THE CONTRIBUTION OF POSTMORTEM EXAMINATIONS TO THE AUDIT OF POSTOPERATIVE DEATHS

The role of NCEPOD is to review the delivery of care to patients who die after anaesthesia and surgery and to make recommendations for improvement. Confirmation of the quality of delivery of care may rely on confirmation of the diagnosis by a postmortem examination. Good practice cannot be assumed and where available, the report of the postmortem report is a valuable aid. It is for this reason that NCEPOD reports have contained reviews of the quality and content of available postmortem examination reports. This year, as there is a section on the management of malignancy, we have also reviewed the quality of histology reports. It is worrying that a third of these reports were inadequate for the purposes of tumour staging.

If it is accepted that an accurate cause of death is central to the assessment of perioperative deaths, it is of concern that an autopsy was performed in only 31% of deaths this year. Last year's 'Then and Now'[13] Report, which compared 1990 with 1998/99, found that the overall postmortem rate had dropped from 41% to 30%. It was noted that the hospital (consented) postmortem rate in 1990 was only 9% of postoperative deaths. By 1996/97 the hospital postmortem rate had fallen to an unacceptably low figure of 8%[14]. Unfortunately this decline has continued, with hospital postmortem rates of 4% being noted in 1998/99 and of 5% noted in this year's report, covering 1999/00. What is now clear is that virtually all postmortems are done for coroners.

Why should we be concerned about the high proportion of coroner's postmortems? In contrast to hospital postmortems, retention of tissues and organs from coroner's postmortems beyond the time needed to determine the cause of death is limited by 'Coroner's Rule 9'. This states that *"the person performing a postmortem 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 sees fit"*[15]. As a result, the pathologist is not permitted to sample tissues and organs comprehensively unless the families give consent. If this consent is not forthcoming the pathologist will not be able to refine and validate the cause of death according to nationally accepted standards [16, 17] which, in turn, may limit the quality of the information made available for clinicians and families on the underlying disease and its treatment.

It is recognised that the postmortem examination can produce new and clinically valuable information. There have been many studies showing that autopsy findings differ greatly from the clinical impression in many cases, and there is no indication that there has been any decrease in the proportion of significant discrepancies despite the increasing sophistication of diagnostic procedures[18, 19, 20]. Our figures of a major discrepancy in 23% of cases this year are consistent with the data of other authors. However, clinicians should not see these revelations as criticism or a threat but rather as a confirmation of the surgical diagnosis and operative findings (in the majority of cases) and a valuable form of audit. The pathologist can and should be one of the surgeon's teachers.

Making a reliable postmortem diagnosis is important not only for clinicians but also for the relatives of the deceased[21], quite apart from any benefits to education and research[22]. As a result of the recent organ retention issues and the huge media attention there has been a collapse of public confidence in pathologists. There is, therefore, a risk that the number of autopsies may fall even lower. Furthermore, families may increasingly attempt to withhold their consent for retention of tissues or whole organs from

coroner's or hospital (consented) postmortems without being fully aware of the benefits of appropriate retention of material, or they may consent to only limited autopsies. Another problem is that some coroners (fortunately only a few) are prohibiting any retention of tissue even if, in the pathologist's opinion, retention of tissues may have a bearing on clarifying the cause of death. In these circumstances pathologists should either refuse to conduct the postmortem examination or should state, in their report to the coroner, how this restriction has prevented the provision of a precise, reliable and auditable cause of death. We believe that it is time for some positive publicity for the autopsy. When properly performed, an autopsy is a crucial part of the investigation of a postoperative death[16, 21, 23, 24]. Appended to this editorial is a personal comment by Professor James Underwood, Vice-President of the Royal College of Pathologists.

Evidence-based comment and published recommendations will have no effect in producing change if they are ignored. In 1993 NCEPOD published a report into deaths which occurred during the years 1991/92[25] . Below is an abstract of some of the key issues from the review of postmortem examinations in that report:

- *"The number of postmortems should be increased."*
- *"Better communication between pathologists and other clinicians is needed."*
- *"Although the overall quality of postmortem examination is good, more frequent use of clinical/pathological commentaries and greater precision in the statement of causes of death are desirable."*
- *"The Enquiry deplores the action of some coroners in refusing to supply the postmortem report to the surgical team."*

The reader may notice many similarities with the key points from this year's report. Why has there been so little change in the performance of pathological services within our health services? One persisting issue is the lack of resources available to the coroner. There also needs to be a serious review of the persisting failures of communication and more teamwork between clinicians, pathologists[26] and coroners. This needs to be linked to improved support and provision from those agencies responsible for providing health care and concerted efforts to restore public confidence and understanding about the value of the autopsy.

POSTMORTEM EXAMINATIONS IN PERIOPERATIVE DEATHS

"Despite improvements in modern medicine and surgery, postmortem examinations continue to reveal that diagnoses made during life are incorrect or incomplete in about 30% of cases. Postmortem examinations therefore enable, first, bereaved families to have a more complete and reliable understanding of the reasons for their loss and, second, doctors to learn from autopsy findings for the benefit of future patients.

The climate of public opinion regarding postmortem examinations has recently deteriorated. The 'organ retention scandal' has resulted in an accelerated decline in the number of 'consent' cases and in fewer histological examinations of retained tissue for more reliably and precisely establishing the cause of death, particularly in postmortem examinations required by law. It has also exacerbated the consultant workforce crisis in histopathology, particularly in paediatric histopathology, by precipitating early retirements.

The Royal College of Pathologists is working actively with other agencies, including groups representing patients and bereaved families, to improve the public understanding of postmortem examinations. Much of the distress experienced by bereaved families is attributable not so much to the fact that tissues or organs were retained but that they were retained without the families' knowledge; at the time of burial or cremation, the body was assumed to be 'complete'.

Many families do recognise the value of postmortem examinations, to them and to future patients, and rightly wish to be actively involved, in partnership with doctors, in decisions about tissue and organ retention. In postmortem examinations required by law, it is essential that families have an opportunity, if they so wish, to seek justification for the examination and for the retention of tissue or organs which have a bearing on the cause of death.

Postmortem examinations may also be regarded by some families as an opportunity for altruism by allowing retention for teaching and research, thus enabling some good to accrue from their loss, in the same way that tissue and organ donation for transplantation has immediate benefits for the living."

James Underwood (Vice-President, The Royal College of Pathologists; Chairman, Royal College of Pathologists Working Group on Retention of Tissues and Organs at Postmortem Examination)