

## The child with repeated injuries— a family problem

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*“ . . . that is your problem! And it is not going to be solved by ivory tower professors, white-coated research men with radiation monitoring badges on their lapels, nor multi-million dollar fund-raising campaigns . . . it is going to be solved at the levels of doctor to patient, doctor to family, doctor to casual group, doctor to local group and doctor to community ”.*

Dietrich (1965).

**SUMMARY.** Recurrent injuries in children should be regarded as a symptom complex rather than a diagnosis of ‘accident proneness’. Investigation, which may include much listening will often reveal a family with emotional problems. The family doctor who can see the family as a whole is often best placed to offer or co-ordinate help.

### Introduction

In the United Kingdom more than 1,500 children between the ages of one and 14 years die from accidents each year. Accidents are twice as common as neoplastic disease which is the next most common cause of death in this age group (table 1). While in many countries there has been no significant increase in the number of accidents in children during the past decade the proportion of deaths attributable to accidents has risen (table 2). Because of such figures, accidents have been aptly described as ‘today’s plague’ (Miles, 1969).

TABLE 1  
DEATHS IN ENGLAND AND WALES IN CHILDREN AGED 1-14 YEARS OF AGE PER YEAR

Total	4,790
Accidents	1,577 (32.9%)
Neoplasms	783 (16.3%)
Respiratory disorders	656 (13.7%)
Congenital disorders	618 (12.9%)
Infections	456 (9.5%)

TABLE 2  
ACCIDENTAL DEATHS IN GERMANY 1933 AND 1967

	Number of deaths per 100,000 male children and adolescents from 1 to 20 years of age	Percentage mortality of male children and adolescents from 1 to 20 years of age
Germany 1933	37.2	15.4
German Federal Republic 1967	45.5	52.0

Von Harnack (1973)

Why then is there such collective complacency about accidents? It is true there are national and local organisations which are deeply concerned with accident prevention, but many doctors must wonder how individually they can play any effective part in accident prevention. It is easy to assume that accident prevention is largely the responsibility of others, be it the government, manufacturers or town and home planners. There is no doubt that in recent years the progress made by surgeons and anaesthetists in the resuscitation and treatment of injured children has been much in advance of our ability to prevent accidents occurring in the first place.

### **Role of the general practitioner**

The role of the general practitioner in the prevention of childhood accidents becomes clearer once it is accepted that accidents are not caused simply by dangerous objects or only by a dangerous environment. Accidents are the result of interaction between the child and his environment and every accident should be viewed as a breakdown in that particular child's adjustment to his own environment. For the child, the most important part of his environment is his home and his family and it is here that the general practitioner can make a useful contribution.

An increasing proportion of our work today is concerned with child health rather than diseases of children. The majority of children are born in a healthy state and it is up to us to do all that is possible to maintain this state of good health. There is thus an increasing emphasis on screening procedures and a need to identify 'at risk' groups of children so that limited resources may be effectively used in maintaining optimal child health and development.

This article is about such a group of children with an increased morbidity rate; children mainly of school age who have repeated accidents. Repeated accidents in younger children will of course raise the possibility of deliberate physical abuse by parents or other adults. There is at the moment a great deal of concern about this problem, but I hope that in thinking of battered babies we do not forget that accidental injury is still the major cause of death in children over the age of one year.

### **The incidence of accidents in children**

Facts about the frequency of accidents and particularly for repeated accidents in a normal childhood population are scanty. Head and Husband (1972) studied 600 children between the ages of three and 11 years in Nottingham during a six-year period. They found an annual accident rate of 0.07 accidents per child for injury requiring attendance at a hospital accident department. Seventy-one per cent of these children did not attend the accident department during the study. Of the 29 per cent who had an injury during the study period, 11 per cent had three or more accidents. It was found that three per cent of the total group incurred 27 per cent of all the accidents. It is difficult to know what the incidence of child accident repeaters is for those children attending their general practitioners, but I feel it would be worthwhile to examine records to see if a small group of children with an increased accident rate can be identified.

### **Symptom complex or diagnosis?**

Children with repeated accidents should not be labelled as 'accident-prone'. This means a persisting and stable personality characteristic that predisposes an individual to have accidents. In this sense there is great doubt whether accident proneness exists and it certainly has not been proven in childhood.

