Leaders

Public perceptions of necropsy

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Introduction

The attitudes of the public have a major role in determining clinical necropsy rates. The reluctance of relatives to give consent for necropsy may be increasing because common misconceptions are not being corrected by medical staff. Public awareness of necropsy has not been investigated in any detail and more studies are essential if the fears and reservations of the public are to be understood and addressed. Only then can specific initiatives be designed to overcome public apprehension regarding necropsies. In the first study of this type the public awareness of necropsy was determined in terms of the purposes and the procedures involved in necropsy examinations.

Methods

QUESTIONNAIRE DESIGN

A postal questionnaire was designed by a panel of histopathologists, general practitioners and non-medically qualified health services research staff. Several versions were piloted during questionnaire development and the final version contained 10 questions with multiple stems relating to histopathology and necropsy. Respondents were required to tick a box within a limited range of options (tables 1 and 2). Space was left for additional comments. Each questionnaire was accompanied by an explanatory letter from the local general practitioner together with a stamped addressed reply envelope. A single reminder letter and further questionnaire were sent to non-respondents after four weeks.

QUESTIONNAIRE TERMINOLOGY

The questionnaire was entitled "what is a pathologist?" and most of the questions were related to the non-necropsy functions of a histopathologist; the large amount of data obtained in relation to these questions will be not be discussed in this paper. All participants in the pilot studies appeared to be aware of the necropsy component of histopathology and therefore specific questions relating to necropsies were included in the questionnaire. These preliminary studies also indicated that the terms "autopsy" and "necropsy" were poorly understood by the public. The term "post-mortem" was found to be the most acceptable synonym and this was adopted in the questionnaire.

SUBJECTS AND SAMPLING PROCEDURE

The sampling frame used was the Family Health Service Authority register of all patients registered with one local general practitioner. EpiInfo software[1] was used to draw a random sample of 500 people aged between 18 and 64 years from this practice population. The age range was selected to determine the views of the adult population and the upper age limit was set in recognition of the potential sensitivity of some of the questionnaire subject material, specifically necropsy. The sample was not stratified but the representativeness in terms of age and gender was validated. The size of the sample was chosen to enable the extrapolation of the findings to a wider population.

SURVEY POPULATION

A detailed assessment of the participating general practice population was made in order to establish that the survey population was representative of the general population in Sheffield. Several key characteristics were examined using the Sheffield Health Authority Locality and Practice Information System which ranks local general practice populations by a range of indicators attributed to the practice populations from the 1991 census. The indicators examined included: age distribution; ethnicity; mortality rates; chronic illness distribution; unemployment; unsupported family and state benefit status; and Jarman-8 underprivileged area and Townsend poverty scores.[2,3] The survey practice was not found to be at the extremes of the distribution for any of these variables and was considered to be representative of the general population.

Results

RESPONSE RATE AND ANALYSIS

A total of 323 questionnaires were returned completed and the response rate was 66% after the exclusion of 10 questionnaires which were not delivered. All of the questionnaire responses were entered into a database using EpiInfo software with a double key and verification technique to ensure accuracy.

RESPONSE REPRESENTATIVENESS

The response rate was slightly higher among women (67%) than men (62%) but this difference was not found to be significant using χ^2

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Table 1 Responses to items relating to the question "do post-mortems involve any of the following?"

Item	Responses			
	Yes	*No*	*Unsure/no answer*	*Total*
1 Getting permission from relatives in all cases	109 (34%)	168 (52%)	46 (14%)	323 (100%)
2 Examining the outside of the body	270 (84%)	22 (7%)	31 (10%)	323 (100%)
3 Examining the inside of the body	312 (97%)	1 (1%)	10 (3%)	323 (100%)
4 Examining the brain	257 (80%)	10 (3%)	56 (17%)	323 (100%)
5 Blood tests	227 (70%)	27 (8%)	69 (21%)	323 (100%)
6 *x* rays	114 (35%)	96 (30%)	113 (35%)	323 (100%)
7 Visible disfigurement of the body	192 (59%)	49 (15%)	82 (25%)	323 (100%)
8 Delay of the funeral	224 (69%)	41 (13%)	58 (18%)	323 (100%)
9 Cremation of the body in all cases	17 (5%)	236 (73%)	70 (22%)	323 (100%)
10 Going to court in all cases	57 (18%)	188 (58%)	78 (24%)	323 (100%)

Table 2 Responses to items relating to the question "which of the following reasons do you think post-mortems are needed?"

