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Prevention in practice

Sir, Tomlinson and Treasure's article on the provision of prevention in Wales (*BDJ* 2006; **200**: 393–397) raises some very important issues. What will the new NHS contract deliver for patients in terms of prevention? Will the tentative optimism of *Choosing better oral health*[1] be borne out in practice? The latter states that 'Observance of the NICE guidelines [on dental recall intervals], supported by the changed balance of incentives within the new contractual framework, should free up capacity that can be used to support a more preventive approach'.

May I ask through your pages how it is planned to monitor the impact of the NICE guideline on recall intervals,[2] and how we might be able to ascertain whether any extra time 'freed up' is actually used to promote patients' oral health? On paper, the opportunities sound tremendous, but in practice, we need to know whether PCTs and dental teams actually deliver the vision as set out in *Choosing better oral health*, or whether the best practice guidance issued by the Department of Health quietly gathers dust on shelves already weighed down by myriad past policy documents. Experience shows that implementing clinical guidelines and changing long-held professional patterns of behaviour is no simple matter.[3]

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Volume of care

Sir, Lynch and Allen (*Chrome Cobalt Replacement Partial Dentures BDJ* 2006; **200**: 277–281) raise some very interesting points.

Although today's dental graduates have more advanced knowledge than ever before, their practical experience remains limited. Providing an average of four replacement chrome cobalt partial dentures (CCRPDs), under supervision, during undergraduate training, is merely an introduction to the topic.

Many practitioners who professionally grew up working in the NHS, including some VT trainers, are themselves uncomfortable with this area of practice. Design and construction of CCRPDs is a time consuming, technically demanding procedure. As failure is expensive and humiliating it is understandable that vocational trainees are frequently advised to avoid it.

By concentrating reward on volume of care, the NHS GDS payment structure has positively discouraged the development of enhanced skills.

If young practitioners are to develop skills in clinical dental prosthetics they need the help of an enthusiastic, skilled mentor. They also need to use a model surveyor and have quality technical support. As the authors show, without appropriate help, these skills will not only fail to develop but may be lost altogether.

Recent pilot PDS payment arrangements have encouraged the provision of high quality dental prostheses. It is doubtful that the new NHS arrangements will significantly improve this situation in the near future.

We must remember that skills acquired during undergraduate and vocational training are both basic and introductory. Experience, together with ongoing learning, will enable clinicians to provide acceptable care, including in the restorative specialities. Care for patients could be greatly improved in an enthusiastic learning environment where dentists with different levels of experience work in teams with dental technicians and clinical dental technicians.

R. Furniss*
***GDP for 36 years — still working in the NHS — still learning!**
By email

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Too little too late

Sir, since the classic works of Burke, Polk and Lopez-Mayor in the 1960s, peri-operative administration of antibiotics is a proven and accepted clinical method to reduce post-operative infections in various surgical procedures, named *'antibiotic prophylaxis'*.[1] Drs Kitchen (*BDJ* 2004; **196:** 515 and *BDJ* 2006; **200:** 363) and Williams (*BDJ* 2006; **200:** 124) recommended a single at- or post- extraction dose of 200mg metronidazole for prevention of 'infected socket'. According to their experience in the last few years, oral administration of 200mg metronidazole 'has stopped all incidences of post-operative infection' or made them 'a rarity' and 'the cost ... is negligible'. They stated that the common practice of a multi-dose post-operative course is unnecessary, but a single-dose is preferred. However, in my opinion their recommendation is wrong and based on a misconception.

Firstly, an *at-* or *post-*operative administration of antibiotics violates the basic principle of *prophylaxis* as the antimicrobial agent must be within the tissue from the beginning of the operation in adequate level, waiting for the bacterial invasion,[1] whereas oral administration of 200mg metronidazole produces a plasma concentration of 4µm/ml *after one hour*, a half of the mean effective concentration of this antimicrobial agent.[2] Too little and too late.

Secondly, although it is a widespread practice,[3,4] the peri-operative use of antibiotic agents in third molar surgery has not been shown to reduce post-operative complications in healthy patients.[5] While the prophylactic use of antibiotics in bleeding dental procedures in cardiac and orthopaedic compromised patients are recommended by official institutions and considered as a standard of care, the routine use of antibiotics following third molar surgery in healthy patients is firmly contraindicated by the literature as costly, harmful, and having little or no effect.[6] Recently, Augmentin has been reported to reduce post-third molar surgery complications,[7] but there has been no recommendation of routinely prescribed Augmentin after tooth extraction.

