TALKING POINT

Medical referee of a crematorium

J STUART HORNER

Crematorium authorities are statutorily required to appoint a medical referee, and he has the right to refuse cremation without giving any reason. He can insist that a necropsy is performed or that other inquiries are made before a cremation takes place. The applicant can, of course, make arrangements with another crematorium authority whose medical referee may not invoke such stringent requirements.

The Committee on Death Certification and Coroners¹ concluded that there was no justification for separate arrangements between burials and cremations, and recommended that in the light of the improvements in death certification that it proposed the office of medical referee could be abolished. The committee took almost seven years to report, and 10 years later its proposals have not been implemented, perhaps because of evidence offered by the British Medical Association suggesting that the risk of unsuspected homicide was greater than the committee had assumed.²

This paper reviews the work of one referee and attempts to evaluate it over a six-year period.

Method and results

Details were collected of all cremations authorised by the medical referee at Croydon Crematorium from November 1975 to October 1981. Each day a record was kept of the number of cremations authorised and the number of forms in which queries were raised before the cremation could proceed, together with a more detailed analysis of all cases in which a necropsy had been carried out.

In those cases in which some reference was made on the cremation forms to the fact that a necropsy had been performed, a note was made of the diagnosis given on form B (the medical attendant's certificate) and on form C (the confirmatory medical certificate). This gave some indication of the extent to which valuable medical information would be lost to the medical referee if the confirmatory certificate was abandoned, as suggested by the Brodrick Committee. There were a few cases in which the confirmatory medical certificate gave a different cause of death from that in the medical attendant's certificate in form B, even though a necropsy had not been done. These cases were not separately analysed but were included as queries since that meant a professional decision by the medical referee.

A total of 11 457 cremations were included in the survey. Of these, 3810 (33.3%) were authorised on the basis of a coroner's certificate (usually involving a necropsy). There were 1994 (17.4%) queries arising out of the forms presented to the medical referee.

A total of 1048 (13.7%) medical forms showed that a necropsy had been carried out; table I shows the results of these. On the form used at this crematorium there is provision to indicate that

a necropsy has been undertaken by a doctor other than the two giving the medical certificates, and the great majority of such examinations were probably included. Approximately 42.4% of the cremations had been submitted to necropsy, though the proportion of these resulting from hospital examinations seems

TABLE I—Necropsies performed at Croydon Crematorium, 1975-81 (figures are numbers (%))

	Total necropsies	Necropsy diagnosis		
		No change	Different diagnosis*	Related diagnosis†
Reported on medical certificates	1048	568 (54.2)	304 (29)	176 (16.7)
Ordered by referee	28	5 (17.9)	21 (75)	2 (7.1)

*Different diagnosis is intended to refer to major differences with a different ICD coding and sometimes an entirely different system of the body.

†Related diagnosis is intended to indicate disagreement about the importance of disease processes in the cause of death.

low. Over half of the necropsies (other than those ordered by the coroner) resulted in no change in the clinical diagnosis, but in 29% the diagnosis on the confirmatory medical certificate after the necropsy bore no relation to the diagnosis given in the medical attendant's certificate in form B. In the remaining cases the necropsy had added to the clinical information about the cause of death but had not necessarily changed the aetiology in any fundamental way.

The necropsies requested by the referee show that in most cases the decision was fully justified since the cause of death on the medical certificates submitted had clearly not been definitely ascertained.

Forms authorised under the Cremation Acts

Form A. Application for cremation with statutory declaration—completed by applicant.

Form B. Certificate of medical attendant—completed by medical attendant in final illness.

Form C. Confirmatory medical certificate—completed by a medical practitioner fully registered for at least five years.

Form D. Certificate after post-mortem examination—completed by pathologist authorised to carry out post-mortem examination by medical referee.

Form E. Coroner's certificate—completed by HM Coroner.

Form F. Authority to cremate—completed by crematorium referee.

