PATHOLOGIST TURNED GENERAL PRACTITIONER

Reflections of an ex-Army Pathologist

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When one considers the role of the former specialist in General Practice it seems to be common sense that some specialities will be of more use than others. With a strong psychiatric component in 40% of our consultations, there is no doubt that psychiatric training will be of inestimable value and the same goes for paediatric and obstetric training. I would imagine it to be frustrating for a former surgeon to have to limit his repertoire to the level of boils and sebaceous cysts though his clinical acumen would be of great value in say, the elucidation of the acute abdomen.

Frustration must play a part when a physician turns general practitioner, for though his greater knowledge of general medicine would be of value, general practice is not the place for in-depth investigation, and the constant repetition of domestic trivia would be frustrating. A specialist in skin, chest diseases, eyes, E.N.T. and other disciplines could be of value in the odd 10% of cases in which these conditions present and I have no doubt that in general specialised education is never wasted for it improves and enhances the general medical knowledge of each individual doctor.

But where does pathology fit into this picture? Surely the pathologist could be right out of his depth and I can hardly imagine many patients presenting themselves for post mortem examination.

Most people, doctors included, have strange ideas about pathologists and consider them a race apart. After all they do confine themselves to their laboratories amid the less pleasant aspect of medical practice, of blood, pus and worse. Their only contact with the whole person is in the post mortem room from which their reports, though interesting, appear to have little relevance as the patient, already dead, has been buried.

There have been great changes in Pathology in the Army over the past few years, though the basic realities remain unchanged. Although it is now many years since I left Pathology, the interval has given me time to look back upon what proved to be a most valuable start to a career in General Practice.

In the late 1950's postings seemed to appear right out of the blue. It was, therefore, with resignation that in 1957 I received my Army posting as a First Lieutenant to a British Military Hospital in Germany as a general duty Medical Officer with experience in Pathology. I regarded my experience in clinical pathology as negligible as at that time I was interested only in forensic pathology. True, I had spent nearly ten years working in various mortuaries and I could perform a passable post mortem but my knowledge of laboratory routine was sketchy to say the least, and I quailed at the thought of organising a blood transfusion. My friends did not help either by promising to send me large numbers of specimens for examination, usually of the twenty-four hour variety. They could

not laugh at my posting as their posting seemed equally unsuitable. We cursed the authorities in the RAMC for their ineptitude though as things turned out they had really handled things very well and we subsequently agreed that postings were not so unsuitable after all.

When I arrived I found the actual Laboratory was self contained, well equipped, with about twenty technicians, its own transport and administration. I was amazed to be given an office to myself, half share in a secretary and the services of a car and driver. I was the third doctor in a three man team, the chief later becoming Professor of Pathology. I soon discovered that Pathologists were in very short supply and they had obviously been scraping the barrel when they appointed me. However, in the valley of the blind the one eyed man is king and even my smattering of knowledge was quickly pressed into use. At least I could hold my own in the post mortem room and could cope reasonably well with the histology. Here, all my reports were checked for many months until I only had to ask for advice in cases of difficulty.

For the rest it meant working in each department in turn. Bacteriology, Biochemistry, Haematology, Serology and blood transfusion, etc. followed one after the other, including the animal house. I worked in the Crystalloids Department where, at risk to life and limb (to ourselves) from exploding bottles in the autoclaves, we made all the transfusion fluids and giving sets for the whole of The British Army of Occupation of the Rhine. The techniques, though basic, were conducted with a high degree of competence for we were never allowed to forget that we might have to use them in the field. The flame photometer had just been introduced for the determination of electrolytes and this greatly improved our accuracy.

Blood transfusions became my special charge and this is a form of treatment about which I have never been entirely happy.

The possibilities of error seem endless and I have never been happy till the actual transfusion has been completed. Reactions can, and do, occur, in the most carefully matched blood. There can be mistakes in the typing, the cross matching, the taking of blood, its storage and its administration. Blood transfusions must never be undertaken lightly. The giving of one or two pints to top up a patient is indefensible and in my view it should only be used in those cases in which it is absolutely essential. Blood was often transfused at night when everyone was tired. Often it would be needed in a hurry, and sometimes in vast quantities. It was not unusual to transfuse fifteen to twenty pints into a patient. No wonder Pathologists are fussy about having their forms filled in correctly and the specimens properly labelled. At times like these, clerical errors can occur so easily.

Work in the Laboratory was fascinating as there were so many different aspects to it. Testing drinking water was routine and water from swimming pools also. There was food to test in cases of suspected food poisoning and also food direct from manufacturers, for its safety and consumability. The manufacturers never realised that only one or two ml of their product was required for testing and insisted upon sending it down by the case or crate. Somehow we never

enlightened them and always managed to consume the remains of the sample.

Non-medical items came for assessment, soil for analysis for the siting of new airfields and even gin from the Officers' Mess to determine whether the barman was watering it down.

