

## Hospital Practice

# Attitudes of junior medical staff to requesting permission for autopsy

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**Summary:** The attitudes of junior medical staff in a university teaching hospital to requesting postmortem examination were assessed. Following completion of 100 death certificates, autopsy was sought in only 28 cases (and refused in 18). The majority of staff were unaware of the reported benefits of autopsy, despite their inclusion in the local medical handbook and had received no training in how to seek permission for a necropsy. Formal education programmes have been shown to improve hospital autopsy rates and the results of this study suggest that these would be welcomed by junior medical staff.

### Introduction

In 1991 a joint working party of the relevant Royal Colleges published their report which expressed concern about the falling hospital necropsy rate.<sup>1</sup> Amongst their recommendations to reverse this trend was the suggestion that junior medical staff should be specifically trained to seek permission for autopsy from the relatives. This report was highlighted internationally,<sup>2</sup> and the benefits to be gained from postmortem examination reinforced within the Medical Staff Handbook which was given to all junior doctors at this university teaching hospital in August 1992.<sup>3</sup> The aims of this study were to review both the behaviour and the attitude of the current junior medical staff in the light of these publications, as regards requesting permission for necropsy.

### Methods

The relevant junior doctors who had completed the death certificates on 100 consecutive, non-selected general medical and geriatric in-patients, whose death had not been reported to the coroner, were interviewed. The study commenced on 12 December 1992 and terminated 21 January 1993. All interviews were conducted by one of the authors (SAH) and interviewees were reassured that all information would be collated anonymously. On each occasion the junior concerned was asked whether

an autopsy had or had not been requested, and the outcome of any requests. At the end of the study period the relevant doctors were re-interviewed, and asked for their comments on some of the published data cited in the joint working party report, whether they had actually read the local handbook for medical staff, what training (if any) they had received as regards requesting a necropsy, and whether they felt any (additional) training would be useful to them.

### Results

The 100 death certificates (69 general medical, 31 geriatric) were issued by a total of 26 junior medical staff (18 pre-registration house officers, eight senior house officers), all of whom were interviewed. The commonest certified causes of death were bronchopneumonia (34%), cardiac failure (24%) and malignancy (14%).

Of the 100 deaths, autopsy was performed in 10 cases out of a total of 28 in which permission for this was requested. There was considerable variation in the relative frequencies of the three possible outcomes (that is, autopsy not requested, requested but permission denied, permission granted) for the different medical staff. For example, one house officer made no requests for autopsy from a total of 11 deaths, whereas another made five (unsuccessful) requests out of six deaths. There was no obvious relation between the behaviour of the junior doctor and his/her grade or whether the patient had been under the care of a general physician or geriatrician.

Reasons given by the next-of-kin for refusing an

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autopsy (18 cases) were 'the patient had suffered enough' (15 cases, 83%), fear of disfigurement that might thus result (two cases, 11%) and concern over possible delay in funeral arrangements (one case, 6%).

The main reason given by the junior medical staff for not requesting an autopsy (72 cases) was that he/she was confident of the diagnosis (70 cases, 97%). At this stage of the interview, eight doctors volunteered that, on reflection, an autopsy should have been sought to confirm their clinical diagnosis. In the two remaining cases (3%), the doctors stated that they had been too busy to make the request.

The responses of the junior medical staff at the second interview to six questions relating to autopsy are summarized in Table I. Despite having received only 4 months earlier the Medical Staff Handbook containing a section highlighting the potential benefits of autopsy, the majority of the junior medical staff were surprised by the data published on this. In fact the majority admitted to never having read the handbook, and had not, in their opinion, received any training in how to seek permission for a necropsy.

## Discussion

More than one year after the publication of the working party report, the autopsy rate at this university teaching hospital is similar to national and international figures predating this.<sup>4</sup> The low rate would appear to predominantly reflect the fact that the junior medical staff who issue the death certificate are not requesting a postmortem examination, as distinct from permission being denied

by the relatives. Reasons given for refusal by next-of-kin were similar to those reported previously.<sup>1</sup>

The potential benefits of autopsy are well documented. A recent review of the literature showed that, in 24–66% of cases the main clinical diagnoses at death are not confirmed by the findings at necropsy.<sup>5</sup> Similarly, unexpected significant findings of relevant diseases are revealed in up to 64% of cases coming to autopsy and about 10% have pathology that would have materially altered clinical management had this been identified before death.<sup>6</sup> Such high levels of discordance must prompt caution when viewing those mortality statistics not supported by a necropsy.<sup>7–9</sup> Moreover an increased autopsy rate would, by providing more accurate epidemiological data, facilitate a more appropriate prospective planning of medical resources.<sup>10</sup> Significantly, in marked contrast to what is widely perceived,<sup>11</sup> advances in antemortem diagnostic techniques have not diminished the value of autopsy.<sup>12,13</sup> Necropsies also have an important role in clinical audit<sup>14–19</sup> and for the education of medical students<sup>20</sup> and trainee pathologists.<sup>1</sup>

Formal education programmes for medical staff have been shown to improve hospital postmortem rates significantly.<sup>21,22</sup> This study suggests that if an individual hospital wishes to attain the increased necropsy rates recommended by the working party,<sup>1</sup> then merely providing written support for the benefits of an autopsy to junior medical staff is not sufficient. An approach emphasizing the benefits to be gained from requesting autopsy to those doctors who would not otherwise do so, combined with a training programme to enhance the ability of those juniors who wish to obtain an autopsy to