Croydon Area Health Authority, Taberner House, Park Lane, Croydon, Surrey CR9 3BT

J STUART HORNER, MB, FRCM, area medical officer

A review of the papers of the 28 cases in which a necropsy was ordered by the medical referee is shown in table II.

Discussion

The statutory procedure for cremation requires the executor or the next of kin to submit a formal application (form A) to the crematorium authority together with the certificate of registration of death from the local registrar and two medical certificates. The medical attendant's certificate (form B) must be completed by a doctor who has attended the patient before death and who has seen and examined the body after death. The form is normally completed by the doctor who gave the death certificate. The introduction of rota systems has made it more difficult for doctors to satisfy these requirements, especially as some coroners insist that all cases in which the patient has not been under continuous medical care for at least 24 hours before death must be reported to them.

The confirmatory medical certificate (form C) is less detailed and must be signed by a doctor with at least five years' experience. Since the 1951 Medical Act became law the Home Office has interpreted the original regulation as meaning a doctor who has been fully registered in this country for a period of at least five years. This decision has yet to be tested in the courts, though it offends experienced overseas doctors working here who, for various reasons, may not be fully registered. There seems to be no other requirement on the doctor signing the confirmatory medical certificate except that he must have seen the

medical attendant's certificate in form B and have completed the answers to various questions. In practice, most medical referees expect him to have seen the body of the deceased, to have spoken to the doctor who gave the initial certificate, and to have made a careful external examination of the body.

Cremation may be authorised by the medical referee in several other circumstances, most commonly when the coroner has issued a certificate (form E) or when a necropsy has been carried out at the request of the medical referee and a pathologist has certified the cause of death and confirmed that further toxicological investigations are unnecessary, using form D. When he is satisfied that the requirements of the Cremation Acts have been satisfied and the cause of death has been definitely ascertained the medical referee issues form F, which allows the cremation to proceed. A list of the six forms and their functions is set out in the box.

Almost one-third of the cremations in this series were authorised on the basis of a coroner's certificate. The coroner's local rules encourage doctors to refer cases to him in certain circumstances and in some of these the doctor is authorised by the coroner to issue a death certificate. The close relation between the medical referee and the coroner in this area allows for free exchange of information when this is considered to be in the best interests of the responsibilities of the respective officers.

In a high proportion of cases the medical referee had queries to raise. Some were relatively minor. Others were more fundamental, requiring protracted telephone calls to doctors, funeral directors, and relatives, and occasionally leading to the conclusion that a necropsy was the only satisfactory way of establishing the cause of death. It is

