

How tooth-friendly are prolonged oral clearance medicines for the elderly?

Prevalence of long-term use of medicines with prolonged oral clearance in the elderly: a survey in north east England
by A. Maguire and W. Baqir *Br Dent J* 2000; 189: 267-272

Aim

To determine the prevalence of long-term use by the elderly of prescribed and over-the-counter (OTC) medicines with prolonged oral clearance (POC), with regard to sugars content, dose form and therapeutic groups of medicines used.

Design and setting

Two cross-sectional observational surveys in ten general medical practices in north-east England during 1996.

Methods

Computerised patient records of all elderly patients (aged 60 years and over) were surveyed for prescribed medicines use. Within these practices, 50% of elderly patients registered with ten general medical practitioners were surveyed by postal questionnaire to assess over-the-counter (OTC) medicines use.

Results

Of 20,731 elderly patients registered, prevalence of use of prescribed prolonged oral clearance (POC) medicines was 9.8% (95% CI: 8.2%, 11.3%) and use in females aged 75 years and older was significantly more likely ($P < 0.0001$). Of 2,796 prescribing instances (PIs) for 143 POC medicines used long-term, 53% were gastrointestinal and 72% were sugars-free; however, 82% of 542 PIs for generic liquids were sugars-containing compared with 8% of 685 PIs for proprietary liquid oral medicines. Of 1,532 elderly respondents to a postal questionnaire, 17 were using 13 different OTC medicines with POC regularly and long-term (mean prevalence; 1.1%). Of the 17 instances of regular long-term use of OTC medicines, 59% were sugars-free.

Conclusions

Prescribed medicines represent the bulk of regular, long-term medicines use in the elderly. Generic prescribing is more likely to result in sugars-containing medicines being dispensed. Generic medicines manufacturers must be encouraged to provide sugars-free alternatives to POC medicines used long-term, and health professionals should be vigilant when prescribing and dispensing these medicines to the increasingly dentate elderly.

In Brief

- The elderly consume more medication per head than any other age group; prescribed medicines represent the bulk of regular long-term use.
- Medicines with prolonged oral clearance (eg oral liquids and syrups, chewable tablets) can constitute a risk to dental health if they contain sugars and are used long-term. Generic prescribing is more likely to result in the dispensing of sugars-containing medicines.
- Pharmaceutical manufacturers, particularly generic manufacturers, must be encouraged to provide suitable alternatives to sugars-containing medicines. The role of health professionals is also crucial; they should be vigilant when prescribing, dispensing and monitoring the use of medicines with prolonged oral clearance.

Comment

It has been demonstrated in a number of scientific studies, that the prolonged use of sugar containing liquid medicines by children causes an increase in caries. There have been efforts made to increase awareness of this issue among consumers, prescribers and manufacturers. As a result there has been an increase in the availability of sugar-free alternatives for children and this has affected products bought over the counter as well as prescribed items. It follows that if this is a problem in children that it likely to be an issue in elderly people.

Elderly people are now surviving longer and are increasingly dentate. Physiological changes such as those affecting the saliva as well as gingival recession increase the risk of caries, especially on the root surfaces. Data from the United States National

Health and Nutrition Examination Survey indicates that 56% of people in the over 75 age group showed evidence of root caries. The use of medication on a long-term basis is common amongst the elderly but the prevalence of use of prolonged oral clearance (POC) medicines was not demonstrated prior to the present study. If these liquids, syrups and chewable tablets contain sugar they have the potential to do considerable harm.

The results presented here show that most POC medicines in the elderly are prescribed items. This type of medication is regularly used by almost 10% of the elderly population and therefore the sugar content is of considerable interest. It is interesting that generic preparations were much more likely to contain sugar than proprietary products.

What is worrying is that these generic products are increasingly being prescribed largely on the basis of reduced costs. The extra morbidity associated with their use brings with it a hidden extra cost for the health service as well as a disimprovement in the quality of life of these elderly people. Generic manufacturers should provide sugar-free alternatives and these should be prescribed in the case of regular and long term users. Health professionals have a responsibility to ensure that they prescribe and dispense a sugar-free version and consumers should be encouraged to request this also.

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