

## PATHOLOGY AND CLINICAL MEDICINE.

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THE relations of the pathologist and the clinician in these latter days remind one very much of the old-time feud between the physician and the surgeon. On the one hand there is the extremist pathologist, with a limited knowledge of clinical work, pouring scorn on bedside methods and failing to realize the difficulties which confront the man in charge of sick people, difficulties arising from the uncertain guide given by the symptoms, the state of the patient, the short time which is at his disposal for the formation of an opinion and the reluctance of the patient to submit to measures which, however desirable from a scientific point of view, do not conduce to his greater comfort and which it is sometimes difficult to persuade him will aid in his recovery. On the other hand there is the pure clinician, a man accustomed to the nice balancing of probabilities, an art which he has raised to a high level; to such a man many of the methods of the pathologist are repellant as savouring too much of the mechanical, and he is sometimes only too delighted when he is able to catch a pathologist tripping. To the pure clinician the proper sphere of the pathologist is in the dead-house and for the rest he may amuse himself with his test tubes, but that is not medicine; in the practice of men of such a temperament the help of the pathologist is only called for at about the same time as that of the clergyman. As is usual in such cases the truth lies nearly midway between the two extremes: pure clinical work without modern pathological methods is for the most part pure guess-work, very skilful guess-work, no doubt, in many cases, but guess-work all the same; on the other hand, pure pathology without clinical methods would in any case be a groping in the dark, and the best it could arrive at—a very good best, however—is the broad fact that a patient is suffering from such and such an infection or such and such a blood disease; how that disease is affecting his prospects of life, what chances he has of complete recovery and what measures of relief are to be adopted are things which, as a rule, only clinical methods and clinical experience can tell one. It is probably a true proposition that a pathologist of the purest, steeped to the eyes in vaccine therapy, would not scorn the aid of such a triumph of empiricism as an expectorant mixture if he were suffering from bronchitis.

I have thought it would be of interest to record a few cases in which clinical signs were either fallacious or failed, from the absence of guiding symptoms, to give one a clue to the patient's condition, and in which pathological methods cleared up the diagnosis. The first case is that of a soldier who had not been abroad for thirteen years and who developed symptoms closely resembling those of typhoid fever—onset gradual with headache, epistaxis and slight bronchial catarrh, continuous temperature for some three weeks, during the last week of which the temperature was intermittent and fell by lysis. For the rest the pulse was persistently slow; the tongue was of the small red type, thickly furred along the dorsum and clean at the edges, and the stools were at times "pea-soupy" in character. Several observers thought that they recognized rose spots on the abdomen during the second week; the patient's general aspect was dull and placid, very much as one usually sees it in a mild case of typhoid fever. After a short interval of apyrexia the temperature rose again and the patient presented all the appearances of a relapse. He developed a slight pain in the region of the gall-bladder which might have been due to cholecystitis in a mild form. So far the clinical signs had been those of a typical mild typhoid fever; blood culture, however, gave sterile results on three occasions; there were no agglutinins for typhoid bacilli present at any time, leukopenia was not present, and culture of the stools and urine failed to demonstrate any typhoid or paratyphoid bacilli. A few days after the commencement of the apparent relapse there was a slight leucocytosis (12,000) and the liver was found to be enlarged upwards to the extent of one inch in the nipple line. X-ray examination showed restriction in the movements of the diaphragm on the right side, and in its descent the diaphragm showed a very distinct wave-like elevation at one part; puncture of the liver revealed liver abscess. It is to be noted that the man had not been abroad for thirteen years and nearly up to the end showed no signs or symptoms referable to the liver, so that one might be excused for being slow in coming to the suspicion that amœbic infection of the liver was the cause of the trouble. Here pathological findings served chiefly to keep one uneasy as to the tentative diagnosis of typhoid fever, and it was not till leucocytosis occurred that they helped to point towards the real cause of the trouble.

In another case, that of an officer who had apparently recovered from an operation for removal of a tuberculous kidney, symptoms arose which were diagnosed by some very eminent London physi-

cians as typhoid fever; pathological investigations entirely failed to support this view, and the officer eventually died from general tuberculosis.

We have had two cases at the Queen Alexandra Hospital in which pathological methods led to the discovery of unsuspected typhoid fever. One was the case of a man who was under treatment at Rochester Row for gonorrhœa; he had also had syphilis and while in hospital he developed a severe syphilitic ulceration of the palate, fauces and tongue, and in addition a fairly severe bronchitis, his temperature was raised to about 103° F., and his pulse was rapid as one might expect with bronchitis and high fever; clinically his local troubles accounted fully for the fever. Blood culture, which was done in accordance with our routine practice in cases of fever, revealed the presence of typhoid bacilli. The case did badly, as one might expect with so many troubles, and he died in about a week. In another case, the patient, an orderly in the Royal Army Medical Corps, was admitted with high fever, cough, pain in the right side, and rusty sputum; the pulse was rapid and there was evidence of consolidation at the right base with fine crepitations. He was delirious and his general condition suggested the possibility of meningitis in addition to the obvious pneumonia; routine blood culture revealed the presence of typhoid bacilli: he was treated with a vaccine made from his own strain and his condition very rapidly subsided into that of a mild case of typhoid fever, from which he recovered.