TABLE II—Analysis of necropsies ordered by medical referee

Age	Sex	Clinical diagnosis	Necropsy diagnosis	Notes	Diagnosis	
					Same	Different
90	F	Diverticulitis	Peritonitis, carcinoma of sigmoid colon	Seen at home by doctor for less than 24 hours		X
91	M	Circulatory collapse, perforated gastric ulcer	Uraemia, pyelonephritis, carcinoma of prostate	Long-stay hospital for 23 days before death		X
83	F	Myocardial infarction	Bronchopneumonia	At home; not seen for 14 days		X
70	M	Myocardial infarction	Coronary thrombosis	Acute hospital two hours before death	X	
86	F	Cerebrovascular accident	Cerebral thrombosis	Acute hospital eight hours before death	X	
85	F	Cerebral thrombosis	Coronary thrombosis, mitral stenosis	Nursing home one hour before death		X
80	F	Bronchopneumonia, cardiovascular degeneration, coronary disease	Acute heart failure, coronary atheroma, acute pyelonephritis	Not seen seven days before death—nursing home		X
86	F	Femoral arterial embolus, atrial fibrillation, congestive cardiac failure	Purulent bronchitis	Seen once 12 hours before death—acute hospital		X
66	M	Pulmonary embolism	Coronary thrombosis	Acute hospital		X
84	F	Cerebrovascular accident, cerebrovascular disease	Haemorrhage, duodenal ulcer	At home—seen six days before death		X
75	M	Pulmonary oedema, left ventricular failure	Cerebral embolism, myocardial infarction with mural thrombus, coronary thrombosis	Seen once 12 hours before death—acute hospital		X
74	M	Myocardial infarction	Myocardial infarction		X	
75	M	Pulmonary embolism, deep vein thrombosis	Inhalation of vomitus, intestinal obstruction, carcinoma of bladder	Acute hospital for two days before death		X
77	M	Lobar pneumonia	Coronary thrombosis, severe coronary atheroma	Acute hospital 10 hours before death		X
87	F	Cardiac infarct, ischaemic heart disease	Bronchopneumonia, subdural haematoma	Long-stay hospital; mode of death inconsistent with cause		X
71	M	Bronchopneumonia, acute on chronic bronchitis	Pulmonary embolism and infarction, inferior vena cava thrombosis, ischaemic congestive cardiac failure	At home. Not seen for over one month before death		X
82	F	Tracheorespiratory aspiration, carcinoma of oesophagus	Bronchopneumonia, cerebral arteriosclerosis	Long-stay hospital—two months		X
83	F	Chronic renal failure, cause unknown	Arterial hypertension, coronary atheroma	At home—refused medical examination		X
90	F	Bronchopneumonia	Haematemesis, chronic gastric ulcer			X
64	M	Pulmonary embolism, left ventricular failure	Myocardial ischaemia, coronary artery disease	Acute hospital		X
66	F	Coronary thrombosis	Massive pulmonary embolism, deep calf vein thrombosis			X
73	F	Myocardial infarction	Acute heart failure, severe coronary atheroma	Seen 10 hours before death	X	
50	F	Acute rheumatoid arthritis	Acute heart failure, pericarditis	At home, cause of death considered unusual		X
77	M	Cardiac arrest, carcinoma of stomach	Carcinoma of lung, old operation for carcinoma of stomach	Acute hospital, inadequate clinical details to establish cause of death		X
72	F	Congestive cardiac failure, ischaemic heart disease, hypertension	Uraemia, thrombosis of right renal artery, hypertension secondary to ischaemic left kidney	Acute hospital		X
75	M	Bronchopneumonia, secondary to carcinoma of bones and brain, carcinoma of bronchus	Carcinoma right lower lobe of lung		X	
82	F	Acute heart failure, pulmonary embolism, deep vein thrombosis	Congestive cardiac failure, left ventricular hypertrophy	Acute hospital, clinical details not consistent with stated cause of death		X
88	M	Bronchopneumonia	Pulmonary embolus, periprostatic venous thrombosis, carcinoma of prostate	At home, mode of death inconsistent with stated cause of death		X
Total					5	23

interesting that in 21 (75%) of the 28 cases in which the referee ordered a necropsy the pathologist's diagnosis differed appreciably from the clinical diagnosis—though no forensic problems were raised. This result upholds the referee's decisions and shows the need for a referee who will resolve them before the cremation is allowed to proceed. Despite the Brodrick Committee's view that a referee need not be medically qualified this assessment can only be done by a doctor, for it is commonly necessary to resolve apparent conflict between the available medical evidence. Surprisingly, there are few requirements for the office of medical referee other than to have been registered with the General Medical Council for five years. The appointment by the cremation authority must be approved by the Home Office, but in the last 10 years no request for approval has been rejected. The medical referee is given no guidance or training in carrying out his duties except perhaps fortuitously from a more experienced colleague who may introduce him to the general nature of the work. There are no standards against which he can assess any new events with which he is likely to be regularly confronted, and there is no ready access to more considered advice about such problems that may require resolution usually within hours. So it is hardly surprising that major differences in practice have emerged between cremation authorities. Such differences may create serious problems for medical referees who try to maintain their own predetermined standards since the example of the neighbouring crematorium will invariably be used to persuade them to reduce rather than to improve criteria that they use.

LACK OF CO-ORDINATION

The Home Office has failed to provide any overall co-ordinating role for cremation practice in this country despite having wide powers of inspection—presumably granted to ensure that minimum standards of cremation practice are maintained. These powers have not once been used in the last decade. Even when specific problems are drawn to its attention the Home Office is reluctant to intervene. So how is a medical referee expected to audit his work if there are no standards against which to assess his performance and if it is unlikely that he will ever be called on even to confirm, let alone justify, his professional decisions?