**Table I** Responses of 26 junior doctors at the second interview

Question	Yes	No
Are you surprised that, following autopsy, major discrepancies between certified and actual cause of death have been reported in 10% of hospital in-patient deaths? <sup>12,23–25</sup>	17 (65%)	9 (35%)
Are you surprised that in 25% of deaths certified as due to malignancy, autopsy reviewed the cause of death as being not related to malignant disease? <sup>26</sup>	15 (58%)	11 (42%)
Are you surprised that in only 56% of autopsies performed on patients, thought to have died of malignant disease, was the primary site identified correctly in life? <sup>26</sup>	25 (96%)	1 (4%)
Have you read the section in the Medical Staff Handbook relating to hospital postmortem examination?	7 (27%)	19 (73%)
Have you received training on asking the next-of-kin for permission for autopsy?	3 (11%)	23 (89%)
Do you feel you should have received such training?	22 (85%)	4 (15%)

produce an increased proportion of positive responses from such requests, would be one way of addressing the different educational needs of junior

staff. Furthermore, the opinions collated here would suggest a positive response from the medical staff to such a formal education programme.

## References

- Royal College of Pathologists, Royal College of Physicians, and the Royal College of Surgeons. *Autopsy and Audit. A Report of a Joint Working Party*. RCPATH, RCP, RCS, London, 1991.
- Lauder, I. Auditing necropsies: learning from surprises. *Br Med J* 1991, **303**: 1214–1215.
- Royal Liverpool University Hospital Medical Staff Handbook. *Caring and Learning*. Royal Liverpool University Hospital, 1992.
- Ashworth, T.G. Inadequacy of death certification: proposal for change. *J Clin Pathol* 1991, **44**: 265–268.
- Cameron, H.M. Future of the hospital autopsy. *Br J Hosp Med* 1988, **44**: 335.
- Laissue, J.A., Altermatt, H.J., Zurcher, B., Truniger, B. & Gebbers, J.O. The significance of the autopsy: evaluation of current autopsy results by the clinician. *Schweiz Med Wschr* 1986, **116**: 130–134.
- Gobbato, F., Vecchiet, F., Barbierato, D., Melato, M. & Manconi, R. Inaccuracy of death certificate diagnoses in malignancy: an analysis of 1,405 autopsied cases. *Hum Pathol* 1982, **13**: 1036–1038.
- Kircher, T., Nelson, J. & Burdo, H. The autopsy as a measure of accuracy of the death certificate. *N Engl J Med* 1985, **313**: 1263–1269.
- Nash, I. The autopsy as a measure of accuracy of the death certificate. *N Engl J Med* 1986, **314**: 1259.
- Hartveit, F., Karwinski, B. & Gierstein, J. Changes in autopsy profile 1975 and 1984. *J Pathol* 1987, **153**: 91–98.
- Giles, A.P., Doshi, R., Menon, G.G. & Khan, M.K. Declining necropsy rate. *J Clin Pathol* 1991, **44**: 964.
- Goldman, L., Sayson, R., Robbins, S., Cohn, L.H., Bettmann, M. & Weisberg, M. The value of the autopsy in three medical eras. *N Engl J Med* 1983, **308**: 1000–1005.
- Stevanovic, G., Tucakovic, G., Dotlic, R. & Kanjuh, V. Correlation of clinical diagnoses with autopsy findings. *Hum Pathol* 1986, **17**: 1225–1230.
- Schned, A.R., Mogielnicki, R.P. & Stauffer, M.E. A comprehensive quality assessment program on the autopsy service. *Am J Clin Pathol* 1986, **86**: 133–138.
- Scottolini, A.G. & Weinstein, S.R. The autopsy in clinical quality control. *JAMA* 1983, **250**: 1192–1194.
- Cameron, H.M. The autopsy, past and present. *J R Coll Physicians Lond* 1984, **18**: 236–239.
- Reid, W.A., Harkin, P.J.R. & Jack, A.S. Continual audit of clinical diagnostic accuracy by computer: a study of 592 autopsy cases. *J Pathol* 1987, **153**: 99–107.
- Russell, G.A. & Berry, P.J. Postmortem audit in a paediatric cardiology unit. *J Clin Pathol* 1989, **42**: 912–918.
- Underwood, J.C.E., Cotton, D.W.K. & Stephenson, T.J. Audit and necropsy. *Lancet* 1989, **i**: 442.
- Benbow, E.W. Medical students' view on necropsies. *J Clin Pathol* 1990, **43**: 969–976.
- Clayton, S.A. & Sivak, S.L. Improving the autopsy rate at a university hospital. *Am J Med* 1992, **92**: 423–426.
- Champ, C., Tyler, X., Andrews, P.S. & Coghill, S.B. Improve your hospital autopsy rate to 40–50 per cent, a tale of two towns. *J Pathol* 1992, **166**: 405–407.
- Paterson, D.A., Dorovitch, M.I., Farquhar, D.L. *et al.* Prospective study of necropsy audit of geriatric inpatient deaths. *J Clin Pathol* 1992, **45**: 575–578.
- Schned, A.R., Mogielnicki, R.P. & Stauffer, M.A. A comprehensive quality assessment program on the autopsy service. *Am J Clin Pathol* 1986, **86**: 133–138.
- Gross, G.S., Neufeld, R.R., Libow, L.S., Gerber, I. & Rodstein, M. Autopsy study of the elderly institutionalized patient. Review of 234 autopsies. *Arch Intern Med* 1988, **148**: 173–176.
- Mollo, F., Bertoldo, E. & Grandi, G. Reliability of death certifications for different types of cancer. An autopsy study. *Path Res Pract* 1986, **181**: 442–447.