Fatal illness in general practice

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SUMMARY. In an investigation of fatal illness during a 12-month period in a practice of 5,897 patients in Glasgow, 58 deaths (42 male, 16 female) were recorded. Malignant neoplasms and myocardial infarction in male patients of 50 years and over accounted for 27 (46·6 per per cent) of the deaths. Thirty (51·7 per cent) of the deaths took place in hospital. Fifteen (25·9 per cent) of the deaths were sudden. In patients dying in hospital of malignant, cardiac, and respiratory disease the duration of the terminal stay in hospital represented a small proportion of the total duration of the illness, the principal burden of their care falling upon their families and community resources.

In an integrated health service much yet remains to be accomplished in co-ordinating the efforts of hospital and community teams in caring for the fatally ill patient.

Introduction

We report a study of patterns of fatal illness in general practice. The term ' fatal ' is used to define an illness causing death from the time of its diagnosis whether measured in days, weeks, months, or years. The designation ' terminal ' is used to describe an illness in which the advent of death is considered to be likely in the near future and in which medical effort has the objective of palliation rather than therapy (Holford, 1972). Other terms such as final and incurable illness, which are thought likely to confuse the issue, are not used.

The Registrar General's *Annual Reports* provide data on causes of mortality. The quality of life enjoyed by patients with terminal illness has been well described by Cartwright *et al.* (1973). Hinton (1968) has described in detail the psychological problems of the dying patient and his family. Isaacs (1971) has referred to terminal illness in the elderly, remarking that the older a person is when he dies, the greater is his total demand for care in the period preceding his death.

Aim

This investigation was epidemiological. The objective was to derive information about mortality data in general practice and to consider the type of care required by the dying. This survey formed a preliminary to a study of bereavement among the near relatives of the deceased.

Method

One of us (BL) is a partner in a two-doctor practice in an industrial part in the Eastern district of Glasgow. During the year of investigation the practice list comprised 5,897 patients, principally in the lower socioeconomic groups. The sex distribution of the patients was 46 per cent male and 54 per cent female. The practice is located in a district of high-density living with poor social amenities, sub-standard housing, and high rates of unemployment, delinquency, and alcohol abuse.

All deaths occurring in the practice population were recorded during the 12-month period 1 September 1972 to 31 August 1973.

The general practitioner recorded the causes of death, personal data about the deceased, details of the fatal illness, and the place of death. The information was recorded on a proforma and analysed later.

Results

During the year of investigation, 58 deaths (42 male, 16 female) took place in the practice. The age range of the deceased was two months to 86 years (table 1).

TABLE 1

AGE OF DECEASED PERSONS

Under 10 years	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89
3	2	0	1	3	14	17	11	7

The primary causes of death by age and sex are shown in table 2.

Males with malignant neoplasm and cardiac disease in the 50–69 age-group made a major contribution to the total deaths.

TABLE 2

CAUSES OF DEATH BY AGE AND SEX

Cause of death	*Sex*	*Under 10 yrs*	*10–19 yrs*	*20–29 yrs*	*30–39 yrs*	*40–49 yrs*	*50–59 yrs*	*60–69 yrs*	*70–79 yrs*	*80–89 yrs*	*Totals*
Malignant neoplasm	M	—	—	—	—	—	5	5	2	2	14
	F	—	—	—	—	1	1	3	1	—	6
Cardiac disease	M	—	—	—	—	—	4	5	3	1	13
	F	—	—	—	—	1	—	1	3	1	6
Respiratory disease	M	1	—	—	—	—	2	2	—	2	7
	F	—	—	—	—	—	1	—	2	—	3
Accident	M	—	2	—	—	1	—	—	—	—	3
	F	—	—	—	—	—	—	—	—	—	0
Cerebrovascular disease	M	—	—	—	—	—	1	—	—	1	2
	F	—	—	—	—	—	—	—	—	—	0
Cot death	M	2	—	—	—	—	—	—	—	—	2
	F	—	—	—	—	—	—	—	—	—	—
Other	M	—	—	—	—	—	—	1	—	—	1
	F	—	—	—	1	—	—	—	—	—	1
TOTALS		3	2	0	1	3	14	17	11	7	58

Table 3 provides a comparison between the distribution of causes of death in the practice and that in the Eastern district (Wards 1–7) of Glasgow, i.e. the wider locality, during the year 1972. Significantly more deaths from malignant neoplasm and significantly fewer from cerebrovascular disease occurred in the practice than in the Eastern District of Glasgow. The place of the deaths is shown in table 4.