The medical referee has to satisfy himself that the cause of death has been definitely ascertained. Yet these words, designed 80 years ago, are ambiguous in the light of today's knowledge. Is his task merely to satisfy himself that all the procedures laid down by the Cremation Acts have been scrupulously followed? This seems to have been the view of the Brodrick Committee when it concluded that the referee did not have to be a doctor. Such a conclusion would, in practice, place the ultimate responsibility for deciding whether a cremation should proceed on the doctor signing the medical attendant's certificate in form B, and he may be relatively inexperienced or be faced with a conflict of loyalties with his practising colleagues when grounds for vague suspicion exist. Provided that all the documents were completed satisfactorily his decision would not be challenged if the need for the referee to be medically qualified were removed and the confirmatory medical certificate abandoned.

If, however, the task of the medical referee is to satisfy himself that those who have signed the various forms have reasonable cause for the views that they have expressed then there is some cause for concern. Every sixth application in the survey required further investigation. Such queries frequently meant telephone calls to the doctors providing the medical certificates, and their comments invariably required detailed medical knowledge to understand their full significance.

If the task of the medical referee is to establish that the cause of death has been definitely ascertained he will find this hard to do as more medical evidence accumulates. The proportion of cases in which the clinical diagnosis was supported by necropsy evidence was low (table I), though probably comparable with the rates reported from Birmingham³ and Scotland⁴ if it is assumed that approximately half the deaths in a given community occur in hospital. Several studies⁵⁻⁷ have shown that death certification in the absence of necropsy evidence is likely to be unreliable in establishing the precise cause of death. The Registrar General in a survey in 1955⁸ showed that only a half of death certificates accorded with necropsy evidence. A small survey by the Royal College of Physicians⁹ showed a similar result 20 years later. The present survey adds to the available evidence, though it was not primarily designed for this purpose and used less rigorous methods. In particular, the assessment of the differences identified was a personal one and was not discussed with either the pathologist or the clinician concerned.

The fact that over half of all the necropsies reported in this series

confirmed the clinical cause of death does not contradict reports from other studies. Almost all of these deaths occurred in hospital, and the doctor signing the medical attendant's certificate in form B had usually stated that he was at the necropsy or was aware of its results. It is far more significant that almost one-third of the confirmatory medical certificates signed after a necropsy showed a cause of death different from that shown on the medical attendant's certificate in form B. The proposal by the Brodrick Committee was that the confirmatory medical certificate should be abolished and that responsibility for signing the medical certificate should rest with the responsible clinician. Such a proposal would result in a fall in the number of cases presented for cremation in which the cause of death had definitely been ascertained. The significance of differences between the pathological diagnosis and the clinical diagnosis has been discussed in several papers⁵⁻⁷ and doubt has been cast on the accuracy of death certification.

REASONS FOR ACCURATE CAUSE OF DEATH

An accurate cause of death is needed for three reasons. Firstly, the community must have a safeguard to ensure that medicolegal investigations are undertaken in appropriate circumstances.¹⁰ Secondly, the community needs a more efficient system for disclosing unsuspected public health hazards. Thirdly, epidemiologists require improved mortality statistics to elucidate aetiological factors. Though Heasman⁶ argued that differences in clinical and postmortem causes of death cancelled one another out, Cochrane¹¹ more recently emphasised the importance of accurate certification for epidemiological purposes. Mortality statistics have increasingly become an essential tool in health care planning and are important in allocation of financial resources in the Health Service.¹²

This survey provides further evidence in support of the Brodrick Committee's argument for extending the circumstances in which a necropsy should be done. Emery¹³ suggested a greater use of routine necropsy for selected cases in particular localities, while Cameron *et al*¹⁴ argued that a proportion of hospital cases should be submitted to necropsy even though there may be no specific clinical justification. It seems more logical to incorporate such requirements into the existing cremation procedures rather than to reduce substantially the existing controls.

