

Changes in prescribing for terminal care patients in general practice, hospital and hospice over a five-year period

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SUMMARY. Differences in prescribing between 1981 and 1986 were examined for 100 terminal care patients admitted to a city hospice in each year. Prescribing before and after the patients were admitted to the hospice was also compared for the two years. Between 1981 and 1986 there was a large increase in the number of patients receiving morphine sulphate tablets and a reduction in the numbers receiving Brompton's mixture and other unsuitable analgesics both before and after admission. Contrary to critical opinion, general practitioners showed more acceptable prescribing patterns in both years than hospital doctors. In the hospice more patients received non-narcotic analgesics and parenteral diamorphine by syringe driver in 1986 than in 1981. The need for an organized system of postgraduate training in terminal care is considered.

Introduction

IN the past decade, there has been an upsurge of interest in terminal care. Prescribing patterns are changing. The present study was undertaken to assess the extent of these changes over a five-year period in general practice, hospital and hospice, from the viewpoint of a city hospice.

Method

The study was undertaken in St Mary's Hospice, a modern, 25 bed hospice situated near the centre of Birmingham. The hospice admits patients mainly from a waiting list with social priority given to those who live alone, to those with a single carer, and to immigrants.¹ A retrospective survey was made of medical records of patients who died in the hospice in each of the years 1981 and 1986. Patient selection was based on 100 consecutive deaths from 1 May each year, accounting for 42% of hospice deaths in 1981 and 46% in 1986.

General practitioners and hospital doctors seeking hospice admission for their patients completed standard forms which gave details of the drugs given to the patients before admission. Analysis of the prescription forms used in the hospice provided information on inpatient treatment. Only drugs prescribed for symptom relief were assessed in the survey; cytotoxic and hormone drugs were excluded and the main categories of drugs included were analgesics, antiemetics, tranquillizers, sedatives, corticosteroids and antidepressants. Drugs were classified in accordance with the *British national formulary*.

Yates chi-squared test with one degree of freedom was used to test the difference in the drugs prescribed in the two years and between different groups of doctors. The test was considered significant at the $P < 0.02$ level.

Results

The age, sex and source of referral for the sample of patients were similar for 1981 and 1986 (Table 1). With two exceptions, all patients had cancer. An unexpected difference was found in the number of patients with breast cancer, with 20 patients having breast cancer in 1981 and seven in 1986 ($P < 0.02$). Administration arrangements and the medical criteria for admission remained unchanged over the period, with patients suffering from cancer and motor neurone disease being accepted for terminal care. One bed was reserved for the respite care of patients with other diseases; deaths occurring in this latter group have been reported elsewhere.²

Drugs prescribed before admission to the hospice

Table 2 shows a four-fold increase between 1981 and 1986 in the number of patients receiving morphine sulphate tablets at the

Table 1. Age, sex and source of referral for patients referred to the hospice in 1981 and 1986.

	1981	1986
<i>Age (years)</i>		
Mean	67	69
Range	29-87	22-85
<i>Sex (no.)</i>		
Male	45	40
Female	55	60
<i>Source of referral (no.)</i>		
Hospital doctor	43	41
GP	57	59

Table 2. Drugs which patients were taking on referral to the hospice: comparison between 1981 and 1986.

Drug	Number of patients	
	1981	1986
<i>Analgesics</i>		
<i>Narcotic analgesics</i>		
Morphine sulphate tablets	6	24***
Morphine elixirs	10	13
Brompton's mixture	12	2*
Dihydrocodeine tartrate tablets	16	2**
Non-opiate central analgesics	29	11**
Non-narcotic analgesics	7	15
Compound analgesic preparations	20	20
None	25	28
<i>Hypnotics, sedatives and anxiolytics</i>		
Tranquillizers	17	17
Sedatives	14	21
<i>Antidepressants</i>	2	5
<i>Antiemetics</i>	18	13
<i>Corticosteroids</i>	19	21

* $P < 0.02$, ** $P < 0.01$, *** $P < 0.001$.

time of referral to the hospice ($P < 0.001$) and this was associated with a significant reduction in the number receiving Brompton's mixture and dihydrocodeine tablets. In contrast to 1981 none of the patients referred in 1986 was taking pethidine, fortal or acupan.

More patients received oral analgesics ($P < 0.001$) and morphine sulphate tablets in particular ($P < 0.01$) from general practitioners than from hospital doctors (Table 3). No differences were found in the prescribing of other drugs by general practitioners compared with hospital doctors.

