

Antibiotic prescribing for acute dental pain

A randomised controlled trial of clinical outreach education to rationalise antibiotic prescribing for acute dental pain in the primary care setting **J. M. Seager, R. S. Howell-Jones, F. D. Dunstan, M. A. O. Lewis, S. Richmond and D. W. Thomas** *Br Dent J* 2006; 201: 217–222

Objective

To assess the effect of educational outreach visits on antibiotic prescribing for acute dental pain in primary care.

Study design

Randomised controlled trial (RCT).

Setting

General dental practices in four health authority areas in Wales.

Subjects and methods

General dental practitioners were recruited to the study and randomly allocated to one of the three study groups (control group, guideline group or intervention group). Following the intervention, practitioners completed a standardised questionnaire for each patient that presented with acute dental pain.

Interventions

The control group received no intervention. The guideline group received educational material by post. The intervention group received educational material by post and an academic detailing visit by a trained pharmacist. The educational material included evidence-based guidelines on prescribing for acute dental pain and patient information leaflets.

Main outcome measures

The number of antibiotic prescriptions issued to patients presenting with dental pain and the number of 'inappropriate' antibiotic prescriptions. Antibiotics were considered to be inappropriate if the patient did not have symptoms indicative of spreading infection.

Results

A total of 1,497 completed questionnaires were received from 23, 20 and 27 general dental practitioners in the control, guideline and intervention group respectively. Patients in the intervention group received significantly fewer antibiotic prescriptions than patients in the control group (OR (95% CI) 0.63 (0.41, 0.95)) and significantly fewer inappropriate antibiotic prescriptions (OR (95% CI) 0.33 (0.21, 0.54)). However, antibiotic and inappropriate antibiotic prescribing were not significantly different in the guideline group compared to the control group (OR (95% CI) 0.83 (0.55, 1.21) and OR (95% CI) 0.82 (0.53, 1.29) respectively).

Conclusions

Strategies based upon educational outreach visits may be successfully employed to rationalise antibiotic prescribing by dental practitioners.

COMMENT

The quality of antibiotic prescribing by dentists in the UK is poor. The number of antibiotic prescriptions issued by dentists is rising alarmingly, while in the rest of medicine the number is decreasing. This paper describes the effect of the use of outreach education on the alteration of dentists' prescribing habits for patients with dental pain. Compared to a control group the dentists who received the outreach education issued far fewer prescriptions. They also issued far fewer inappropriate prescriptions for which there was no clinical indication.

This study involved a small number of dentists (70 in total), and it is difficult to see how such individual outreach education could be applied to all of the dentists in the UK. What is also not clear is whether the outreach education described in this study had a lasting effect, or whether there was a return to previous bad antibiotic prescribing habits.

The essential questions that are not answered in this paper are why dental antibiotic prescribing habits are so poor and where do the dentists acquire these bad practices?

If these poor prescribing habits are from poor clinical practice in the institutions where they qualified, then there is much remedial work to be done in UK dental schools. If the practice of poor antibiotic prescribing is acquired in vocational training years, then the problem is one for postgraduate dental deans to commission a great deal of remedial education for dental practitioners as a matter of urgency. Probably the most potent force for change, however, is the law and for patients to sue dentists for inappropriate antibiotic prescribing; sadly this is slowly starting to happen.

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IN BRIEF

- Previous studies have shown that educational outreach visits (academic detailing) can reduce inappropriate prescribing by medical practitioners.
- This study sought to assess whether academic detailing combined with printed educational material could be used to reduce antibiotic prescribing by dentists for acute dental pain.
- Evidence based guidelines for the use of antibiotics and analgesics for acute dental pain were produced.
- Antibiotic prescribing by general dental practitioners for acute dental pain can be reduced using academic detailing combined with guidelines. Guidelines alone do not affect antibiotic prescribing.