Sometimes it is argued that a doctor not in clinical practice and with only limited written medical information available to him cannot be expected to identify cases in which there are considerable discrepancies in the information provided. This survey has shown that the medical referee was able to identify with some precision those cases in which a necropsy was justified (tables I and II). Most cases in which a necropsy was ordered produced a pathological diagnosis substantially different from the clinical diagnosis given on the forms. Thus on the limited information available to him a medical referee can select a group of cases in which the clinical diagnosis will almost certainly be incorrect. Relatively few crematorium referees regularly requested any necropsies at the time of the survey by the Brodrick Committee, and a review of the mechanisms for ordering and financing such examinations now seems appropriate. Any increased use by referees of their power to order a necropsy depends, firstly, on crematorium authorities agreeing to meet the costs and, secondly, on the necessary forms being sent to the crematorium earlier than is now usually the case. A small survey in the present study showed that half of the forms arrived on the day of the cremation. According to the Brodrick Committee these delays are due to the requirement for two medical certificates, but no evidence was produced to justify this conclusion and my limited survey showed that 45% of forms are completed within 24 hours of death and fewer than 15% take longer than three days.

The importance of the differences in cause of death shown in the necropsies requested by crematorium referees is less clear. In this survey all 28 cases showed a satisfactory alternative explanation of death not involving foul play or hazard to public health, and so far as I know none of these cases was subsequently investigated by the police. But a more positive necropsy policy

continued on page 440

Scottish Council

Agreement on management of Forth Valley laboratory service

The Scottish Council met on 13 January with Dr Samuel McKechnie in the chair.

He reported that in November he and representatives of the council and the craft committees had met Mr Allan Stewart, Scottish Minister for Health and Social Work. Mr Stewart had, like his predecessor, Mr Russell Fairgrieve, been unwilling to issue a circular of guidance on the organisation and management of scientific services. He had, however, confirmed that the statement made by Mr Fairgrieve in the House of Commons on 12 November 1980 remained Departmental policy. Mr Fairgrieve had said: "I do not consider that any changes need to be made in the long-standing arrangements under which hospital laboratories are managed by medical consultants or non-medical scientists of equivalent standing as head of department, with appropriate delegation of duties to other staff." Mr Stewart undertook to reaffirm this policy at his next meeting with health board chairmen.

It was reported to the council that agreement had finally been reached between the BMA and the Forth Valley Health Board regarding the management of the Forth Valley laboratory service. The board had made an agreement with ASTMS and NALGO about the job description for the principal medical laboratory scientific officer (PMLSO), who, under the recommendations of the disputes panel, would perform a limited co-ordinating role as principal while also retaining his senior chief duties (10 October 1981, p 1004). This job description was unacceptable, mainly because the senior chief element of the job carried no accountability to the head of department. The only way to overcome this was to ensure that the job description of the head of department made clear his responsibility for this and other matters. Several unsuccessful meetings had been held between the board and BMA representatives, and in December the

terms of the BMA's dispute with the board had been widened to include the agreement between the board and ASTMS and NALGO, and also the failure of the board to implement a job description for head of department which had been agreed in November and then rejected by the area executive group.

On 13 January, however, a job description was finally agreed that gave the head of department scientific and administrative charge of the department; responsibility for the range and scope of the scientific work of the department, for the management of this work, and for departmental working policies; and responsibility for the departmental budget. It also stated that senior chief MLSOs (including the PMLSO when acting in his capacity as senior chief MLSO) were responsible for

their scientific work to the head of department.

In Fife the health board has still been unable to reach agreement with ASTMS on the terms of the disputes procedure invoked by the latter in the summer of 1981. The settlement in Forth Valley may result in action in Fife.