Drugs prescribed in the hospice

The number of patients receiving oral opiates in the hospice (59) was exactly the same for 1981 and 1986. The numbers receiving antidepressants, sedatives, corticosteroids and antiemetics was also similar for both years (Table 4). In 1986 fewer patients received morphine elixirs, with more being given morphine sulphate tablets and non-narcotic analgesics. In the last group, the difference was due mainly to an increased use of flurbiprofen and paracetamol. It is interesting to note that no patients were given aspirin. In 1986, there was reduced use of tranquillizers, mainly diazepam. Similar numbers of patients received parenteral diamorphine in 1981 and 1986, and although the hospice possessed a syringe driver in 1981, it was not until 1986 that the technique was used for 16 patients requiring parenteral diamorphine.

Comparison of drugs prescribed before and after admission

Comparing Tables 2 and 4 it can be seen that more patients in 1986 received oral opiates, antiemetics, tranquillizers, sedatives and corticosteroids in the hospice than before admission and fewer were taking no analgesics.

There was no difference between men and women in the drugs received either before, or after, hospice admission.

National trends in opiate prescribing

To determine whether the changes in prescriptions for opiate analgesics were in line with a national trend, data was obtained from the DHSS. The DHSS figures were calculated from approximately 1 in 200 NHS prescriptions submitted to the Prescription Pricing Authority from England and Wales, and 1 in 100 from Scotland (Table 5). They show a reduction in prescriptions for liquid morphine from 1600 in 1981 to 800 in 1985, and a six-fold increase in prescriptions for morphine sulphate tablets, thus supporting our findings. However, although nationally more prescriptions for dihydrocodeine tablets were dispensed in 1985 and 1981, the present survey shows a decline in the use of dihydrocodeine in terminal care ($P < 0.01$).

Table 3. Drugs which patients were taking on referral to the hospice: comparison between hospital doctors and general practitioners.

	Year	Number of patients prescribed drug by:	
		Hospital doctor	GP
Oral analgesics excluding morphine sulphate tablets	1981	28	56***
	1986	27	58***
Morphine sulphate tablets	1986	6	18**

** $P < 0.01$, *** $P < 0.001$

Table 4. Drugs which patients were taking at some stage in the hospice: comparison between 1981 and 1986.

Drug	Number of patients	
	1981	1986
<i>Analgesics</i>		
<i>Narcotic analgesics</i>		
Morphine sulphate tablets	0	34**
Morphine elixirs	59	37**
Dihydrocodeine tartrate tablets	4	1
Non-opiate central analgesics	18	7
Parental diamorphine (by syringe driver)	69 (0)	71 (16***)
<i>Non-narcotic analgesics</i>		
Paracetamol	0	12**
Flurbiprofen	1	12***
Compound analgesic preparations	11	22
None	8	9
<i>Hypnotics, sedatives and anxiolytics</i>		
<i>Tranquillizers</i>		
Diazepam	39	21**
Sedatives	43	55
<i>Antidepressants</i>		
	2	5
<i>Antiemetics</i>		
Oral antiemetics	31	34
Intramuscular prochlorperazine	18	18
Hyoscine injection	35	38
<i>Corticosteroids</i>		
	34	50

* $P < 0.02$, ** $P < 0.01$, *** $P < 0.001$.

Table 5. Estimated figures provided by the DHSS for the number of prescriptions for morphine elixirs and other oral opiates.

	Number of prescriptions (000s)	
	1981	1985
<i>Morphine elixirs</i>		
Diamorphine and cocaine	0.2	0.4
Diamorphine, cocaine and chlorpromazine	1.4	0.2
Morphine and cocaine	—	0.2
Total	1.6	0.8
<i>Other oral opiates</i>		
Morphine sulphate tablets	23.9	172.1
Dihydrocodeine tartrate tablets	1181.1	1321.9

Discussion

The survey shows that the use of drugs in terminal care, particularly analgesics, has changed between 1981 and 1986; in hospital and general practice, there was a significant and welcome reduction in the number of patients given Brompton's mixture — an outmoded pharmaceutical preparation that is never prescribed in hospices. Also in contrast to 1981, no patient referred to the hospice in 1986 was receiving pethidine, fortal or acupan — drugs that are generally considered unsuitable for terminal pain. With postgraduate teaching in terminal care becoming more widespread and with many articles on symptom relief in the medical press, the decline in the use of Brompton's mix-

ture and increased use of morphine sulphate tablets by hospital doctors and general practitioners might have been expected. However, critical assessments of the quality of care provided in general practice are common.³⁻⁵ Parker,⁶ in a study of terminal cancer patients in London found that 'although pain control in hospital has been much improved, the same cannot be said of pain control at home'. It is encouraging to note, therefore that general practitioners prescribed oral analgesics more frequently than hospital doctors.

