

## Histopathology and medical laboratory scientific officers

### Pathologists are responsible for diagnosis

EDITOR,—T G Ashworth was correct when he predicted that his views would incur the displeasure of some of his peers.<sup>1</sup> In the interest of job satisfaction and economy he advocates that medical laboratory scientific officers should undertake the gross examination of surgical specimens and the microscopical examination of some unspecified tissues. He states that, for 50 years, his laboratory has entrusted the selection of tissue for embedding and microscopy to medical laboratory scientific officers and he knows of no instance in which this practice has led to diagnostic error. Without the aid of external audit what is this statement worth?

Undoubtedly, medical laboratory scientific officers could be trained to describe and dissect many surgical specimens and to select appropriate tissues for histological examination, but they do not have the appropriate background for this. Is it cost effective to train staff for jobs for which they have inadequate background experience and education? While the medical laboratory scientific officers are undertaking these tasks who does the skilled work for which they have been trained?

If a medical laboratory scientific officer misses an early neoplasm in a specimen (for example, an adenocarcinoma in a distorted fibrotic sigmoid colon resected for diverticulosis) who will be responsible? Finally, this separation of gross from microscopical examination increases the chances of diagnostic error. Gross examination is an integral part of diagnostic histopathology, and the findings on gross examination not infrequently modify the interpretation of the microscopical appearances.

With respect to the reporting of microscopical examinations, I am not sure what Ashworth means when he says, "All histopathologists know the lesions to which I am referring, those that require simple, objective answers and which can be easily verified." Does he mean appendixes and gall bladders, when the debate often revolves around whether they should be sent to the pathology laboratory or thrown in the waste bin? If so, does he think that a medical laboratory scientific officer is the best person to identify inflammatory bowel disease, goblet cell carcinoids, or other unusual lesions that are occasionally seen in these specimens? I dispute Ashworth's contention that histopathology largely entails the recognition of patterns and that interpretation is necessary in only

a minority of cases. Histopathology entails the interpretation of patterns in the light of all other available data, including clinical information.

Finally, Ashworth suggests that the Royal College of Pathologists' guidelines on workload are becoming increasingly irrelevant in the face of financial and market forces. I hope that accreditation of laboratories will prevent this from happening. If not, a few hefty court settlements in favour of patients whose conditions have been misdiagnosed and who have consequently been mismanaged should do the trick.

University Department of Pathology,  
Southampton General Hospital,  
Southampton SO16 6YD

<sup>1</sup> Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

### MLSOs are not doctors

EDITOR,—T G Ashworth is right to suggest that histopathologists should review their practices to improve efficiency, but I believe that the remedies implied will be detrimental to patients.<sup>1</sup> Reporting of a specimen depends on the assessment of clinical features, macroscopic appearances, and findings on microscopy. This balance differs from case to case, but a long period of training is necessary to allow correct assessment. As Ashworth points out, many specimens that we report are mundane, but this is evident only after examination by somebody sufficiently broadly experienced to recognise that no difficulties of differential diagnosis are present. The histopathologist should attempt to understand the processes lying behind diagnostic labels, and this requires continuing exposure to the entities in their various guises. The science of histopathology will not advance by our devolving some of our responsibilities to staff who have little understanding of disease processes.

My colleagues who are medical laboratory scientific officers are skilled, patient, dedicated, and enthusiastic. Like histopathologists, they face increasing workloads. Why should we pathologists seek to ease some of our burden by transferring it to technical staff? My colleagues and I try to maintain the morale and develop the skills and intellectual satisfaction of our medical laboratory scientific officers in various ways, but it is not their job to select tissue for microscopy, teach medical trainees dissection, or make histopathological diagnoses. It seems extraordinary for Ashworth to suggest that senior medical laboratory scientific officers might carry out some of these duties better than Ashworth could; should that not be a stimulus for self improvement or retirement?

Selection of blocks for microscopy is crucial for correct diagnosis and prognosis; failure of this element of reporting may lead to errors, with serious implications for patients. Training of doctors in anatomical and histopathological assessment is, likewise, the responsibility of consultant pathologists, not medical laboratory scientific officers.

The increasing workload of histopathologists and the reduced resources available to support it are of great concern. Some extra work can be assimilated, but there are limits; the profession must insist that its first duty, to its patients, demands the highest standard of diagnosis. While it is appropriate for us

to assess our work practices and, if necessary, to change them, I believe that Ashworth's prescription is the wrong one. Attempting to make medical laboratory scientific officers into something that they are not is a potential recipe for disaster.

R Y BALL  
Consultant haematologist

Department of Histopathology and  
Cytology,  
Norfolk and Norwich Health Care NHS Trust,  
Norfolk NR1 3SR

<sup>1</sup> Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

### MLSOs are efficient and save money

EDITOR,—Since 1954, Belfast City Hospital's histopathology laboratory, like that of T G Ashworth,<sup>1</sup> has involved experienced medical laboratory scientific officers in the dissection of a wide range of biopsy specimens, including the selection of suitable blocks. The laboratory used to provide a biopsy service to most of the hospitals in Northern Ireland; the annual number of specimens peaked at 29 000 in 1984. Since then phased decentralisation has occurred and has reduced our annual workload to 17 500 specimens.