A further case of an officer shows how clinical signs may lead one astray. Some ten days after a slight operation on the nose (removal of a spur) he developed fever with pain and swelling in the joints. The pains flitted about from joint to joint, and he had symptoms of pericarditis and endocarditis. There was a very strong family history of rheumatism; the diagnosis, based on clinical grounds, was acute rheumatism. He was ill for some months, then became apparently convalescent and was sent to Osborne, still suffering, however, from mild pains in his joints and occasional swelling. After a few days at Osborne all his symptoms returned with, in addition, acute pains in the loin and abdomen and he was transferred to the Queen Alexandra Hospital. Examination of the urine showed the presence of pus and culture gave a pure growth of *Staphylococcus aureus*. He was treated with a vaccine of his own strain and responded very well indeed. In a short time the fever and pain in the loin had gone and his urine rapidly cleared up; coincidentally he lost the pains in his joints from which he

had suffered since the commencement of his illness four or five months before, and the joint troubles have not returned since, although some six months have elapsed. Although it is impossible to speak very definitely about a case which one did not see from the beginning, it seems very probable that the joint and heart lesions were not due to acute rheumatism, but were an expression of a staphylococcic septicæmia. There was a continuous history of illness beginning ten days after the operation on the nose, the joint pains and swellings were not influenced by salicylates, and he did not make any material headway till he was treated with a vaccine from his own germ, when he very rapidly lost, not only the immediately urgent symptoms of pyelitis, but also his joint troubles, and for the first time began to gain instead of lose weight.

In other cases clinical signs fail to give one any guide as to the nature of a patient's disease. An officer in the Royal Army Medical Corps, a worker in a pathological laboratory, who had not been abroad for some years, developed signs of general ill-health of somewhat slow onset. After a while he noticed that his evening temperature was going up to 100° F. to 101° F., and he had drenching night sweats. Clinical examination failed to reveal any cause for the fever; tuberculosis naturally occurred to one's mind, but there was no evidence of that in the lungs or elsewhere. A streptococcic septicæmia also seemed possible; all the organs appeared normal, the liver and spleen were not enlarged, and there was no evidence of cardiac lesion; blood culture and culture of the urine gave negative results, there were no parasites to be seen in the blood, but a differential count of the white corpuscles showed a very definite increase in the mononuclear elements, and the serum gave an agglutination reaction with *Micrococcus melitensis* in high dilutions. The case ran the course of a mild attack of Malta fever, and the patient recovered in about six weeks. Here the fact that the patient was working in a laboratory was of some assistance in pointing to the diagnosis, though he had not himself been working with *M. melitensis* for a long time. But in another case of the same kind there was no guide of that sort. An officer in the Pay Department developed evening fever with copious night sweats; this was accompanied by a troublesome cough, especially at night; he had not been abroad for seven years. Malaria was suspected by the officer who first treated him, and the patient took considerable quantities of quinine for about six weeks without deriving any benefit from it. The persistent troublesome cough with scanty expectoration suggested the likelihood of tubercle of the lung, but

repeated examinations of the sputum failed to reveal any tubercle bacilli, and physical examination of the chest showed nothing but a few râles scattered all over the bases of both lungs. There was no evidence of liver abscess or of suppurative lesions in other parts. Blood examination resulted in the finding of a large increase in the proportion of mononuclear cells without any increase in the total number of leucocytes, and the serum agglutinated *M. melitensis* in high dilutions; the diagnosis was Malta fever; he was treated with an appropriate vaccine, and after about four weeks more of hectic fever, the patient, after a rather larger dose of vaccine than had been given previously, developed a high temperature with rigors and considerable general disturbance. This attack subsided as quickly as it appeared, and from that time on the fever ceased and the patient recovered rapidly. A similar termination to Malta fever has been noticed by other observers.

In another case a girl developed repeated attacks of high fever of a hectic type accompanied by acute pains along the shafts of the bones; these continued for some months with intervals of freedom from pain and fever, but with progressive anæmia and deterioration of the general health. The suggestion was a septicæmic condition of some kind, but blood cultures gave negative results, and, on the other hand, examination of the blood showed an extreme anæmia with leucocytosis (20,000), about 80 per cent of the white cells being lymphocytes of the large variety; the diagnosis was chloroma.

Finally, since confession is conducive to a due humility, I would relate an incident showing the danger of giving an opinion based on a single examination and clinical signs alone. An officer of middle age came to me one morning complaining of general debility of some weeks' duration, with occasional nausea; he had been holding a responsible post requiring very hard work, and had not had a holiday for some time; latterly, without any other-very definite symptoms, he had found that the work was getting too much for him, and he was easily tired; he was obviously "run down," but was not particularly pale, and so far as he knew he had not lost weight. Apart from neurasthenia from overwork, the usual things that such symptoms in a patient of middle-age suggest are: tubercle, cancer, granular kidney, and diabetes. A careful physical examination, however, gave no evidence of any of these diseases, and his urine was apparently quite normal. As he was leaving the station it was not possible to make any more observations, and I told him he was probably suffering from overwork and

wanted a holiday. About six months later he wrote to me that he had become steadily worse since he saw me; he had seen several doctors who had given different opinions, had been to a spa where his condition was labelled "congestion of the liver!" and eventually got into the hands of a well-known hæmatologist who discovered that he had pernicious anæmia. It is impossible to say that his blood would have shown evidence of the disease at the time I saw him, but I regret that the examination was omitted, and can only plead that there was nothing in his appearance to suggest anæmia at the time, and that the conditions under which he was seen did not allow of any more than a single observation. The incident serves as a lesson on the unreliability of consulting-room diagnosis.

These few cases, taken from the experiences of the last two years, show, I think, that it is impossible to practise medicine properly without having constant recourse to the help of the pathological laboratory, that such work is not a luxury, as is so often thought, but is absolutely essential to correct diagnosis, and that diagnoses made without such aid are in very many cases pure guesswork, whether they are done in a sixpenny dispensary or in Harley Street itself.

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## **Pathology and Clinical Medicine**

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