Of the 20 malignant neoplasms, the primary site was in seven cases the bronchus, three the stomach, two each the pharynx, prostate and ovary, one each the colon and bladder, and in one case the primary site was unknown.

Nine of the 19 deaths from cardiac disease occurred in patients who had no previous history of such illness.

TABLE 3
COMPARISON OF THE CAUSES OF DEATH: THE PRACTICE AND EAST GLASGOW

	The practice	*East Glasgow*	*Statistical significance*
Malignant neoplasm	20 (*34·5*)	543 (*21·3*)	p <0·01
Cardiac disease	19 (*32·8*)	868 (*34·0*)	NS
Respiratory disease	10 (*17·3*)	302 (*11·9*)	NS
Accident	3 (*5·2*)	118 (*4·6*)	NS
Cerebrovascular disease	2 (*3·4*)	367 (*14·4*)	p <0·01
Cot death	2 (*3·4*)	352 (*13·8*)	NS
Other	2 (*3·4*)		
TOTALS	58 (*100·0*)	2,550 (*100·0*)	

TABLE 4
PLACE OF DEATH

In hospital	30 patients (*51·7%*)
At home	17 patients (*29·3*)
Other*	8 patients (*13·8*)
Unknown	3 patients (*5·2*)

* In street, 6; drowned at sea, 1; in club, 1.

The terminal stay in hospital among the 30 patients dying there was as follows:

TABLE 5
DURATION OF TERMINAL HOSPITAL RESIDENCE (N = 30)

Time	*Number of patients*
Less than 24 hours	1
1 – 6 days	14
7 – 28 days	7
29 – 90 days	6
3 – 6 months	1
7 – 12 months	1

Fifteen (25·9 per cent) of the total deaths occurred after an illness lasting less than 24 hours. In all 15 instances they occurred in previously healthy individuals. The causes of such " sudden " deaths are shown in table 6.

TABLE 6
CAUSES OF SUDDEN DEATHS (N = 15)

Cause	*Number of patients*
Cardiac disease	9
Accidents	2
Cot deaths	2
Respiratory disease	1
Cerebrovascular disease	1
TOTAL	15

An attempt was made to delineate the pattern of medical care on a " home versus hospital " basis in those patients who suffered more protracted fatal illnesses. Twenty-five patients (43·1

per cent) experienced an illness lasting a year or more. Hospital admission was generally sought at the outset, mainly for the purpose of diagnostic assessment. Subsequently there were occasionally brief spells of hospital care before the terminal admission.

In all, there were 29 patients who had an illness lasting longer than 24 hours and who ultimately died in hospital. Table 7 indicates the relatively small proportion of the total illness

TABLE 7
MEAN DURATION OF NON-SUDDEN FATAL ILLNESS AND OF TERMINAL HOSPITAL STAY (N = 29)

Diagnostic group	*Number of patients*	*Fatal illness*	*Terminal hospital stay*
Malignant neoplasm	16	1.3 years	4 weeks
Respiratory disease	8	9.0 years	2 weeks
Cardiac disease	2	7.0 years	3 weeks
Cerebrovascular disease	1	8.0 weeks	8 weeks
Accident	1	3.0 days	3 days
Cause unknown	1	2.0 weeks	4 days

span which was spent terminally in hospital by patients with malignant, cardiac, and respiratory diseases.

Of the 16 malignant cases only six were admitted to hospital for medical reasons, e.g. investigations specialised therapeutic techniques, and skilled nursing attention. The remaining ten patients were admitted for social reasons—five could not be supported by their relatives and another five were living alone.

Discussion

In this study the preponderance of deaths occurred in males of 50 years and over. Malignant neoplasm and cardiac disease were outstanding causes of mortality.