An increased liability to accidents in a child results not only from individual personality characteristics, but also from many other factors such as exposure to hazard, sensory, motor and neural functioning, capacity for making judgements about hazards, degree of experience and training, and exposure to social and other stresses. Whether

a child will have repeated accidents depends on his degree of adjustment to his environment.

If the term 'accident proneness' is applied to these children then everyone feels that a diagnosis has been made, whereas repeated accidents should be viewed as a symptom requiring investigation in the same way as an adult with repeated bouts of pneumonia.

My interest in this problem was stimulated by meeting a family with three children aged eight, six, and five years. In less than five years they had attended our accident department on no less than 53 occasions, often because of minor injuries occurring at home. When one of our medical students visited this home, instead of finding danger in abundance he found a clean, well-maintained house which was well lit with approved electrical fittings, and he even found that medicines in this house were kept locked in a medicine cupboard. Here seemed good evidence for factors other than hazard *per se* being important as a reason for repeated accidents in children.

### Study of 24 families

We then studied 24 families where a child had attended the accident department on at least two occasions in the preceding 12 months (Husband and Hinton, 1972). There were 17 boys and seven girls with an average age of seven years. These children tended to have extrovert personalities and their parents frequently described them in such terms as "determined, daring, or fearless". The injuries incurred by these children are shown in table 3. They were not unduly severe accidents; almost half were minor limb injuries consisting of bruises and sprains and cases where trauma was alleged, but no sign of injury found; 10.3 per cent of the children required admission to hospital.

TABLE 3  
ANALYSIS OF ACCIDENTS

<i>Nature of accidents</i>	<i>All cases</i>	<i>Male</i>	<i>Female</i>
Limb injuries	62 (45%)	38 (39%)	24 (59%)
Cuts	25 (18.4%)	19 (20%)	6 (14.6%)
Head injuries	17 (12.5%)	14 (15.3%)	3 (7.3%)
Ingestions	10 (7.4%)	9 (9.5%)	1 (2.4%)
Fractures	9 (6.7%)	8 (8.5%)	1 (2.4%)
Foreign bodies	5 (3.8%)	2 (2.2%)	3 (7.2%)
Eye injuries	4 (3.0%)	2 (2.2%)	2 (4.8%)
Burns	4 (3.0%)	3 (3.3%)	1 (2.3%)
TOTAL	136 (100%)	95 (100%)	41 (100%)

These families tended to be large, with a mean number of children of 3.8; 46 per cent of the families had four or more children. A further finding was that none of the children was an only child. The importance of this is that a child's vulnerability to accidents is increased when there is excessive maternal preoccupation with either other children, illness, or work. Dalton (1970) found that 49 per cent of children admitted to hospital because of accidents came in during the mother's paramenstruum, a time when she herself also had an increased liability to accidents. Three sets of adverse circumstances were frequently present in these families. In 54 per cent housing was unsatisfactory in terms of overcrowding, general condition of the property, and space for play. In 50 per cent serious physical or psychiatric illness was present in other immediate members of the family. In 29 per cent the parents were either divorced, separated, or the mother was unmarried and not cohabiting in a stable relationship.

Only four of the 24 children were living in an environment where the parents'

marriage was reasonable, where there was a decent home to live in, and where the health of the rest of the family was good.

### *Mechanisms*

These families show how some children with some personality characteristics may react to various family problems with repeated accidents. Birnbach (1949) showed that accident-repeating children dominated social relations by physical means, and Marcus *et al.* (1960) considered that children with repeated accidents used the motor system as the primary channel for the expression of anxiety. Children with different personalities may react to the same stresses with other symptoms, e.g. asthma, enuresis, or recurrent abdominal pain.

The importance of the motor system is shown by the study of Matheny, Brown and Wilson (1971) in which they compared the behavioural characteristics of twins up to the age of one year and correlated these with their liability to accidents up to the age of six years. The amount of general activity was found to be strongly related to accident frequency. These children easily get into hazardous situations and their impulsiveness then impairs their ability to make risk-reducing decisions.