The national figures for opiate analgesic prescribing showed a similar trend to our study in terms of prescriptions for morphine elixirs and morphine sulphate tablets but not for dihydrocodeine. The DHSS figures were based on a low number of sample prescriptions, were limited to NHS prescriptions dispensed in the community by high street chemists, and did not include drugs issued in hospital. Moreover, general practitioners do not record on the prescription form either their diagnosis or their reason for prescribing a particular drug. Therefore, the extent to which drugs are prescribed for specific reasons, such as pain relief in terminal care as opposed to pain relief in herpes zoster or chronic back pain, cannot be determined except in audits such as this.

With hospices being committed to symptom relief it is not surprising that many more patients were receiving oral opiates, antiemetics, tranquillizers, sedatives and corticosteroids in the hospice, though the differences are large. It does indicate the considerable difference in therapeutic management existing in hospices compared with hospitals and general practice. Although general practitioners prescribed analgesics for more of their terminal patients than did hospital doctors, when compared with hospice practice general practitioners might well ask themselves if their use of analgesics, sedatives and steroids is adequate. The infrequency with which antidepressant drugs were prescribed both outside and within the hospice is noteworthy, especially with Kübler Ross' fourth 'stage of dying' being 'depression'.⁷ This is often best managed by a psychotherapeutic approach, the provision of a 'safe' environment and good nursing care. In St Mary's Hospice, corticosteroids are often used for their euphoriant effect; they act more quickly than tricyclic antidepressants, lack the latter's anticholinergic effects and unlike the monoamine oxidase inhibitors can be used safely with opioids.

The regular use of oral drugs to control symptoms is fundamental to hospice care but the parenteral route must sometimes be used. At some stage 18% of inpatients required a parenteral antiemetic, over one third needed an injection of hyoscine, and 70% required parenteral analgesia to maintain good symptom relief. If 18% seems a high proportion of patients to have uncontrolled vomiting, especially when 32% of hospice patients received regular oral antiemetics, it indicates the difficulty in maintaining complete symptom relief with oral medication only. Although these figures are for inpatients, they almost certainly reflect the needs of terminal cancer patients in the community, where the provision of such care is more difficult. The suggestion that 70% of patients dying of cancer at home may need, at some stage during the illness, parenteral drugs for adequate symptom relief, can possibly be disputed on the grounds that patients are selectively admitted for hospice care. Support for this view is to be found in a paper by Rees,⁸ who reported that in mid-Wales people dying at home were less likely to be suffering from vomiting, incontinence or bed-sores, and less likely to have unrelieved physical distress than patients dying in hospital.

Changes in prescribing patterns can affect the locus of medical care. Spilling⁹ reported that cancer deaths in the home in England and Wales fell from 37% in 1965 to 32% in 1983 —

a pattern which looks ominously similar to the decline in domiciliary obstetrics. But in St Mary's Hospice the proportion of people referred for domiciliary care who died at home increased from 30% in 1981 to 55% in 1986. This improvement was associated with an improved method of administering parenteral drugs to the patient at home, using the Graseby syringe driver. This enabled four-hourly injections of diamorphine to be discontinued, with analgesia maintained by continuous subcutaneous injection of diamorphine, administered by a nurse visiting once daily. Other drugs, including steroids, antiemetics and hyoscine were used with diamorphine, as reported by Dover¹⁰. This is a simple way of ensuring that dying cancer patients needing parenteral drugs at home receive them regularly. The number of syringe drivers available to the hospice was increased from one in 1981 to nine in 1986, with two being reserved for inpatients and seven for patients at home. Sensible use of this technique will enable general practitioners to care more effectively for patients dying at home and help to reverse the trend towards hospitalization. But if general practitioners wish to maintain a role in terminal care, they should not be complacent about their present ability to care for patients at home. They need to reassess their commitment to terminal care and even consider the advisability of an organized system of postgraduate training in terminal care, perhaps similar to that for the obstetric list.

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