning; this has been attributed to the reluctance of the pathologist to encourage the practitioners to use his service for fear of being overwhelmed with a flood of work beyond the resources of his laboratory. Those of us who have had experience of this form of service would agree with Sir Allen Daley (1953) that these fears have usually proved unfounded. In defence of the pathologist who has been hesitant to undertake this work it should, however, be pointed out that when the Health Service was formed, since the practitioner work was probably an unknown quantity, the pathologist worked out the establishment of his laboratory on the basis of the hospital work it would have to undertake. He no doubt thought that he could proceed cautiously and increase his staff as the service developed; he was probably not allowed to do otherwise. Now for various reasons, economic as well as the difficulty of getting staff, he could not expand the work of his laboratory very much if he wished, and he is faced with trying to fit a quart

measure into a pint pot. So it makes it all the more important for the general practitioners to get in touch with the pathologists in their districts to find out how they are situated and what they can reasonably undertake. When this service is brought to maturity not only will it lighten the load on the hospitals by making it possible to treat more ill people in their homes, but it will bring an added interest to the work of the pathologist and make general practice an even more worth-while career.

REFERENCES

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Next article on Clinical Pathology—"The Public Health Laboratory Service," by Dr. M. T. Parker.

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CAPITAL PUNISHMENT FOR MURDER

THE ROYAL COMMISSION'S REPORT

"... to consider and report whether liability under the criminal law in Great Britain to suffer capital punishment for murder should be limited or modified."

Such was the Royal Warrant for the Commission which has been sitting under the chairmanship of Sir Ernest Gowers for more than four years and has now issued its report.¹ Evidence was taken from 117 witnesses in Great Britain—and many more in other countries—from the Archbishop of Canterbury to the Chief Executioner. In its 500 pages the report discusses proposed amendments to the law, the exercise of the royal prerogative, and alternatives to capital punishment. The sections which will be of chief interest to medical readers are those concerning the M'Naghten Rules and concerning methods of execution. This latter subject was added to the terms of reference at the request of the then Prime Minister (Mr. Attlee).

Murder is, in peacetime, the only offence for which the sentence of death is imposed, and the only offence for which the court has no discretion to alter the sentence. The crime may be human and understandable or brutal and callous to an unbelievable degree; it may have been committed in a fit of passion or as the result of premeditation; motives may range from cupidity or lust to pity or despair, but there remains the one penalty.

Categories of Murder

During the last 50 years, in England and Wales, 1,210 persons have been convicted of murder and sentenced to death. Recommendations to mercy were made in 468 cases and reprieves were granted in 555. Murder in this country is slowly declining. The number of murders known to the police has almost consistently fallen since 1900. The years of highest incidence in England and Wales were 1903 (5.14 per million of population) and 1945 (5.11); the incidence was highest also in Scotland in the last year of the second world war. A rising figure since 1941 is for murders in connexion with sexual assault.

The Commission discusses certain categories of murder. It makes no recommendation with regard to infanticide. It is not considered right to provide by law that a mother who kills her child should in no circumstances be adjudged guilty

¹ Royal Commission on Capital Punishment, 1949-53. Report. Cmd. 8932. London: H.M. Stationery Office. 12s. 6d. net.