We have just received conditional accreditation from Clinical Pathology Accreditation (UK) Ltd. The inspectors commented favourably on the efficiency of the laboratory but pointed out that our use of medical laboratory scientific officers as dissectors breached the code of practice of the Royal College of Pathologists. The inspectors recognised, however, the enhanced job satisfaction of the medical laboratory scientific officers, who greatly appreciate the confidence that we, as pathologists, have in them. Their dissection is careful and closely supervised by consultant staff.

For 40 years this system has worked satisfactorily, with rapid, comprehensive reporting appreciated by all clinical users. In our view, there are essential prerequisites to ensure that the system works safely.

Firstly, senior medical laboratory scientific officers must initially receive intense training from consultant pathologists in the art of dissecting common surgical specimens; this should be supplemented by the creation of detailed bench dissection manuals. Interest is stimulated by the transfer of knowledge of the diseases encountered.

Secondly, a stable, intelligent workforce of medical laboratory scientific officers is needed. (Most of ours have been employed for 15 years or more, possibly partly because of job satisfaction.)

Thirdly, a consultant should be available to provide immediate advice when a medical laboratory scientific officer encounters an unusual or difficult specimen.

Fourthly, dissected specimens should be inspected by the duty consultant in conjunction with the medical laboratory scientific officer. The consultant ensures that descriptions are accurate and appropriate blocks have been taken.

Fifthly, consultants' offices should be close to the biopsy dissection laboratory.

Finally, junior medical trainee staff must also become fully knowledgeable about and competent in dissection. They should work side by side with the medical laboratory scientific officers as they acquire the necessary skills. Ultimately, however, a busy pathologist's time can be better spent than

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on repetitive routine sectioning of, for example, uterine fibroids.

The system works well for both laboratory staff and service users. In these days of accountability for use of public resources and analyses of skill mix, managers would also commend the considerable diminution in expensive medical staff time that is required.

J DENIS BIGGART  
Consultant histopathologist  
DEREK C ALLEN  
Consultant histopathologist

Histopathology Laboratory,  
Belfast City Hospital,  
Belfast BT9 7AD

1 Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

## May have medicolegal implications

EDITOR,—In giving a personal view of the future of histopathology T G Ashworth opines that the bulk of histopathology can safely be reported by non-medically qualified medical laboratory scientific officers and then draws comparison with opticians and paramedical ambulance crews.<sup>1</sup> Ashworth seems to have lost sight of the fact that, although histopathology largely entails the recognition of patterns, this skill takes many years of practice to master and is not to be delegated lightly.

The histopathological diagnosis is regarded as the gold standard for definitive treatment; it should be the responsibility of every histopathologist to ensure that every section is examined with the same degree of depth by someone who is suitably qualified for this task. There is no such thing as an easy histological section; the diagnosis is obvious only after the slide has been looked at. All histopathologists have specimens submitted to them by doctors who believe that the lesion is clinically innocuous; some prove to be otherwise but require great skill to diagnose. Presumably in Ashworth's view these specimens could safely be reported by a medical laboratory scientific officer—a view that I find untenable.

The medicolegal atmosphere in Britain has undergone a shift in the past few years, with histopathologists being increasingly in the front line of medicolegal litigation; the concept of non-medically qualified people reporting diagnostic material ignores this fact. The arrangements in Ashworth's laboratory seem to be idiosyncratic in that the medical laboratory scientific officers do all of the tissue dissection and selection for embedding and microscopy. No laboratory in which I have worked has operated a similar practice, and I find Ashworth's espousal of this practice reprehensible and against the ideals of proper patient care. I agree that medical laboratory scientific officers should be given intellectual stimulation, but I disagree strongly that this should be done by delegating diagnostic histopathology to them.

I do not support protectionism, but in the present NHS it is important that standards are maintained in the face of decreasing budgets; I believe that Ashworth's ideas are retrograde and misguided.

T J JONES  
Consultant histopathologist

Royal Shrewsbury Hospitals NHS Trust,  
Shrewsbury SY3 8XQ

1 Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

## MLSOs play a minor part

EDITOR,—We agree with T G Ashworth that skill mix is relevant to medical practice.<sup>1</sup> Ashworth's conclusions relating to histopathology are, however, inappropriate. A modern histopathology service must be cost effective, rapid, and,

above all, diagnostically accurate. Furthermore, accuracy must not be compromised by current financial and market forces. The ability to perform necropsies to the standard expected of a member of the Royal College of Pathologists, and the diagnostic skills needed, requires at least five years' training. This is because of educational necessity, not protectionism. It is also why the speciality remains dependent on career grade doctors.

Some histopathology reports are, admittedly, confirmation of clinical diagnoses. Not infrequently, however, histological examination results in unexpected and clinically important findings. These findings often rely on subtle observations, which are unlikely to be made by a medical laboratory scientific officer trained to the limited level of empirical confirmation. Ashworth draws a comparison with cytological screening but fails to appreciate that its inherent false negative rate is unacceptable in histopathological practice.

