

3. Results of study

Evisceration of bodies

To perform an autopsy, the body has to be opened and the organs removed for detailed examination and dissection. This is the process of evisceration, a process that is carried out either by the pathologist or by the technical staff in the mortuary. After examination, the organs are replaced in the body (unless any significant parts are being retained for later examination) and the body reconstructed.

The organisational questionnaire examined two important aspects of this process:

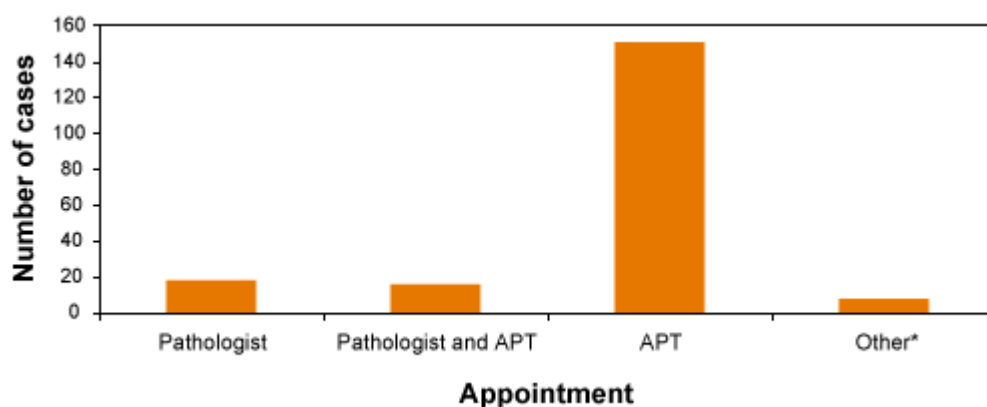
- Who performed the evisceration?
- Whether or not it was mandatory for the pathologist to inspect the body before evisceration.

Correlating these results with the assessment forms, NCEPOD considered whether the above points impact on the quality of the autopsy report itself.

Who performed the evisceration?

In 77% (149/193) of mortuaries the anatomical pathology technologist (APT) performed the evisceration, and in only 18% (34/193) of mortuaries was the pathologist normally involved with the evisceration of the bodies (Figure 8).

Figure 8: Who performed the evisceration?



** Responses on the organisational questionnaire marked as 'other' included: trainee pathologist or Resident Medical Officer. Some mortuaries made a note indicating that the person who carries out the evisceration "varies according to pathologist and case".*

The factors determining who performed the evisceration are multiple, and although not specifically explored in the questionnaire, may include:

- Pressure of time, if the pathologist has several cases to examine;
- Whether the case is performed by a pathologist in training;

- Whether the case is used for APT training;
- Risk of infection.

These data were also correlated with the mortuary type (Table 10).

Table 10: Mortuary type by who performed the evisceration		
	Hospital/combined mortuary	Local authority mortuary
Pathologist	16	2
Pathologist and APT	15	1
APT	136	13
Other	8	0
Total	175	16

Did pathologists see the bodies before evisceration?

To pursue this governance aspect over autopsy performance, NCEPOD asked whether it was 'mandatory for a pathologist to see the body prior to evisceration'. In one third, 33% (63/193) of all mortuaries, it was standard practice that the pathologist was not obliged to inspect the body externally before the evisceration and organ removal commences.

Although the numbers were small, in local authority mortuaries bodies were more likely to be checked by pathologists first, compared with hospital mortuaries (Table 11).

Table 11: Type of mortuary by whether or not it is mandatory for the pathologist to see the body prior to evisceration		
	Hospital/combined mortuary	Local authority mortuary
Yes	114	14
No	60	2
Unknown	1	0
Total	175	16

These data have important implications. Only the pathologist can make the decision not to examine the body before evisceration. However, it is the responsibility of the pathologist to identify the body prior to autopsy and check that the correct body is being examined. Although the coroner and his/her officers are responsible for ensuring that the chain of evidence of identification is secure, with appropriate delegation to medical systems of body labelling (if in hospital) and to the APTs for further confirmations, ultimately it is the pathologist who is accountable if the labelling is misidentified and the wrong body is opened.

In section 11 of the RCPATH Guidelines (2002), it states that:

"Under no circumstances should an APT commence opening the body before the pathologist has checked the identity, and examined the external surface of the body nor until the pathologist is satisfied that there are no suspicious circumstances, that the death has not occurred in relation to recent surgery and that there are no allegations of suboptimal care"³.

