

Injuries in rural practice: their incidence and management

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SUMMARY. Injuries in a rural practice were studied for a five-year period. Nine hundred and sixty-five incidences of injury were recorded in a population averaging 1,308 patients. There were complete records for 894 patients; the remaining 71 had left the practice. Eighty-six per cent of cases were managed entirely in the practice; when radiographic facilities used by the practice were included, this figure rose to 97 per cent.

Methods by which this proportion of injuries may be managed in general practice involve political decisions as well as provision of facilities to enable general practitioners to achieve this aim.

Introduction

THE incidence of most conditions requiring medical care is known with reasonable accuracy from general practice and hospital records, but there is considerable uncertainty over the occurrence of accidents. The majority of serious injuries are included in hospital statistics, but the incidence of less serious injuries is ill-defined: figures relating to patients with minor injuries who attend their own general practitioner or a casualty department are thought to be suspect in that they are either incomplete or overlap. It seemed that a rural practice might provide accurate figures of the incidence of injuries presented for medical care and of the proportion of injuries which can be managed in general practice and the facilities required.

The study practice is 50 miles from a casualty department with a house officer on the staff. The nearest hospital is eight miles away and the general practitioner is on the staff of its casualty department, along with a general practitioner anaesthetist and a general practitioner surgeon; radiographic facilities are available.

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Method

The practice population averaged 1,308 patients over the five years of the study from 1975 to 1979, and during this time all injuries reported to the general practitioner were recorded (RCGP, 1963, classification 470-487) together with Hogben number, social class and marital status. Where an accident resulted in more than one recorded injury, only the most serious one was included in the survey. From information received from the general practitioner or hospital involved, or as a result of the patient's own reporting, incidents known to have occurred outside the practice area were also recorded. It is unlikely that many injuries sufficiently serious to cause a patient to seek medical aid went unrecorded. Accidental deaths were included in the study, but two cases of suicide were excluded.

Records of the incidents of injury were inspected to determine the place of consultation, the use of radiography and referral of patients to specialists.

Results

Nine hundred and sixty-five incidents of accidental injury were recorded during the study. The age and social class of the patients are shown in Table 1. Full records were available for inspection in 894 (92.6 per cent) cases, the other 71 had left the practice.

For the first consultation 62 per cent of patients attended the surgery, 15.9 per cent attended a local casualty department, 0.8 per cent attended another hospital, and 21.3 per cent required a home visit.

Table 2 gives a breakdown of the types of injury. The lacerations category includes traumatic amputations, superficial injuries, contusions, abrasions and crushings (RCGP classifications 483). There was a total of 195 actual lacerations and 75 (38 per cent) were sutured—a suturing rate of 12 per 1,000 per annum.

Seventy-one (80 per cent) of the fractures were treated entirely in the practice, the only extra facilities required being radiographical. In addition, five forearm fractures were reduced with the help of an anaesthetist.

Other injuries included burns, foreign bodies, and dislocations. Twenty-eight patients were treated for burns, an incidence of 4 per 1,000; 51 patients were seen with injuries caused by various foreign bodies (45 being

Table 1. Age, social class and incidence of injury per 1,000 patients.

	Age (years)					All ages
	0-4	5-14	15-44	45-64	Over 65	
<i>Social class I</i>						
Incidents	4	3	6	4	3	20
Patients	3	11	20	10	12	56
Rate	267	55	60	80	50	71
<i>Social class II</i>						
Incidents	6	11	39	18	11	85
Patients	5	26	47	26	31	135
Rate	240	84	166	138	71	126
<i>Social class III</i>						
Incidents	8	33	60	23	20	144
Patients	10	40	74	40	47	211
Rate	160	165	162	115	85	136
<i>Social class IV</i>						
Incidents	32	77	133	68	47	357
Patients	24	99	184	99	117	523
Rate	267	156	145	137	80	137
<i>Social class V</i>						
Incidents	39	64	150	49	57	359
Patients	18	73	135	72	85	383
Rate	433	175	222	136	134	187
<i>All social classes</i>						
Incidents	89	188	388	162	138	965
Patients	60	249	460	247	292	1,308
Rate	297	151	169	131	95	148

in the eye), an incidence of 7 per 1,000. One dislocation (of the interphalangeal joint) was seen during the five-year period.

A radiographer took all the radiographs. The plates were assessed initially by the author, then formally reported on by a consultant radiologist who visited on a weekly basis. The decision to use radiography was made when a fracture could not otherwise be excluded, or to demonstrate the degree or type of deformity.

A total of 21 patients (2 per cent) received consultant care and three of these patients died, one as the result of a road traffic accident. Two other patients were killed in road traffic accidents. Thus there was a total of five accidental deaths.

Discussion

During the period of the study over half of all consultations took place in the surgery, not an unusual proportion in a rural practice (Wilson, 1982). A sharp contrast is shown with the place of initial consultation for injury, where about four times as many patients reported to the surgery or to a casualty department as requested a visit, demonstrating that with injuries the patient is as anxious as the doctor to do something quickly.

The incidence of injuries varies with age and social class, and age is obviously a more objective measure to

Table 2. Radiography and types of injuries. (Full records of 71 patients were not available.)