Ritzau *et al.*[8] and Bergdahl and Hedstrom[9] showed that pre-operative single administration of 1000mg or

1600mg metronidazole did not achieve a significant reduction of post-extraction complications compared to placebo. I am doubtful whether an *at-* or *post-operative* administration of *200mg* metronidazole is more effective than a pre-operative 1000/1600mg dose.

The recently gained acceptance of the concept of evidence-based dentistry is aimed to base dental practice on profound foundations of research rather than personal experiences, feelings and believes. According to the current literature, if the authors want to 'reduce the quantity of antibiotics dispensed', as stated, they should not give oral antibiotics at all.

Y. Zadik
By email

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No ethical differences

Sir, I write in response to the letter from Fleming entitled *Ethical dilemma* (*BDJ* 2006; **200:** 304), as a Consultant Oral and Maxillofacial Surgeon with experience of chairing a Local Research Ethics Committee and who is currently Honorary Secretary of the Association of Research Ethics Committees (AREC). Dr Fleming quite rightly recognises the need to safeguard patient welfare, particularly in the case of trials of relatively new medicinal products. The abuses in the previous century which occurred in Nazi concentration camps and American prisons are examples of this need. The recent film, 'The Constant Gardener', gives a more modem slant to this.

The research ethics process has changed over the last 10 years. We are now approaching the situation in France where only one ethical review is valid for the whole of France. In the UK now only one ethical review is required, but there may be a need for site specific assessment for local issues to be considered. The application form does look daunting, but where certain questions are answered 'no' then some subsequent sections of the form shrink and disappear. It is an important part of a clinical researcher's education to become familiar with the concepts of ethical review and the process of obtaining it. Dr Fleming is not arguing against ethical review, rather that the process should be simplified for dental trials.

Why bother with ethical review for dental trials? In the case of a new dental material, a research ethics committee would need to make sure that the researcher is appropriately trained, qualified and registered; has had appropriate training to obtain informed consent; that there are sufficient subjects in the trial to obtain a meaningful result; that appropriate statistical advice has been obtained so that the researchers can be sure that their results would not just have occurred by chance; that the information sheet is not too complicated and where necessary has been translated into other languages; that participants are not recruited under duress and have the opportunity to withdraw at any time without giving a reason and without their ongoing routine care being adversely affected; and that there is no inappropriate financial inducement offered to the researcher.

Furthermore it would be important to make sure that the material is unlikely to pose any clearly identifiable risk to the dental pulp; that arrangements are in place to replace the material should it fail prematurely; that such arrangements should pose no additional financial burden to the participant and that participants are able to give fully informed consent. If the material is suitable for use in special needs patients, and if it needs to be trialled in those patients, then a research ethics committee would need to check the arrangements which are in place for obtaining consent and assent for those participants.

The implication is that dental trials are somehow less complex than other trials in the fields of medicine and surgery. I can see no ethical differences. Sometimes, even thorough ethical review can fail to prevent problems. Two recent examples are the long term problems which have come to light with the COX II inhibitor

Vioxx and the recent anaphylactic-type reaction experienced by participants in a Phase I trial of a new genetic engineering product being developed as an anti-cancer treatment. The system is not foolproof but that is not an argument for dismissing the system. Dr Fleming states that failure to simplify the system will make clinicians in both primary and secondary settings less inclined to undertake research. Unfortunately, in order to succeed, any argument in favour of a simplified system for dental trials will need to be based on a better argument than just inconvenience.

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doi: 10.1038/sj.bdj.4813778

Temporal arteritis

Sir, we read with interest the article by Scully and Felix (*BDJ* 2006; **200:** 75-83) on the causes of orofacial pain. We felt it underplayed the importance of jaw pain as a key trigger for consideration of the diagnosis of a temporal (or giant cell) arteritis. It was particularly pertinent as we had recently treated a case of temporal arteritis where jaw pain was the presenting feature.