APTs are increasingly skilled health care workers and are properly and appropriately employed for this work. The RCPATH Guidelines are clear that, following inspection of the body prior to evisceration, the responsible pathologist must either be in the mortuary whilst the evisceration is being done by an APT, or be available to attend promptly should unexpected and significant gross findings become apparent during the process.

There are further guidelines that, ideally, the pathologist, or in conjunction with the APT, should make the main skin incision and remove the organs so that all abnormalities are inspected and palpated. This particularly applies to postoperative deaths, suicides, accidents and perinatal deaths. Furthermore the APT should not remove the brain from the skull before consultation with the pathologist. One standard text on the coronial system also emphasises that evisceration of the body organs 'should only be done under the direct supervision of the pathologist'⁴.

In the mortuaries with a smaller workload (≤ 52 cases per annum), it was more often mandatory for the pathologist to inspect the body prior to evisceration (75%), than mortuaries with a larger workload (Table 12). On the organisational questionnaire, it was indicated how many coronial autopsies were performed in the mortuary between 1st April 2004 - 31st March 2005, and the data were subsequently categorised into four groups: 52 or less a year (less than one case per week); 53 - 520 a year (10 a week); 521 - 999 a year; and more than 1000 a year. The raw data are presented as an Appendix.

Table 12: Mortuary workload by whether it was mandatory for the pathologist to see the body prior to evisceration				
	Cases per annum			
	≤ 52	53 - 520	521 - 999	≥ 1000
Yes	6	66	51	6
No	2	31	25	5
Unknown	0	1	0	0
Total	8	98	76	11

Did these details about the evisceration process affect the quality of the autopsy report?

The study produced evidence that the advisors' judgement as to the quality of the autopsy report was influenced by whether or not the pathologist examined the body first. Correlation between the assessment form and the organisational questionnaire showed that the external descriptions (as described in the autopsy report) were of better quality where pathologists inspected the body

first (Table 13). And similarly, the overall quality of the autopsy report was slightly better in cases where the pathologist inspected the body first (Table 14).

Table 13: Quality of the external description by whether it was mandatory for a pathologist to see the body before evisceration (<i>n</i> =1338)			
	Quality of external description		
	Good	Satisfactory	Unsatisfactory
Yes	261	401	138
No	120	302	115
Unknown	0	0	1
Total	381	703	254

Table 14: Overall quality of the autopsy report in cases where it was and it was not mandatory for the pathologist to see the body prior to evisceration (<i>n</i> =1338)					
	Quality of autopsy report				
	Excellent	Good	Satisfactory	Poor	Unacceptable
Yes	43	188	396	149	24
No	18	81	284	138	16
Unknown	0	0	1	0	0
Total	61	269	681	287	40

From personal experience some advisors were aware of instances where evisceration of the internal organs had taken place even the day before the autopsy was performed, let alone earlier on the day of examination. Apart from the potential of an examination on the wrong body, the result is the potential obscuring of critical external marks on the body as well as of the internal arrangements of the organs and their contents (e.g. pulmonary emboli dislodged, operative procedures rendered uninterpretable). The modes of opening the body and the internal examination will often be influenced by external markings (e.g. surgical procedures) and it is important that the responsible pathologist makes the appropriate decisions to maximise the utility of the procedure.

Finally, external markings might suggest that a forensic rather than a non-forensically qualified pathologist is required for a particular case because of the possibility of third party involvement in the death. Whilst the APTs are increasingly skilled and qualified, and in the process of applying to become a formal profession with Health Professions Council regulation¹⁰, these considerations should not be left to their discretion in the absence of the pathologist.

The reasons for this significant non-compliance with recommended best autopsy practice were not explored specifically in the study, but may be conjectured to relate mainly to saving time per case for both pathologist and APT:

- To save time if the pathologist has to travel to a mortuary away from his/her normal base; some mortuaries are known to be tens of miles distant from the nearest pathology department.
- To enable many cases to be examined during one autopsy session.
- If the pathologist does not consider it important personally to examine bodies prior to autopsy.

It may be that some pathologists consult in advance with APTs, in person or by telephone, over whether certain cases may be commenced before he/she arrives. It may be that highly qualified APTs can indeed reliably assess the external features in the context of the information about the case and act accordingly so as to maximise the quality of the autopsy product. But this is not formally established in practice protocols - for pathologists, APTs or coroners - and the public may be disconcerted to realise the extent of this delegatory practice and its implications.

Recommendation

Before evisceration of a body, the pathologist must inspect the body first. This is to confirm identity, to observe any external features that might modify the process of examination and to consider the possible need for a forensic examination.