Medical laboratory scientific officers may have a role in the selection of tissue for microscopy. We consider, however, that this is minor and restricted to specimens not requiring dissection and naked eye clinicopathological correlation. Ashworth's statement that selection of tissue can be done better by a medical laboratory scientific officer is, we believe, unrepresentative. Ashworth is not aware of one case in which this practice has led to a diagnostic error. This, however, is not surprising as tissue indicating the correct diagnosis will have been discarded.

Enhancement of job satisfaction is always to be encouraged. Ashworth's proposals, however, are unrealistic and comparable to a suggestion that theatre sisters should undertake cholecystectomies for intellectual stimulus. Laboratory contracts should now contain service specifications that incorporate agreed national standards. Ashworth's suggestions are unlikely to be acceptable to the accreditation agency Clinical Pathology Accreditation (UK) Ltd, and the department may lose contracts.

Unlike Ashworth, we are proud protectionists of our traditional practice and its ensured quality standards. Prudence in our department results in marginal consultant staffing, hard work, and long hours. We believe that our contracted price for a skin biopsy (£10.40) is competitive.

LEONARD HARVEY  
Consultant histopathologist  
DAVID SLATER  
Consultant histopathologist

Rotherham Hospitals NHS Trust,  
Rotherham S60 2UD

1 Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

## Accreditation refused

EDITOR,—I am the clinical director responsible for the laboratory in which T G Ashworth works as a consultant histopathologist. Readers of his article<sup>1</sup> (with which I concur) may be interested in the outcome of a visit to our laboratory by Clinical Pathology Accreditation (UK) Ltd earlier this year, after the article had been submitted to the journal.

Accreditation of histopathology was refused on the grounds that technical staff took part in the cutting up and trimming of surgical specimens. When we asked why this was considered to be unsound we were informed that it contravened the code of practice of the Royal College of Pathologists.<sup>2</sup> Thus the inspectors seem to have been more concerned with perpetuating the restrictive practices of a professional organisation than with properly evaluating technical quality in our laboratory. In our view this discredits the accreditation of histopathology, especially as we are aware that the "forbidden practices" in our laboratory are duplicated in many others.

Faced with the inspectors' refusal to accredit our

laboratory, which we believe maintains high standards, we considered our response. Should we change our current arrangements and debar medical laboratory scientific officers from undertaking the work? This would gain accreditation for the department but at considerable cost. Another consultant would be required, and it would be difficult to justify the appointment of a consultant primarily to undertake a task now being satisfactorily performed by someone earning half a consultant's salary. We would also lose the skill of someone with over 25 years' experience of cutting up surgical specimens and replace him with a junior consultant with perhaps a third of the experience.

So what will we do? We have produced a standard operating policy for cutting up and trimming surgical specimens, which will be ratified as trust policy by our trust board. We will continue with our current working practices, which we believe are of a high standard. We would, however, welcome some form of peer review, which we consider the present system has denied us. We will pursue formal accreditation only when the organisations concerned remove their heads from the sand and see more clearly the changing world of pathology in the 1990s.

RICHARD I HARRIS  
Clinical director of support services

Department of Haematology,  
Walsgrave Hospital NHS Trust,  
Walsgrave,  
Coventry CV2 2DX

1 Ashworth TG. The future for histopathology: protectionism or prudence? *BMJ* 1994;309:417. (6 August.)

2 Royal College of Pathologists. *Code of practice for histopathology departments*. London: RCP, 1987.

## Similar problem with radiographers

EDITOR,—Departments of clinical radiology are under similar pressures to those felt by departments of histopathology.<sup>1</sup> The Royal College of Radiologists has shown that although the number of radiologists has doubled since 1968, the workload has trebled.<sup>2</sup> Most radiologists are aware not only of that increase in workload but also of the increased pressure to deliver services expeditiously and to indulge in other activities including audit and management.

The additional 823 radiologists that the college estimates are required to address this increase in workload seem unlikely to be appointed, and alternative solutions must be sought. Alterations in working practices may help, with increased delegation to radiographers. It is now not uncommon for radiographers to administer contrast media both at urography and during computed tomography.

In many departments general abdominal ultrasonography is undertaken by experienced ultrasonographers, and in some departments radiographers undertake contrast studies, principally barium enemas.<sup>3</sup> I have shown that radiographers with supplementary training can significantly improve their ability to report radiographs from the casualty department.<sup>4</sup>

Film multiviewers to speed up reporting of mammograms in the breast screening programme are almost universally used but seem strangely absent from general departments, where a "reporting pile" is still routine. Their introduction—with film mounting and unloading by clerical staff—could have an appreciable impact on the time spent on the workload generated by plain radiography.

If radiologists are to grasp the opportunities to improve patients' care offered by the newer imaging modalities such as magnetic resonance imaging and the therapeutic potential of interventional radiology then these and all other possible alternatives must be examined. If radiology departments introduced some of these