ORIGINAL ARTICLE

Implementation of the 2005 Coroners Rules Amendments: a survey of practice in England and Wales

Russell J Delaney, Ian S D Roberts

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See end of article for authors' affiliations

Correspondence to:
Dr R J Delaney, 7 Stork
House Drive, Lambourn,
Berkshire RG17 8ND, UK;
r.j.delaney@btinternet.com

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Background: On 1 June 2005, amendments to the Coroners Rules 1984 were introduced in England and Wales. These principally cover the retention of tissues from autopsies and their subsequent disposal. This study assesses regional variations in the interpretations of the amendments, and their impact on local autopsy practice in Oxford.

Methods: A questionnaire was circulated to pathologists in 120 coronial jurisdictions, addressing conditions under which histological material could be retained. A local review of autopsy practice was conducted before and after the introduction of the amendments.

Results: Questionnaires were returned from 71 coronial jurisdictions. 35 (49%) coroners provided written guidelines on their interpretation of the amendments. In 52 (73%) jurisdictions, pathologists are authorised to retain material to confirm/refine causes of death from natural causes. In 77% of jurisdictions, coroner's officers are responsible for obtaining instructions from the next of kin on subsequent retention, use or disposal of retained tissues. In Oxford, there has been a reduction in the proportion of cases in which histology is taken, but an increase in the proportion of cases in which a histology report is issued.

Conclusions: There is considerable regional variation in the interpretation of the 2005 Coroners Rules Amendments. These variations have potentially important implications for clinical practice.

In England and Wales, the coroner is an independent judicial officer with the principal responsibility of investigating sudden, violent or unexplained deaths. The coronial service is divided into approximately 120 jurisdictions based on traditional county boundaries, although in some areas the same person is the coroner for more than one jurisdiction. Currently, approximately 22% of all deaths in England and Wales are followed by a postmortem examination, of which >99% are performed under the instruction of the coroner.¹ The powers and jurisdiction of coroners in the investigation of death are detailed in the Coroners Act 1988 and in statutory rules.

Rule 9 of the statutory Coroners Rules of 1984 covered the preservation of material from postmortem examinations and states: "A person making a post-mortem examination shall make provision, so far as possible, for the preservation of material which in his opinion bears upon the cause of death for such period as the coroner thinks fit."²

On 1 June 2005 a set of amendments to these rules came into force.³ Prior to the introduction of these amendments, there was widespread concern regarding their potential impact on the routine inclusion of histological examination as part of the coronial autopsy, as recommended by guidelines on autopsy practice published by the Royal College of Pathologists.⁴ A significant proportion of these amendments concern the preservation of material from postmortem examinations. The amendments state "Where a pathologist preserves material ... he must notify the coroner of that fact forthwith in writing". The coroner in turn must "notify the pathologist of the period for which he requires the material to be preserved, being such period as in the coroner's opinion the material needs to be preserved for the purpose of fulfilling his functions under the 1988 Act". This is qualified by stating "if a period ... does not expire before the date on which the coroner's functions cease under the 1988 Act it shall expire on that date". Subsequent disposal or retention of material for audit, teaching or research requires the specific consent from the next of kin.³

The amendments do not define precisely the point at which the coroner's function ceases. For those cases in which an inquest is not opened, the coroner's function may be regarded as ceasing when a natural cause of death is provided, making retention of histological material without the consent of the next of kin unlawful in the majority of coronial autopsies.

However, as with any piece of legislation, the Coroners Rules Amendments are subject to interpretation by individual coroners. Variation in practice of coronial autopsy and inquest between different coronial jurisdictions is well documented.^{5,6} The aims of our study were to establish any regional variations in practice with regard to the preservation of histological material from coronial autopsies following the introduction of the June 2005 Coroners Rules Amendments, and to assess how our local autopsy practice in Oxford has been affected by the legislation.

METHODS

An electronic and postal questionnaire was sent to 208 consultant pathologists, selected from the online membership handbook of The Royal College of Pathologists, so that all coronial jurisdictions in England and Wales were covered (n = 120). The questions addressed whether written guidelines on the interpretation of the Coroners Rule Amendments had been provided with regard to under what circumstances histological material could be preserved from postmortem examinations, the length of time material could be retained for, and who was responsible for obtaining consent for retention or disposal of this material. Pathologists were also invited to add any further comments as they felt appropriate.