At an early stage I was sent to other Military Hospitals to perform post mortems in cases of sudden death and as my competence increased I was occasionally regraded eventually to Junior Specialist with the rank of Captain. Now the responsibility increased and I was sent on more difficult and interesting assignments. We worked in close liaison with the wards and were able to actually see and examine the patient whose material we were testing. Liaison was possible with German hospitals and I was most impressed with their high standards of thoroughness. Their ward rounds would start at 7.30 a.m. and though I thought their thoroughness perhaps made them a little heartless, nevertheless, they accomplished a great deal of work in a short space of time.

The German forensic pathology was of a high standard and at that time they were conducting an investigation into the accurate determination of the age of a subject by studying the medullary structure of the neck of the femur.

Previous estimations of the age of middle-aged and elderly patients had been rudimentary but after studying the internal anatomy of the neck of the femur, it became apparent that the medullary trabeculae formed a less acute angle with the shaft of the femur as age progressed and that by measuring this angle with a protractor, the age of the subject could be determined with remarkable accuracy. This internal anatomy was interesting and may explain the success of some osteotomy operations by rejuvenating the internal structure of the bone.

One particular case was interesting in that the subject had been dismembered and pieces of the body were discovered scattered around the countryside, some of them in the local lake. After surveying the remains it struck me that this case was remarkably like the Ruxton Murder in Lancaster in 1936, written up by Professor Glaister.

We visited the University Library and sure enough, there was a copy of Professor Glaister's investigations. Following his methods, the blood stains were found exactly as he described and thus the murderer was caught and convicted.

Although fascinating as pathology had been, the time eventually came when I settled down as a General Practitioner.

General Practice is a far cry from the Pathology Laboratory and at first glance it may appear that my previous experience was largely wasted.

Admittedly at first I did undertake a wide range of pathology procedures for most haematology and bacteriology and not a little bio-chemistry can be undertaken in the surgery. It was useful to do a quick Gram stain or view the urine through a microscope and to have a blood urea or blood sugar estimation to hand before the patient left the consulting room. But these procedures are time consuming and there were problems and expense with keeping fresh stocks of the numerous reagents and I had to quickly abandon all but the simplest tests.

For many years I was sent a complimentary slide of any histology performed on any of my patients. This practice ceased some years ago but I still visit our

local Laboratory to look at anything particularly interesting (much to the consternation of the younger technicians, who view such interest with suspicion).

Though the practical side of Pathology sadly is no more, what remains is an ability to think in terms of underlying pathology. And this is where the real value of a training in pathology lies. There is nothing comparable to following patients in the Laboratory and on the Wards and finally performing the autopsy and subsequent histology to bring home the real facts about disease.

Thus, to listen to a bronchitic chest and see in your mind's eye the slide under the microscope or to percuss an emphysematous chest and visualise its broken down alveoli is the only way to view objectively what is going on. The same goes for most other conditions including the diagnosis of pyrexia of unknown origin.

Therapeutics takes on a different view when you realise that precious little is going to influence the pulmonary function of a very emphysematous chest and in this and many other situations can be saved the useless exhibition of numerous drugs. There is another bonus in that the care of patients on anti-coagulants is less worrying after working in a Laboratory. The same goes for the management of Diabetes mellitus.

The submission of appropriate samples becomes more scientific when you recall the terrible state in which you had received specimens in the past.

This goes for simple things like swabs drying out unless transported in Stuart's Medium and the care with which mid-stream urine specimens should be collected, in the correct container adequately secured against leakage and transported swiftly to the Laboratory so that the results might bear some resemblance to the true state inside the patient's bladder. But also with the more complicated investigations including blood cultures, where it is so important that the correct technique is used to enable the maximum chance of capturing an elusive pathogen.

Properly labelled and correctly sent specimens must be packaged to arrive safely. Breakage and spillage is aesthetically unpleasant and can often be downright dangerous, particularly in cases of suspected Hepatitis.

You appreciate the importance of sending adequate clinical information for the casually scribbled form is as discourteous as it is unhelpful. When sending histology specimens a diagram is often helpful, particularly if several specimens are sent and glands are involved.

You develop a new understanding of the Pathologist's difficulties as not everything is black and white. Often further and more elaborate tests may be needed and it is helpful for the doctor to phone or even go and visit the Pathologist to discuss the case together.

One of the most useful factors lies in the interpretation of laboratory results and the development of a healthy scepticism for the figures you read on the form. White cell counts for example vary tremendously in each individual during the normal day, quite apart from any disease that may be present. It is vital to appreciate this if you are not going to stop one unfortunate worker at an atomic power plant from carrying out his duties on the basis of one low

white cell report. Even the simple ESR test is subject to a tremendous variation in its result and the interpretation must be made in conjunction with the patient's clinical progress.

These and many other matters give the former Pathologist a unique insight into the disease pattern which I have found to be of great practical value.

I still regard blood transfusions as a potentially dangerous procedure only to be used when absolutely necessary. The new artificial blood of emulsified fluorinated hydrocarbons is now in its Phase Two Clinical Trials and if it becomes generally available it should eliminate many of the risks of this so far hazardous form of treatment.

In conclusion, far from being the cinderella of specialities, Pathology is perhaps not the most glamorous but certainly the most basic and useful training for General Practice.