Beyond the antibiotic prophylaxis of infective endocarditis: the problem of dental surveillance

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Controversial guidelines by the National Institute for Health and Clinical Excellence (NICE)[1] have stimulated useful discussions about antibiotic prophylaxis before dental procedures. However, this should not distract us from an equally important debate about dental surveillance in the UK.

All guidelines including NICE[1] and those from the USA,[2 3] Europe[4] and Australia[5 6] agree that regular dental surveillance is essential to promote good oral hygiene, reduce the need for invasive dental procedures and reduce the risk of infective endocarditis. Around 40% of cases of infective endocarditis are caused by oral bacteria. Although these may enter the circulation during invasive dental procedures there is also evidence that transient bacteraemia with oral organisms occurs during daily activities such as chewing food and tooth brushing. The size and frequency of the bacteraemia are significantly greater in those with poor oral hygiene.[7]

Despite the unanimity of these guidelines, provision of dental surveillance in the UK is suboptimal. The 2011 GP patient survey[8] found that 40% had not asked for a National Health Service (NHS) appointment in the previous 2 years and although a number of these saw a private dentist, 7% did not see a dentist at all. The response rate was only 515 000 (37%) of the 1.4 million people contacted and it is possible that non-responders were even less likely to organise dental surveillance. In the 2009 Adult Dental Health Survey,[9] 11 380 individuals were interviewed and 10% said they had occasional check-ups, 27% only attended when having problems, and 2% never attended a dentist. The Simplyhealth Annual Survey of 2011[10] showed that 29% had had difficulty finding an NHS dentist. Access was worst in the South East. In a much smaller survey of all patients receiving a new design of mechanical valve at a single cardiac centre serving the South East, only 126 of 188 (67%) had regular dental surveillance.[11] All these surveys, with their different populations and methodologies, point to the fact that approximately 30% of the population do not attend a dentist regularly.

There are many reasons for inadequate surveillance. Changes to the organisation of dental services in 2006 mean that there are fewer NHS dentists, while charges are high even within the NHS. In 2011, 40% of patients said they had put off going to the dentist because of cost.[10] Under the new NHS dental contract, patients no longer have their own dentist and can go to any provider who will accept them. This has resulted in a reduction in both regular 6-monthly dental visits and routine monitoring of patients by 'their own dentist'. The removal by NICE of the recommendation that patients see their dentist every 6 months in favour of 'individually tailored' review schedules[12] has encouraged patients to visit a dentist only when they have a problem and has interrupted continuity of care and preventive management. The 2009 Adult Dental Health Survey[9] also found that the 2006 Dental Contract favoured a 'cycle of intervention and repair' rather than preventive care and oral health. As a result of these factors, 54% of patients say they have experienced a decline in the quality of dental treatment.[10] Anecdotally, confusion as to whether antibiotic prophylaxis is necessary and the unwillingness of some high-street dentists to treat patients on warfarin are cited as reasons for non-attendance by some high-risk patients.[11]

What should be done? Access to good quality dental care needs to be improved with an increase in the number of NHS practices and a decrease in fees. The Adult Dental Health Survey 2009[9] made a number of recommendations to improve access and to shift the focus of care from intervention and repair to 'prevention and maintenance' of oral health. Although the government has committed to act on these recommendations,[13] the situation remains largely unchanged with the exception of a small number of pilot programmes.

For patients at risk of infective endocarditis, education about the need for surveillance is required. Elective heart valve surgery may be delayed through need of restorative dental work to reduce the likelihood of prosthetic valve endocarditis. Education is particularly important for those at high-risk, notably after valve replacement or prior endocarditis. In these patients, the index operation or illness should not be seen as an isolated event but the beginning of a continuum of care including physical and psychological rehabilitation, diet (especially if warfarin is required), maintenance of good oral hygiene and preventive dental surveillance. There is a strong case that these patients should be exempt from charges for NHS dental treatment. Why exempt pregnant women from dental charges, whose lives are not at risk, but not patients at risk of infective endocarditis? The cost of this would be small when weighed against the high mortality, morbidity and healthcare costs associated with infective endocarditis. Schools, GP practices and dental surgeries must also play a part in education and it is also a role of specialist valve clinics.[11]

The incidence of infective endocarditis in the UK has continued to rise although at a rate not obviously worsened after introduction of the NICE guidance on antibiotic prophylaxis.[14] While controversy persists concerning the role of antibiotic prophylaxis,[15] the message from all guidelines is that improved access to dental surveillance is likely to help.

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