	Number of incidents	Radiographs taken	
		Number	Percentage
Sprains	202	33	16.3
Lacerations	451	41	9.1
Fractures	89	46	51.7
Other injuries	152	2	1.3
Total	894	122	13.6

be applied to other practices and populations. For example, the overall incidence of injuries of 148 per 1,000 patients in this study is similar on superficial examination to Hodgkin's (1973) figure of 142. However, when Hodgkin's figures are adjusted on the basis of his practice's age profile the amended figure is 173, suggesting that additional injuries may have been treated elsewhere.

The age-related incidence of injuries showed that the risk of injury in pre-school infants is double that for the total population. However, this study failed to confirm the increased risk for other children which Hall (1982) found in patients attending a hospital casualty department.

The increased risk of injury in patients in social class V compared with those in social class I is not entirely surprising. Nevertheless, this difference cannot be entirely due to hazardous conditions at work since the increased incidence applies also to children in social class V.

Almost half of the fractures were diagnosed on clinical grounds alone. Most of these cases involved undisplaced fractures of superficial bones such as ribs or metacarpals, where radiography plays little or no part in management. Fractures and their treatment are a major cause of anxiety in general practice, and the availability of radiographic facilities determines whether these injuries can be managed in any particular practice.

In total, only 13.6 per cent of patients had radiographs taken. This has obvious financial implications when compared with house officer-staffed accident and emergency departments, where 44 per cent of patients may undergo radiography (Reilly, 1981). Furthermore, any reduction in incidental radiation is worthwhile.

Referrals for specialist care involved 13 patients with major fractures and eight for reasons as varied as metallic foreign body in the eye and possible abdominal injury. Similarly, a study from a general practitioner hospital in rural Wales showed that 2 per cent of its casualties were transferred for consultant care (Kyle, 1971).

When the figures for age-related incidences in this survey are extrapolated for an average practice of 2,500

patients with the national age range shown in the 1971 census (Registrar General's Report, 1971), a national incidence of 158 is found, which would give an estimated 394 incidents of injury annually. The present study demonstrated that it was possible to manage 86 per cent of injuries entirely in the practice and, with the aid of radiographic facilities, this percentage rose to over 97 per cent without having to use anaesthetic services or hospital beds. The management of injury is the essence of general practice and deserves the widest possible encouragement.

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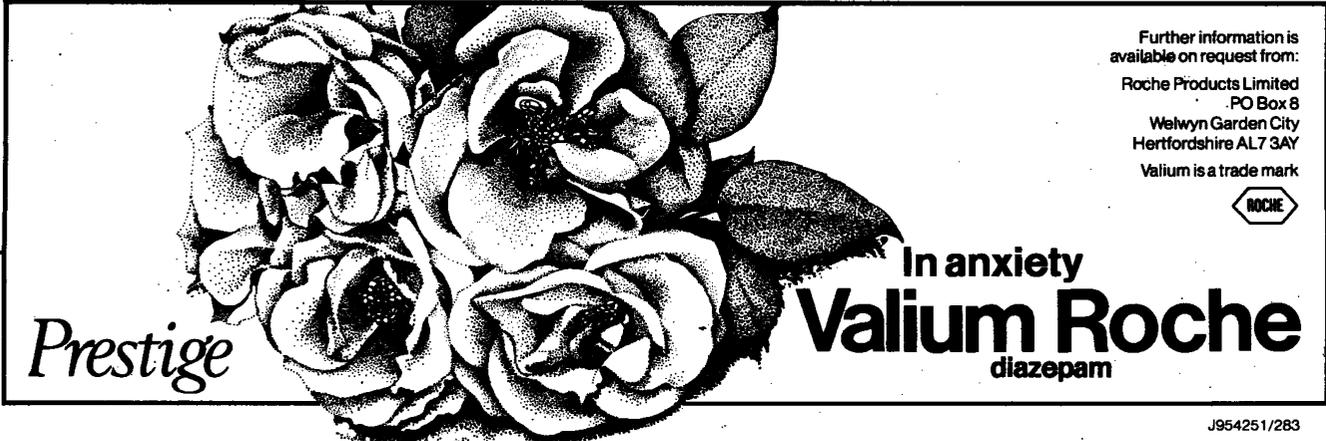
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Deaths by cause

The total number of deaths registered in England and Wales for the March quarter 1982 (166,440) was 5,886 (3.7 per cent) above the number registered in the March quarter 1981 but about average for the equivalent quarter over the past 10 years.

There was no influenza epidemic in the quarter, the number of deaths assigned to influenza (433) being slightly lower than the figure (474) in the March quarter 1981. Deaths assigned to all diseases of the respiratory system increased by 2,605 (+9.5 per cent), accounting for nearly half the total increase. The majority of this increase was in pneumonia deaths (+1,555) and the continuing tendency to certify deaths to chronic airways obstruction (+719). Deaths assigned to diseases of the circulatory system also increased by over 2,000 (+2.8 per cent), the figures being very similar to those for the March quarter 1980. The comparison of figures for March quarter 1982 with March quarter 1981 shows that there were small increases in the number of deaths assigned to all the other main chapters of the *International Classification of Diseases*: neoplasms 147 (+0.4 per cent), diseases of the digestive system 187 (+4.3 per cent), diseases of the genitourinary system 190 (+8.9 per cent) and accidents and violence 34 (+0.6 per cent). The figures for the detailed components of the last category are affected by the industrial action of registration officers and should be treated with extreme caution.

Source: Office of Population Censuses & Surveys (1983). *OPCS Monitor* DH2 83/1: 15 March.



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