The case involved an 81-year-old lady who had developed jaw pain four weeks before presentation and had had two teeth removed by her dentist. This failed to improve her symptoms and over the coming weeks two further teeth were removed without resolving her pain. It was not until she developed blurred vision in her left eye that she was referred to us.

When we saw her, in addition to her jaw pain, she also complained of scalp tenderness and extreme tenderness over the temporal region. On examination her vision was normal in the right eye but on the left was markedly reduced. Investigations showed a raised erythrocyte sedimentation rate (ESR) and an elevated c reactive protein (CRP). A diagnosis of temporal arteritis was made and she was started on intravenous methyl prednisolone. After starting the treatment her jaw pain finally improved. Unfortunately, the vision in her left eye will not recover.

Temporal arteritis is a condition that occurs mainly in the over 50s and whose incidence increases with age.[1,3] Jaw claudication is commonly the presenting symptom, present in 48% of cases.[4] Other key features include tongue pain, headache and scalp tenderness (especially when combing their hair), weight loss and general malaise. We have not found sweating or fever to be key features although they are described in the literature.[2-4] The temporal artery is not always tender, although it frequently is, and in advanced cases the artery becomes pulseless.[2,3]

As stated by Scully and Felix untreated temporal arteritis can lead to loss of vision. This is usually unilateral, as in our case, but can become bilateral. In the worse case scenario, untreated temporal arteritis can lead to a stroke.[3]

It is vital then that dental practitioners are aware of the importance of jaw pain as a presenting feature of this condition which can have such devastating effects and refer if there is any doubt.

F. Lyon, Z. Varga, S. Anderson
York

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Mediastinal collection

Sir, a 26-year-old previously fit and healthy male presented with a dental infection, causing acute sepsis, upper airway compromise, and gross neck swelling. This was diagnosed as Ludwig's Angina. He was treated with surgical drainage but required aggressive inotropic support. Chest x-ray (Fig. 1) showed a widened mediastinum and CT confirmed a large mediastinal collection and pericarditis. A pig-tail catheter was inserted under radiographic guidance and drained 750 ml of pus overall. The patient made an uneventful recovery following this. Mediastinal collection is an unusual sequel to orofacial infections with a 70% mortality and should be excluded in non-resolving cases.

S. Rice, M. Millwaters, P. Hardee
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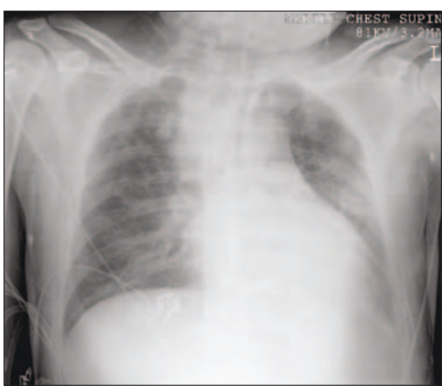

Fig. 1 X-ray showing a widened mediastinum

Don't crown my tooth Argentina

Sir, I thought you would like to hear about this case demonstrating that recycling is not always the best way to go.

A new patient presented at the end of last year with a heavily restored dentition which would have benefited from several extractions and an equal number of crowns, but the patient was not keen on such extensive treatment and did not book any.

The upper right first premolar (14), which had a large perio-endo lesion, was pencilled in to be removed, but the patient was happy to leave this tooth as 'it [was] not bothering [her] at the moment'.

Forward to this month and the patient attends as an emergency patient with a fat face on the upper right side. On examination the previously root filled and amalgam restored 14 was now the proud bearer of a bonded crown.

The patient had been on holiday in Argentina where the tooth had flared up, and a very nice dentist with Mozart playing in the surgery had placed a crown and prescribed some antibiotics.

On removal of the offending tooth (Fig. 2), the reason this dentist had managed to crown the tooth in one appointment became obvious. It was second-hand!

When I explained my fears to the patient she seemed unconcerned and seemed more upset that we had Radio 2 playing in the background.

The moral to this story, if any, is that perception is everything to a patient. The dentist in question was a 'lovely man' who had a very stylish practice, who managed to save her tooth instantly without all the fuss of radiographs, lab fees, or several appointments. One thing I forgot to mention, he fitted two crowns on that fateful visit so we will be taking a look at the other one next time she's in!

I. Byford
By email
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Fig. 2 The extracted upper right first premolar