### *Physical illnesses*

Physical illnesses are relatively unimportant as a cause of repeated accidents in childhood though Manheimer and Mellinger (1967) found that disabilities such as poor eyesight and hearing were associated with a higher accident liability in girls. The earlier detection of physical handicaps which could predispose to accidents should enable parents and those involved with the care of these children to provide the necessary protection.

### **Investigation**

If these children are to be helped, it is important that accidents are not accepted as inevitable and that these children are not labelled as 'accident-prone'. Repeated accidents must be regarded as a symptom requiring further investigation. It is easy to treat each minor injury as a separate episode and not to look further. It is easy to be irritated by these families repeatedly bringing a child along with frequent minor injuries, especially if they arrive at seemingly inappropriate times, e.g. some days after a minor injury.

A general practitioner told me recently that he always asked at routine developmental checks if the child was eating and sleeping normally. *He* was not usually worried exactly how much the child ate or slept but felt that if the mother was concerned that her well child was not eating or sleeping enough, then this was a clue that all was not well between the mother and child. In the same way, repeated accidents may be a clue that all is not well with the family. It is important in a group practice that one partner should look after all members of a family. When a child is seen with repeated accidents the diagnosis may be a sick family and not just a sick child.

These families are often helped by sympathetic yet professionally sensitive listening. They usually welcome someone taking an interest in their problems and being willing to help. We should try to define areas in which they have difficulties and to understand with the parents any connection between these difficulties and the accident pattern. No attempt is made to alter the personality of the child, but we should try to increase their capacity to tolerate stress and if necessary alleviate some problems in the family. Sometimes parents may not realise how involved and confused their children have become by other problems in the family.

Sally was an unhappy looking ten-year-old girl admitted with a minor head injury. She had attended the hospital with another injury two months previously, though before this had never had any accidents. She complained so much of the noise in the ward that she had to be nursed in a cubicle. She was very close to her young brother aged eight months who had Fallot's tetralogy. This had already required two major operations and on the day she was admitted he was due to go back to hospital for his first

outpatient appointment since his latest discharge. She looked after him during the school holidays when her mother was at work. Her parents had not appreciated her intense fear that when he cried and went blue he might die. After her parents started to discuss his illness more frankly with her, she appeared much happier and had no further accidents over the following two years.

The value of safety education in these families is limited. They are often the families who will not be able to make use of safety education in the form of advisory posters or through propaganda in newspapers or on television. I am not suggesting that practical advice should never be given. This is one practical role for the family's health visitor, but advice without understanding will never help and the temptation to give advice so that we feel we are doing something when perhaps we ought to be listening more must be resisted. The use of medicine cupboards demonstrates how we cannot rely entirely on the common-sense safety approach. Accidental poisoning can still occur in homes where medicines are normally kept in a locked cupboard. So often the poisoning occurs when medicines have been taken out of the cupboard and left in reach of a young child while a mother preoccupied with other matters has her attention diverted. Sobel (1970) clearly showed that the traditional approach to the safe storage of drugs in the home was not enough to prevent accidental poisoning. He found that the incidence of accidental poisoning bore no relationship to home safety as measured by the quantity, toxicity, or availability of poisonous substances in the home. He did however find a relationship to family psychopathology and child-parent struggles.

The general practitioner with the help of his health visitor may be able to offer more specific help in the areas of marital problems, family illness, and poor housing. Parents are often unwilling to disclose marital difficulties, but are more likely to do so to the general practitioner they know—if given the time and opportunity. The health visitor may be able to give a great deal of support to the unmarried mother and this will include arranging a play group or a nursery school for the child when necessary. McGregor (1969) in a study of general practice has pointed out the increased accident frequency in families where there is illness. By successfully treating illness in other members of the family and being aware of the effect it has on the rest of the family, then children may be less likely to injure themselves. The provision of better housing is probably the most difficult of the adverse social factors to deal with. I think that poor housing in this group of children is seldom the only factor but when we feel that it is of major importance then we must be 'passionate' in our approach to remedying this, as suggested recently by Lord Goodman in the third Richard Dimpleby lecture.

This group of children is of concern to general practitioners because of their increased morbidity and even mortality. Family doctors with their specialised knowledge of family problems and their easy access to homes have an important part to play and will often be the most suitable people to take responsibility for them and to co-ordinate other professional workers and social agencies who may be trying to help.

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