Hazards from the use of child-resistant drug containers

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SUMMARY. Fifty-nine patients receiving repeat prescriptions for anti-rheumatic drugs were visited unexpectedly at home and found to have had experience with 'Snap-Safe' child-resistant containers. Forty-one (70 per cent) patients were unable to use them. Twenty-seven (46 per cent) patients adopted hazardous alternative methods of storage. Ways of reducing this problem are suggested.

Introduction

THE use of child-resistant drug containers for dispensing prescription drugs is widespread as a voluntary measure practised by the pharmaceutical profession. Safety packaging has been legally required in the United States for prescription drugs since 1974, and in the United Kingdom it has been mandatory for all drugs containing aspirin and paracetamol sold 'over the counter' for children since January 1976 and for adults since January 1977.

Accidental child poisoning has declined since these measures were introduced (Silbert *et al.*, 1977), and it has been suggested that the use of these containers should be extended to all drugs (Silbert *et al.*, 1979).

We suspected that the elderly, and others lacking dexterity, found difficulty using these containers and that the solutions they adopted created hazards.

Method

Sixty-five consecutive patients applying for repeat prescriptions for anti-rheumatic drugs in a semi-rural Nottinghamshire practice were visited at home without warning by a medical student (P.B.) attached to the practice. They were shown a 'Snap-Safe' child-resistant container (arrows on lid and body aligned and lid pushed off) and asked if they had had drugs dispensed in any. Patients then usually produced their own drugs for inspection spontaneously but, if not, were asked to do so. If they had experienced 'Snap-Safe' containers they were asked to demonstrate how they used them, and if they were able to do so, a note was made of whether or not they had found it easy. Those patients unable to use them were asked how they overcame the problem by demonstrating with their own drugs. A note was also made of the types of container the drugs were stored in, whether they were correctly labelled, and whether it was the original container.

Results

Fifty-nine patients had been supplied with drugs in 'Snap-Safe' containers. Their ages ranged from 42 to 90 years, the largest number being in the 70 to 79-year-old group. Forty-one (70 per cent) patients were unable to use the containers. They either asked somebody else to open them, left the lid loose, or put them in another container. Eighteen (30 per cent) patients were able to use the containers, but only 13 (22 per cent) of them did so with ease, these being predominantly the younger patients (modal age group 40 to 49 years). The remaining five (8 per cent) patients either used an implement to assist them or persisted in spite of difficulty. The numbers and strategies adopted are shown diagrammatically in Figure 1.

Discussion

Little work has been done in this country on the domiciliary use of child-resistant containers amongst those who could be expected to have difficulty, such as the elderly or disabled. Workers in the United States have studied the difficulties that patients of all ages, both outpatients and those at home, have encountered with safety containers. The proportions having difficulties ranged from 22 per cent to 38 per cent (Lane *et al.*, 1971; McIntire *et al.*, 1977; Myers, 1977). A British

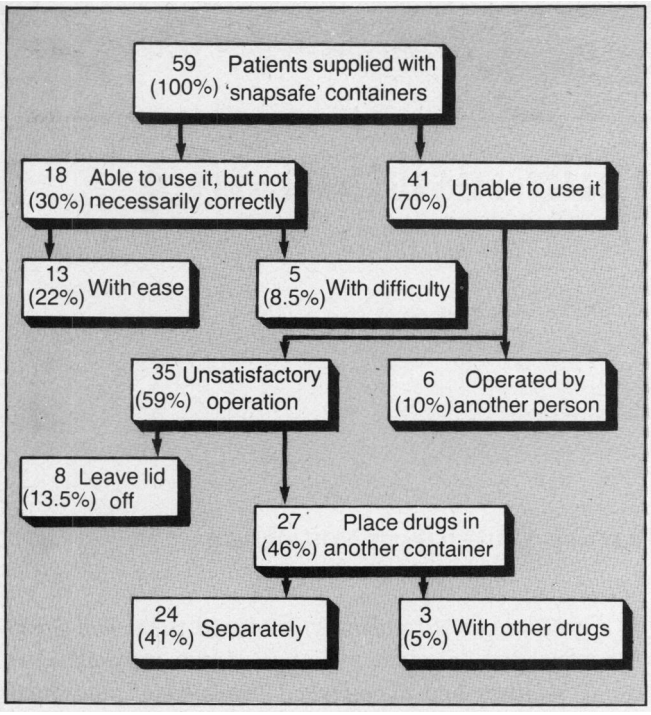

Figure 1. *How patients coped with 'Snap-Safe' child-resistant containers. (Modal age of the asterisked group is 40-49 years; in all other groups it is 70-79 years).*

study of hospital outpatients with arthritis found that 57 per cent of patients were unable to demonstrate the ability to use several types of safety container (Lambert *et al.*, 1978).

We expected the difficulties of many members of the group to be caused by arthritis, but only two had severely restricted hand and wrist movements, and most had no special disability. We cannot say what the exact reasons were for the containers not being used. Some blamed poor eyesight and others admitted to being confused by the instructions, but we gained the impression that the effort and concentration required by the elderly to open the containers, which they saw no need for, added up to a major problem that was resented and therefore rejected. We think it likely that patients of a similar age without arthritis would find the same problem.

Only 18 (30 per cent) patients were able to show that they used the containers properly, but even then we could not be sure that they always did so. For instance, the arrows were often left aligned for easy removal the next time. Thirty-five (59 per cent) patients adopted methods of tablet storage that removed the child-resistant property of the containers, and 27 (46 per cent) of them stored them in a way that was hazardous to themselves. The latter group of patients sometimes transferred the tablets to another container such as a tumbler, or a container with tablets of another type already in it, but usually to an empty conventional container inappropriately labelled.

It is reasonable to suppose that these practices increase the likelihood of medication error in a group of patients who already have difficulty following instructions because of their age.

Pharmacists will usually comply with a patient's request for a conventional container, although most patients appear to be unaware of this or are unwilling to ask.

We believe that all staff working in health care should be aware of this potential source of medication error, and that pharmacists should try to identify patients who cannot use child-resistant containers and supply a satisfactory alternative. Doctors could help by writing the necessary instructions on the prescription. An abbreviation such as 'SC' would save time.

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New hospitals

Speaking to the Asssociation of Community Health Councils in London, Mr Patrick Jenkin, Secretary of State for Social Services, said that in 1969, 23 per cent of all non-psychiatric beds in England were in hospitals of over 500 beds; in 1978 the figure had risen to 33 per cent.

"This has had two effects," he said. "One is the creation of large district general hospitals (some regions are planning hospitals up to 1,400 beds, which I regard as far too large). Such hospitals tend to become impersonal with bad communications and the risk of poor industrial relations. As I have said many times, large, impersonal hospitals tend to breed hard, impersonal attitudes.

"Secondly, the policy has resulted in the closure of many, much loved, small hospitals with a consequent loss of access by the public and, perhaps even more serious, the loss of community pride. A small hospital may be the heart and soul of a local community, and if it dies, the community suffers a mortal blow."

Reference

Department of Health and Social Security (1980). *New hospitals likely to be smaller in future.* Press release.