University finance

The Scottish Council is concerned about the implications of the cuts in UGC grants for medical schools and for the NHS. The effects will be more serious in Scotland, where university departments of clinical medicine have traditionally fulfilled a large service commitment in the NHS. Cuts in Scotland will thus have a serious effect on patient care. A letter has been sent to the Secretary of State for Scotland voicing the BMA's concern (5 December 1981, p 1558), and a meeting has been arranged with the Scottish Minister for Health and Social Work for 1 February. Professor J P Payne, chairman of the Medical Academic Staff Committee, has agreed to attend the meeting.

Hospital pharmacists: withdrawal of emergency services

The Guild of Hospital Pharmacists has made it clear that it does not want to endanger patients' lives because of the withdrawal of unpaid emergency services which started on 1 February. The guild has issued the following statement: "We do not want any loss of life to result from our action, and it is therefore recommended that where a drug is requested out of hours in an emergency—that is, a situation where there is an immediate threat to the life of a patient—that a pharmacist will come into hospital to supply that drug. It should be arranged in advance that such requests will be made by the senior medical practitioner available (normally the consultant in charge), and it should also be arranged as to how these requests will be dealt with. Pharmacists should not refuse to deal with them, but if they feel that advantage is being taken of this procedure by doctors making

requests that are not genuine emergencies, then further talks should be held with the health authorities to sort this out."

BMA advice

The BMA has pointed out to place-of-work accredited representatives that only the medical staff can determine what constitutes an emergency and that all hospital doctors, except those provisionally registered, have authority to sign for all necessary drugs. Any action that is taken will depend on local circumstances, and consultant and junior staff should liaise over necessary arrangements if they are in hospitals where pharmacists take action. The BMA's industrial relations officers are available for advice where problems cannot be resolved after discussions with administrators or DMTs.

Talking Point—continued from page 437

would probably be reflected by changes in local certification practice.

Few reports have appeared on the work of medical referees, who in any case are not required to produce annual reports or to issue any account of their stewardship. I have found that the existing procedures for cremation can work well, and with public spending being cut this may not be the time to press for a stronger Home Office inspectorial system. Even so, improvements can be achieved by better use of the existing rules. This may be a more sensible step than introducing wholesale changes whose effectiveness is uncertain.

References

- 1 Home Office. *Report of the committee on death certification and coroners*. Cmnd 4810. London: HMSO, 1971.
- 2 Havard JDJ. Medical review of the Brodrick Committee report. *Medicine, Science and the Law* 1972;12:5-8.
- 3 Waldron HA, Vickerstaff L. Necropsy rates in the United Birmingham Hospitals. *Br Med J* 1975;iii:326-8.
- 4 Cameron HM, McCoogan E, Clarke J, Wilson BA. Trends in hospital necropsy rates: Scotland 1961-74. *Br Med J* 1977;i:1577-80.
- 5 Waldron HA, Vickerstaff L. *Intimations of quality—ante-mortem and post-mortem diagnoses*. Oxford: Nuffield Provincial Hospitals Trust, 1977.
- 6 Heasman MA. Accuracy of death certification. *Proc R Soc Med* 1962;55:733-6.
- 7 Cameron HM, McCoogan E. A prospective study of 1152 hospital autopsies. *J Pathol* 1981;133:273-300.
- 8 Registrar General. *Registrar General's Statistical Review for 1956. Part III. Commentary*. London: HMSO, 1958.
- 9 Medical Services Study Group of the Royal College of Physicians of London. Death certification and epidemiological research. *Br Med J* 1978;iii:1063-5.
- 10 Havard JDJ. Accuracy of death certification—medico-legal aspects. *Proc R Soc Med* 1962;55:736-8.
- 11 Cochrane AL, Moore F. Death certification from the epidemiological point of view. *Lancet* 1981;ii:742-3.
- 12 Department of Health and Social Security. *Sharing resources for health in England*. London: HMSO, 1976.
- 13 Emery JL. Accuracy of death certification—certification of death by the pathologist. *Proc R Soc Med* 1962;55:738-40.
- 14 Cameron HM, McCoogan E, Watson H. Necropsy; a yardstick for clinical diagnoses. *Br Med J* 1980;281:985-8.

(Accepted 27 November 1981)