In addition, a review of postmortem histology practice in Oxford was performed. The autopsy reports and laboratory data were reviewed for all adult coronial autopsies performed by pathologists at the John Radcliffe Hospital, Oxford, UK, for the periods 1 March–31 May 2005 and 1 July–30 September 2005. Autopsies performed during June 2005 were excluded as this was a transition period during which new protocols were

introduced in response to the Coroners Rules Amendments. The laboratory data were reviewed for each case in order to determine whether any histological material had been retained. For each case, the autopsy report was reviewed to assess whether this information had been included in the final report and whether the histology results had been reported.

Statistical significance was determined by χ^2 tests.

RESULTS

Responses were received from 50 pathologists covering 71 coronial jurisdictions. This represents 59% of the coronial jurisdictions sampled.

Written guidelines for local pathologists were received from 35 of the 71 (49.3%) coroners, with pathologists in 11 (15.5%) jurisdictions having received some form of verbal guidance as to the interpretation of the Coroners Rules Amendments. No guidance was received from 25 (36.2%) coroners.

In 52 of the 71 (73%) jurisdictions, pathologists indicated that they were permitted to retain histological material to confirm or refine the cause of death in cases of death from natural causes. Pathologists in 17 (24%) jurisdictions indicated that histological sampling was not permitted under the jurisdiction of the coroner if death was due to natural causes, including four jurisdictions in which this was permitted only if specific consent of the next of kin had been obtained. In 3% of jurisdictions, pathologists replied that they were sometimes permitted to retain histological material in cases of death from natural causes.

In those jurisdictions where histological sampling is permitted from cases of death due to natural causes, 56% retain the material for the length of time specified by the coroner or the next of kin. A specific time period was given in 20 (37%) jurisdictions, with the length of time ranging from 2 weeks to 1 year. Of those, the most common specific length of time indicated was 3 months (40%). In 7% of jurisdictions, the material is retained until a definitive cause of death has been established.

In 77% of jurisdictions, the responsibility for obtaining instructions regarding the retention, use or disposal of any preserved material lies with the coroner's officers. In 8% of jurisdictions, pathologists indicated that there were specific personnel employed within their own departments with this responsibility. These personnel included tissue co-ordinators, specialist nurses and mortuary managers.

A variety of contrasting overall comments and opinions were received from the responding pathologists. Some described their current situation as ludicrous and impractical. One pathologist reported dismay with regard to the potential distress to relatives. Others reported problems with their practice following the introduction of the amendments, such as being unable to review histology before an inquest as the blocks/slides had already been returned to relatives. The difficulty with not being permitted to take histology was summarised by one pathologist as "the relatives and attending physicians have the same expectations from a PM whether it is a consent or coroner's case".

Other pathologists had more positive opinions regarding their current situation, such as "better than the situation that existed previously", "new arrangements working fine", "working well so far" and "no problems so far or anticipated".

HM Coroner for Oxfordshire authorises retention of tissue for histology or other analysis until completion of the inquest or, in the case of death due to natural causes, for a period of 3 months (also the time allowed for judicial appeal). At the time of providing a cause of death, the pathologist is required to list the retained tissue and provide reasons for retention. The coroner's officers are then responsible for obtaining consent

from next of kin for subsequent disposal, retention or use of the tissue. Despite the coroner authorising tissue retention in all autopsies, there has been a significant fall in the proportion of cases in which histological sampling has been performed following the introduction of the Coroners Rules Amendments. In the 3 months prior to the amendments, 107 of the 178 (60%) cases had histological samples taken, compared with 50 of the 147 (34%) cases in the 3-month period beginning from 1 July 2005 ($p < 0.001$) (table 1). There has been little change in the proportion of reports in which it is clearly stated whether any histological material has been retained. There has been a small increase in the proportion of cases from which histology had been taken, where a final postmortem histology report has been issued (62.6% during the 3 months before, compared with 80.0% after, $p < 0.05$).

DISCUSSION

This study has demonstrated substantial variation in the interpretation of the 2005 Coroners Rules Amendments across different coronial jurisdictions. The exact point at which the coroner's functions cease in cases of death from natural causes is inconsistent. Consequently, differences in the autopsy practices of consultant pathologists with regard to postmortem histology may depend, in part, on coronial jurisdiction. This is to be investigated in a follow-up survey by The Royal College of Pathologists. A quarter of responding pathologists indicated that, once a natural cause of death had been provided, no histological sampling to confirm or refine that cause of death was permitted by their coroner. This has potentially serious implications. The Royal College of Pathologists has published best practice guidelines on autopsy practice for a range of specific scenarios including sudden cardiac death, maternal death and deaths associated with epilepsy.⁴ Many of these guidelines recommend thorough histological sampling to confirm and refine natural causes of death. It is clear, therefore, that many pathologists will have difficulty fulfilling these best practice guidelines because of their coroner's interpretation of the Coroners Rules Amendments as to when histological sampling is permitted. The implication of this is that, without histological sampling, potentially inaccurate causes of death may be provided. This is clearly less than desirable and has resulted in pathologists in one coronial jurisdiction including a paragraph to that effect in their postmortem reports.