Item	Responses			
	Yes	*No*	*Unsure/no answer*	*Total*
1 To find out why people have died in hospital	234 (72%)	41 (13%)	48 (15%)	323 (100%)
2 To find out why people die suddenly at home	306 (95%)	4 (1%)	13 (4%)	323 (100%)
3 To teach medical students and doctors about disease	171 (53%)	82 (25%)	70 (22%)	323 (100%)
4 To find out if treatments work	87 (27%)	131 (41%)	105 (32%)	323 (100%)
5 To learn new surgical operations	58 (18%)	155 (48%)	110 (34%)	323 (100%)
6 To obtain hormones which can be used to treat other patients	74 (23%)	143 (44%)	106 (33%)	323 (100%)
7 To tell the family why a relative has died	275 (85%)	17 (5%)	31 (10%)	323 (100%)
8 To get organs for transplantation	118 (37%)	131 (41%)	74 (23%)	323 (100%)
9 To find out if it is okay to cremate the body	80 (25%)	161 (50%)	82 (25%)	323 (100%)
10 To find out how people have died in suspicious circumstances	303 (94%)	5 (2%)	15 (5%)	323 (100%)

tests. The response rate varied with age and questionnaires were returned by 51% of those aged between 18 and 34 years, 68% of those aged between 35 and 49 years, and 79% of those aged between 50 and 64 years. Factors influencing this variation would be expected to include differential responsiveness to postal questionnaires and higher mobility of younger people. No significant differences in knowledge and views were identified between the age groups using multiple χ^2 tests and the age differentiation of respondents does not prevent the application of our observations to a wider population.

QUESTIONNAIRE RESPONSES

One third of all respondents believed that permission for necropsy was required from relatives in all cases (table 1, item 1) but few thought that necropsies always involved a court attendance or cremation (items 9 and 10). A high proportion of respondents appeared to have a good understanding of the technical aspects of necropsy (items 2 to 6), but many considered that necropsies would result in visible disfigurement of the body (item 7) or delay of the funeral (item 8).

Table 3 Responses to items relating to the question "where have you learned about post-mortems and what a pathologist does?"

Source of information	*Number of respondents*	*%*
Television	210	65%
Books/magazines/newspapers	160	50%
Friends or relatives	71	22%
Personal experience	66	20%
General practitioner	6	2%

* Respondents could indicate more than one source if applicable.

Almost all respondents thought that necropsies were needed to find out why people die suddenly at home (table 2, item 2) or in suspicious circumstances (item 10). Many respondents also considered that necropsies were needed to find out why people have died in hospital (item 1) and to tell the family why a relative had died (item 7). There were variable responses to the other items relating to possible purposes of necropsies (items 4 to 6 and 8) but many believed that necropsies were needed for medical education (item 3). Only half of the respondents appeared to know that necropsies are not automatically required before cremation (item 9).

The commonest sources of information relating to pathology and necropsies were television and the popular press (table 3). Additional comments from respondents indicated that many of them recognised that forensic pathology, which is commonly featured in the popular media, may not represent the only role of pathology and there were many requests for further information about pathology and necropsies. A surprisingly high proportion of respondents had also gained some knowledge through personal experience and the experiences of friends and relatives. Many of these respondents made positive remarks in relation to the benefits that pathology can provide to both the living and the relatives of the dead through the provision of additional information. References to necropsies of family members, friends and coronial inquests were prominent.

Discussion

In contrast to previous studies based on perceptions of public beliefs, our observations sug-

gest that the general public has considerable appreciation of the nature and purposes of necropsy, its value to the advancement of medical science and its importance to the family.[4 5] This appreciation is not limited to the forensic and medicolegal aspects of necropsy, although these are clearly the commonest images of necropsy portrayed in the media and consequently the most widely known. Public perceptions of necropsy could be improved through education. The understanding of the facts surrounding necropsy is incomplete and often inaccurate, and should be corrected through the provision of appropriate information at both local and national levels.

