Personal characteristics and drug histories of patients undergoing treatment for drug dependency

	Patients prescribed heroin (n=28)	Patients prescribed methadone (n=29)
Mean age (years)	28·4	30·4
No of men:women	15:13	23:6
Psychological test scores on admission:		
Beck depression inventory[1]	17·3	18·0
Taylor anxiety scale[4]	24·2	25·6
Mean age at first use of heroin (years)	21·7	20·2
Mean duration of use of heroin (years)	6·4	8·1
No who regularly injected opiates	19	14
Mean No of previous treatments (range)	1·6 (0-6)	1·8 (0-7)
No of patients who reported having used (and mean daily dose):		
Heroin only	18 (625 mg)	18 (721 mg)
Methadone only	4 (47 mg)	7 (39 mg)
Heroin and methadone	5	·2
Other opiates	1	2

different (536 mg and 653 mg). In both groups there was a strong correlation in patients who had injected heroin between the stated daily dose of illicit heroin before admission and the final dose of opiate required as an inpatient. This relation was much less consistent among those who had smoked heroin.

When objective and subjective withdrawal scores were averaged for each group the only significant difference occurred on the second day, when the mean objective score for the group given heroin was greater ($t=2·23$; $p<0·05$). There was no significant difference between the two groups in the time of onset of craving, and neither group identified the treatment drug as being like any particular opiate (heroin, methadone, morphine, codeine, Diconal).

Comment

We found that opiate misusers can be successfully stabilised with either oral heroin or oral methadone and that patients were unable to identify which drug they received. The mean doses required for stabilisation by the two groups indicate that methadone has approximately 1·5 times the potency of heroin when used to prevent withdrawal. Although our study is the first reported direct comparison of oral administration of the two drugs, the result is consistent with what might have been expected from available information.[1,2]

The patients who received heroin required more aliquots of opiate during the first 24 hours and had significantly higher withdrawal scores on the second day of stabilisation when the drug was given regularly rather than on demand. This may be because heroin has a shorter half life than methadone and more doses are required before blood concentrations are high enough to suppress withdrawal throughout the day.

The consistent relation between the stabilisation dose and the reported daily dose of injected heroin suggests that patients had reported their use fairly accurately and that street heroin currently has a purity of less than 10%. The less consistent relation for patients who had smoked heroin suggests that absorption by this route is erratic.

We thank the patients, the pharmacists in Tooting Bec and Springfield Hospitals, and the staff of the regional drug dependence treatment and research unit, Springfield Hospital. The work was supported by a research grant from Bayer UK.

1 Martin WR, Jasinski DR, Haertzen CA, *et al.* Methadone—a re-evaluation. *Arch Gen Psychiatry* 1978;**28**:286-95.
2 Gilman AG, Goodman LS, Rail TW, Murad F, eds. *Goodman and Gilman's the pharmacological basis of therapeutics.* 7th ed. New York: Macmillan, 1985: 491-531.
3 Beck AT, Ward AH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Arch Gen Psychiatry* 1961;**4**:561-71.
4 Taylor JA. A personality scale of manifest anxiety. *Journal of Abnormal and Social Psychology* 1953;**48**:285-90.

(Accepted 15 December 1989)

Deaths from asthma in the mentally handicapped

James M Stuart, Sarah L Stewart-Brown, John Harvey, Kieran Morgan

Southmead Health Authority, Southmead Hospital, Bristol BS16 5NB
James M Stuart, MFCM, *senior registrar in public health medicine*
Sarah L Stewart-Brown, MFCM, *consultant in public health medicine*
John Harvey, MRCP, *consultant physician*
Kieran Morgan, MFCM, *director of public health*

Correspondence to: Dr James M Stuart, Gloucester Health Authority, Gloucester GL1 1LY.

Br Med J 1990;**300**:720-1

A review of avoidable causes of death in the Southmead health district identified a high mortality from asthma among 5-44 year olds.[1] Mortality from asthma in the district was twice the national figure, with an average of two deaths a year. Research has identified potentially avoidable factors that contribute to death from asthma —namely, failure by the patient, relative, or attending medical staff to appreciate the severity of the attack; failure to reach hospital sufficiently quickly; and failure of medical staff to give adequate treatment.[2] We conducted a confidential inquiry to examine whether such contributory factors could have been partly reponsible for the deaths of residents in Southmead Health Authority.