In the pattern of causes of death during the year of investigation in the practice there were significantly more deaths from malignant disease and less from cerebrovascular disease than could be expected in the Eastern wards of Glasgow during the same period. Presumably this distribution of disease arises from the fact that only 8·6 per cent of the practice patients compared with 13·6 per cent of the population of Glasgow were over 65 years of age ($p<0·001$). This skewing of the practice population towards the younger age groups probably accounts for a greater loading of malignancy and a lesser incidence of cerebrovascular accidents than would otherwise have occurred. Using the City of Glasgow Medical Officer of Health's Report (1971), the practice population of 5,897 could be expected to have an annual death rate of 10·3 from cerebrovascular disorders, assuming that its age structure were identical with that of Glasgow as a whole; the actual occurrence of only two cases during the year of investigation can readily be explained by the shortage of patients over the age of 65 years in the practice.

Bronchogenic carcinoma accounted for 35 per cent of the neoplastic deaths. Myocardial infarction, with or without a previous history of cardiac disease, also proved to be a major killer, accounting for about one third of all the deaths. Although not of statistical significance, non-malignant respiratory causes of death displayed a trend towards a higher incidence than in the Eastern District of Glasgow as a whole. Bronchogenic carcinoma, myocardial infarction, and chronic bronchitis complicated by cor pulmonale or bronchopneumonia proved to be the principal killing diseases in the practice, together accounting for about 60 per cent of all the deaths. Aetiologically, cigarette smoking was probably an important factor in each of these conditions.

Despite the fact that over half the patients died in hospital, the principal burden of care in cases of malignant, cardiac, and respiratory illness fell upon the family. Cartwright *et al.* (1973) also found that 52 per cent of the deaths in their study took place in hospital. However, these investigators, working in London, found that nine per cent of their patients spent the whole of their last year of life in hospital. We found only two patients in our series who spent over three months during their final stay in hospital. This discrepancy may reflect differences in available hospital resources or in hospital policy between the two cities.

As Hinton (1968) has observed, there is an increasing tendency in Western society for death to take place in hospital rather than at home. In the present series 50 per cent of those who died in hospital had been admitted for social rather than medical reasons, i.e. the patient was living alone or the relatives were unable to supply the necessary care and attention. In an appreciable number of cases, therefore, the hospital became a hospice, providing a place of rest and accommodation rather than a specialist service. The medical decision to admit a terminally ill patient to hospital is, of course, delicate and must take account of many factors, including the nature of the patient's illness, the family's resources and the patient's own desires.

Ten of the 16 patients with malignant neoplasm were admitted terminally for social rather than medical reasons. It is in such instances that the family doctor tends to experience difficulty in securing the patient's admission to hospital.

We believe that if such patients live alone, or if the relatives are no longer able to provide the necessary support, they should ideally obtain admission to hospital with little delay. Bed shortage, however, is a limiting factor, especially in urban areas. Moreover, who should be responsible for such hospital care? Should this be the consultant who may have previously treated the patient? In some cases several specialists, e.g. surgeon, radiotherapist and geriatrician may have been involved; the family doctor may find difficulty in identifying who will accept responsibility.

A further question arises: is an acute ward the best place for a dying patient? Many now agree that a specialised hospital, such as St. Christopher's Hospice in London, for the terminally ill can provide the most appropriate care when inpatient management is indicated. Alternatively, as suggested in the Scottish document, *General Practitioners in the Hospital Service* (1973), the family doctor of the future could possibly assume responsibility for such patients in hospital.

In the re-organised Health Service the care of the fatally ill patient as yet falls far short of full integration. Communications between the hospital specialist, general practitioner, district nurse, and home help tend to remain tenuous. Likewise professional communications with the patient and his relatives are too often sparse in nature.

In the management of the terminally ill, the family doctor must give attention to relatives as well as to the patient. Sometimes with a dying patient, the relatives' personal resources can become exhausted. Admission to hospital of the patient may then become a medico-social necessity and not an act of rejection.

An opportunity to establish truly integrated care now presents itself in this important area of medicine. We suggest that our society requires a broader range of facilities and more interested professional staff in the management and care of the terminally ill and their relatives.

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