The primary tool for reaching the public is through the media and a wide range of possible methods involving print, audio and visual techniques have been proposed elsewhere.[5] The recent booklet[6] published by the Royal College of Pathologists and entitled *Pathology: the hidden science that's saving lives* has rightly concentrated on those areas of pathology less well understood than necropsy but the contribution of necropsy to patient care and to medical research and education must be emphasised in all such material designed for use in public educational campaigns. The successful production and introduction of such materials is complicated by the sensitive nature of the subject and the lack of vocal support for such initiatives from health care professionals in general. Forensic pathology will always generate considerably more public interest than its hospital based equivalent and it is not surprising that few items appear in the popular media which are not related to the forensic aspects of necropsies.

The representative organisations of many clinical disciplines have actively supported the necropsy in recent years and the similar commitment of some individual clinicians is evident from the amount of literature in which a central role for necropsy is identified within medical audit, education and research.[7-11] Formal assessments of the attitudes of medical staff towards necropsies have consistently shown strong support for necropsies in principle, but these attitudes are not supported in practice and clinical necropsy rates continue to decline.[9 12-15] Many members of the medical community, including allied professions such as nursing, appear to be unaware of the importance of the necropsy and misconceptions regarding the procedures involved are common. The influence such negative attitudes can have on the public should not be underestimated and any measures to improve public awareness of the value of the necropsy must also address this issue. A positive image of necropsy must be introduced at an early stage of medical and related training and this must be reinforced by postgraduate education.[10 11] Our own observations have shown that the public believes that necropsies are important to medical education, and it is unacceptable that some medical students and clinicians appear to know little about the modern necropsy and its uses.[11] Advances in diagnostic techniques have not reduced the value of the necropsy, which remains a vital component of medical care.

Other factors that may influence the attitudes of the public towards necropsies include religious beliefs, the attitudes of funeral directors and the manner in which consent for clinical necropsy is sought.[16-21] These issues have been extensively reviewed elsewhere and should be addressed in all forms of education related to medicine. Permission for necropsy is often refused because of concerns over the physical appearance of the body and our observations confirm that the family should be reassured about the lack of disfigurement.[16] No external marks would be evident at a viewing or at an open casket funeral and necropsies can be performed through an existing incision if necessary. The option of a limited necropsy is often an acceptable compromise and a needle-core necropsy could be offered if there is complete opposition to any form of incision. Many relatives believe that a necropsy will delay or interfere with funeral arrangements and some funeral directors may actively counsel families against necropsy.[17] Particular family circumstances and some religions may require adherence to specific timing restrictions which can be honoured by expediting the necropsy or the performance of a limited examination. Necropsy, except under civil law requirements, is prohibited within some major religions.[18]

A major function of necropsies is to help families understand why a relative has died and the results of this study support such a role for necropsy. The potential benefits to relatives include reassurance through the confirmation of the cause and inevitability of death, the positive experience of contributing to the care of others and the provision of accurate information for familial disorders.[7 16] If these benefits are to be achieved there must be early communication with the family. Many relatives receive no information about the results of clinical necropsies and others suffer long and unnecessary delays.[22] It is important that all relatives are offered the opportunity to discuss necropsy findings with a clinician or general practitioner at a later date. The communication of medicolegal necropsy findings is often better, particularly through inquests, but there can be similar lengthy delays before the information is made available to relatives.

Our observations have demonstrated that the public has considerable understanding of the procedures involved in necropsy and to some extent the role of necropsies. All those who participate in the provision of health care and come into contact with bereaved relatives should have an accurate appreciation of modern necropsy practice. The possible benefits of necropsy to family and society should be understood and explained without expressions of personal indifference or aversion. Many families have to be informed of the requirement for a medicolegal necropsy and it is important that common misconceptions are recognised and corrected in such instances. The present study provides a valuable indication of the public awareness of necropsy.

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