Subjects, methods, and results

We obtained copies of the death certificates of all residents in Southmead Health Authority who died from asthma aged <45 between 1974 and 1986 from the Office of Population Censuses and Surveys; we also examined these subjects' medical records.

The age and sex distributions of the subjects, place of death, and identified failures of management (for example, underprescription of steroids) did not explain the high mortality from asthma. Four of the 24 deaths, however, occurred in residents of hospitals for the mentally handicapped, and in four other cases learning difficulties had been documented. Thus a third of those who died had mental disability—a group estimated to comprise 0·6% of the district's population. Six of these eight subjects died from acute asthmatic attacks and two from complications of chronic asthma (table). A reduction in the dose of oral steroids in case 2 may have contributed to the patient's death. In case 4 asthma had not been recognised until the final illness, which was treated with only low doses of oral salbutamol. In case 7 a recommendation by staff at a chest clinic to prescribe long term oral steroids had not been implemented.

Comment

The mentally handicapped have not previously been recognised to be at a high risk of dying from asthma. We found no correlation between districts with a high mortality from asthma and districts, such as Southmead, with a high number of beds for the mentally handicapped per 1000 population.[1,3] A study in the West Midlands region, however, showed an association between long stay mental hospitals (those for the mentally ill and those for the mentally handicapped) and all avoidable causes of death, particularly those classified as pneumonia and bronchitis.[4] Our findings may therefore illustrate a poorly recognised national phenomenon.

Difficulty and delay in diagnosis have been reported as contributory factors in deaths of mentally handicapped children from conditions requiring emergency surgery.[5] People with learning difficulties probably experience problems in appreciating or communicating

Deaths from asthma among people with learning difficulty living in Southmead Health Authority, 1974-86

Case No	Age at death (years)	Main cause of death (as stated on death certificate)	Clinical details
1	9	(*a*) Bronchopneumonia (*b*) Chronic respiratory failure (*c*) Asthma	Severe mental retardation; resident of long stay mental hospital. Acute asthmatic episode one month before death
2	10	Status asthmaticus	Mental and physical retardation. Known to be asthmatic. Dose of inhaled steroids reduced two weeks before death
3	14	Status asthmaticus	Developmental delay. Known to be asthmatic
4	22	Status asthmaticus	Severe subnormality with aggressive behaviour; resident of long stay mental hospital. Asthma not recognised before terminal illness
5	22	Status asthmaticus	Delayed physical and mental development. Known to be asthmatic; taking oral and inhaled steroids
6	36	(*a*) Congestive cardiac failure (*b*) Cor pulmonale (*c*) Asthma and emphysema	Prader-Willi syndrome; resident of long stay mental hospital. Acute asthmatic episode one month before death
7	37	Status asthmaticus	Mental retardation; resident of long stay mental hospital. Recommended maintenance treatment with steroids not implemented
8	42	(*a*) Acute respiratory failure (*b*) Bronchial asthma	"Dull normal" with IQ of 85. Known to be asthmatic. Treatment at time of death not known

the severity of an asthmatic attack. There may also be delays on the part of nursing and medical staff in recognising or responding to an attack. Such factors have been shown to contribute to deaths from asthma in the general population.[2] We suggest that giving attention to the management of asthma in both adults and children with learning difficulties may be important in preventing death from this cause.

We thank Dr Mary McGraw for help in reviewing the records of deaths in children.

1 Charlton J, Lakhani A. *Avoidable deaths study 1974-83. Inter-authority comparisons and consultancy.* Birmingham: Health Services Management Centre, 1986.
2 British Thoracic Association. Deaths from asthma in two regions of England. *Br Med J* 1982;**285**:1251-5.
3 Yates J. *Inter-authority comparisons 1986.* Birmingham: Health Services Management Centre, 1987.
4 Johnson KW. *Mortality for conditions amenable to medical intervention in Walsall and other health authorities in the Wet Midlands region.* Birmingham: West Midlands Health Authority, 1986.
5 Pledger HG, Fahy LT, van Mourik GA, Bush GH. Deaths in children with a diagnosis of acute appendicitis in England and Wales 1980-4. *Br Med J* 1987;**295**:1233-5.