The autopsy has a vital role in auditing clinical practice and diagnostic performance. Studies have consistently shown that postmortem examinations of postoperative deaths can show significant discrepancies between pre-mortem clinical diagnoses and postmortem findings. Knowledge of these discrepant diagnoses before death may potentially affect management and/or survival of patients.⁷⁻⁹ One study of deaths following cardiac surgery found histology to be of particular value in the diagnosis of acute myocardial infarction.⁷ A recent meta-analysis and review of discrepancies between clinical and autopsy diagnosis identified several studies where postmortem histology altered macroscopic diagnoses and where macroscopically normal organs had histological abnormalities.¹⁰ Possible inaccurate postmortem diagnoses therefore have potentially serious implications for education, training and improvements in patient care.

In Oxford, the amendments have had an immediate impact on autopsy practice, despite the coroner continuing to authorise tissue retention in all cases. This suggests that there are additional factors influencing postmortem histology sampling. There is no apparent explanation for this change in our practice, although it may be related to the more rigorous administrative procedures introduced to cover tissue retention and subsequent use or disposal. The changes in our autopsy practice in Oxford

Table 1 Histological sampling before and after the introduction of the 2005 Coroners Rules Amendments

	1 March–31 May 2005	1 July–30 September 2005
Cases where material is retained for histology	60%	34%
Histology sampling referred to in autopsy report	Yes 56% No 44%	Yes 58% No 42%
Histology report issued	Yes 62.6% No 32.7% Uncut blocks 4.7%	Yes 80.0% No 20.0% Uncut blocks 0%

are reinforced by some of the additional comments received. For example, one pathologist reports that less histology is taken now simply because of the administrative procedures required to preserve, examine and dispose of material.

In other jurisdictions, pathologists report that their clinical practice has changed very little, with one pathologist in particular reporting that very little confirmatory histology was taken before the Coroners Rules Amendments, in part because of issues over funding. The funding of postmortem histology varies between departments and coronial jurisdictions. Some coronial budgets include provisions for postmortem histology, whereas others are reluctant to reimburse departments for this activity. Larger departments may be able to absorb these costs in their general histology budget, whereas others are unable to do so and will be less inclined to retain material from postmortems to confirm or refine natural causes of death.

The length of time for which histological samples may be retained varies considerably, with periods ranging from 2 weeks to 1 year. In many areas, the time period is directed by the coroner on an individual case basis. In these situations, some pathologists report that most relatives consent for indefinite retention for the purposes of the medical record and education, whereas other pathologists report that the majority of tissue is either returned to the body or disposed of. In Oxford, since the introduction of the amendments, 38 forms have been received from the coroner, detailing the wishes of relatives with regard to disposal of retained material. In all, 11 relatives have indicated a wish for disposal by burial, cremation or other lawful means and 24 have consented for retention by the hospital for a variety of purposes such as inclusion in the medical record, audit, teaching and research. Three have expressed a desire for the retained material to be returned to them.

A small proportion of pathologists indicated that they were permitted to take histological samples in cases of death from natural causes, but only with specific consent from the next of kin. The difficulty here is that there is no way of predicting from the outset the cases in which this is likely to be desirable, and it is clearly impractical to regularly attempt to obtain consent from a recently bereaved relative during the course of an autopsy. In the majority of jurisdictions, the coroner's

Take-home message

Considerable variation exists in the interpretation of the 2005 Coroners Rules Amendments. This may have important implications for autopsy and clinical practice.

officers are responsible for liaison between pathologists, coroners and relatives with regard to retention, use and disposal of any retained material. This has placed an additional workload on coronial staff, many of whom have not received training in obtaining consent. Some departments have employed specific personnel to carry out these tasks, although it is not apparent whether this is related to the Coroners Rules Amendments or other issues of tissue retention. Funding for additional personnel is, however, not available for most units.

It is clear that there are a wide range of standards and practices across the various coronial jurisdictions with regard to the preservation of postmortem histological material following the introduction of the Coroners Rules Amendments on 1 June 2005. These variations have potentially important implications for clinical practice.

The findings of this study would suggest that further more specific guidelines would be helpful to reduce variation in coronial autopsy practice.

Authors' affiliations

Russell J Delaney, Forensic Pathology Unit, Leicester Royal Infirmary, Leicester, UK

Ian S D Roberts, Department of Cellular Pathology, John Radcliffe Hospital, Headington, Oxford, UK

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