(Accepted 27 December 1989)

Prevalence of subjective dysphagia in community residents aged over 87

B R Bloem, A M Lagaay, W van Beek, J Haan, R A C Roos, A R Wintzen

Leiden University, The Netherlands
B R Bloem, *medical student*

University Hospital, PO Box 9600, 2300 RC, Leiden, The Netherlands
A M Lagaay, MD, *research fellow, gerontology section, department of pathology*
W van Beek, MD, *research fellow, gerontology section, department of pathology*
J Haan, MD, *lecturer, department of neurology*
R A C Roos, MD, *senior lecturer, department of neurology*
A R Wintzen, MD, *senior lecturer, department of neurology*

Correspondence to:
Dr Wintzen.

Br Med J 1990;**300**:721-2

Dysphagia may have many implications for social and physical health; dysphagic people often have malnutrition and airway infections due to aspiration, and their reluctance to eat meals with others present may lead to social isolation. The prevalence of dysphagia increases with age,[4] but there have been no studies of dysphagia in unselected elderly people. We therefore studied the prevalence of subjective dysphagia in a population of elderly people living in the community.

Subjects, methods, and results

In a gerontological study in Leiden, of the total cohort of 1259 residents aged 85 years or over on the entry date of 31 December 1985, 977 were visited at home. They all had a medical interview and the mini mental state examination.[2] In August 1988 a questionnaire about symptoms on swallowing or choking, or both, was added and included the following questions: Are you bothered either by choking or coughing after eating or drinking, or by pieces of food getting stuck in the throat, or swallowing more than once to get the same bite down, or spilling swallowed fluid through the nose?

Out of the 977 subjects, data on swallowing were available from 136. Because people living in nursing homes had been visited early in the study the subgroup visited after August 1988 consisted of subjects living at home. People who gave a positive answer to one or more questions were considered to be dysphagic. Incomplete medical interviews were excluded from the analysis. The results were analysed statistically by χ^2 and Kendall's Tau B tests.

Six subjects were unable to complete the interview, which left 130 for analysis. Twenty one subjects (16%) gave a positive answer to one or more questions. Dysphagia was not related to age, sex, or mini mental state score ($p>0{\cdot}10$; table). Disorders of the central nervous system (Parkinson's disease and stroke) or oesophageal stenosis confirmed by a doctor occurred significantly more commonly in dysphagic than non-dysphagic subjects.

In six subjects the dysphagia was particularly severe: four reported daily choking, or impaired passage of food, or both, two of whom had to be extremely careful with every meal. The two remaining subjects had been forced by dysphagia to restrict their diet to porridge. Strikingly, none of these six subjects had volunteered symptoms before.

Occurrence of dysphagia by sex, age, mini mental state examination score, and coexistence of diseases. Unless stated otherwise figures are numbers of subjects

	Total	Dysphagic		Odds ratio (95% confidence interval) and significance
		Yes	No	
Total	130	21	109	
Sex:				
Men	27	3	24	NS
Women	103	18	85	
Age (years):				
87-89	73	10	63	NS
90-95	57	11	46	NS
Mean (SD)	89·6 (2·3)	90·0 (2·3)	89·5 (2·3)	NS
Mini mental state examination score*:				
≥24	90	13	77	NS
17-24	27	6	21	NS
≤17	12	1	11	NS
Mean	25·0 (5·0)	24·9 (4·1)	25·0 (5·2)	NS
Stroke and Parkinson's disease	19	9	10	7·43 (2·52 to 21·9)**
Oesophageal stenosis	3	2	1	11·37 (0·98 to 131·7)***

*Not available for one subject with reported dysphagia. **$p<0{\cdot}01$; ***$p<0{\cdot}02$, χ^2 test.

Comment

The number of subjects who gave a positive answer to one or more questions indicates that dysphagia is common in people aged over 87. Reports on the impact of dysphagia on populations of older people are scarce.