

KEEP SMILING

In this time of recession, it is more important than ever that patients do not under-estimate the extent to which their dental health is relevant to their general health. Roger Matthews, chief dental officer at Denplan considers the links between oral health and general wellbeing and why dental healthcare professionals should be ever more vigilant.

Diabetes

Over 300 systemic diseases may have early warning signs in the mouth, among the most serious of which is diabetes. Diabetes, both types 1 and 2, accounts for a staggering 10-12 per cent of total NHS expenditure (1). With 4 per cent of all adults in the UK likely to develop the disease and an estimated 500,000 undiagnosed cases, good oral healthcare could contribute to prevention, or to early diagnosis and treatment.

Worryingly, and probably due to obesity and dietary trends, the number of children with diabetes is also starting to rise. A figure of 17 per 100,000 children developing diabetes each year has been reported (2) and so too have the first instances of type 2 diabetes in childhood, which was previously very rare. Without a combined effort from all areas of the health services, this figure is set to grow.

In order to combat this disease, and particularly type 2 diabetes, I believe dentists should be encouraged to include relevant questions in their medical history protocols. If the responses suggest that further tests are necessary, the patient could then be instantly referred to a GP. Given that training and competence are established, the taking of blood-glucose samples could be indicated, and this has already been recommended.

Cardiovascular disease

Cardiovascular disease (CVD) is another significant systemic risk. Globally the primary cause of mortality, CVD accounts for nearly 30 per cent of all deaths (1). According to research by the British Heart Foundation, the UK has one of the highest rates of coronary mortalities in Europe and a major factor in this is, again, obesity.

While treatment of CVD has improved dramatically, in a culture where obesity is growing, it is even more vital for dentists to report anything unusual to the patient. We are health professionals, not merely oral disease technicians, and consequently should be able to help patients to maintain a healthy lifestyle in any way we can. Dietary advice and appropriate referral should properly be our concern.

Evidence of an association between dental diseases which result in tooth loss and an increased risk of atherosclerosis, CVD and cerebrovascular disease in older patients has been demonstrated in numerous studies (4). As the proportion of older dentate patients increases in society, this further heightens the significance of our professional advice and concern.

Dental caries in children

The systemic impact of dental caries, as one of the most common chronic diseases globally, should not be under-estimated. According to a recent editorial in *The Lancet* (4), 90 per cent of people on the planet will have dental problems or toothache caused by caries at some point in their lives. Caries incidence in young children in some areas of the UK may have plateau'd or be increasing, according to comparative surveys by BASCD and the National Dental Inspection Programme for Scotland(5), and significant social inequalities remain.

Despite the fact that some children in the UK may have three or more carious teeth by the time they reach primary school and that it is over a century since Miller described the “chemico-parasitic” theory of caries, it sometimes appears that only now are we giving full recognition to caries as the chronic infectious disease that it is. Dental Caries in children will not only affect their ability to eat, sleep and socialise effectively, but may contribute to lifelong oral and general health problems. This is largely attributable to increased levels of sugar, salt and fat in the diet, and demonstrates that general health can equally affect oral health. That this type of diet in the very young also increases the risks of both type 2 diabetes and CVD in later life further accentuates the role of the dental care professional in advising and monitoring lifestyle and habits.

Recent work has also demonstrated clearly that the diet and oral health status of the expectant mother impacts on the nature of the bacterial flora in the infant's mouth, and thus the eating habits of the parent will also affect the child's future oral health (6). US advice on dental health now targets the expectant mother as a significant stakeholder in preventive oral care for children (7).

An aging population

Reference has been made to the ageing dentate population. It seems likely that the success of the dental profession in increasing the dentate proportion of the post-war "baby boomer" population will be multiplied by demographic trends. Increasing numbers of elderly patients, many of whom will be taking multiple medications with side-effects including reduced salivary flow, will present with a desire to retain their existing natural teeth.

The impact of dental disease as a cradle to grave condition, requiring far more than interventional surgery, will require dental health care professionals to adopt a "whole body" and "whole of life" approach in the foreseeable future.

1. "The Impact of Oral Disease on Systemic Health. What is the evidence and how big is the problem?" 2008 Conference by Oral and Dental Research Trust.
2. <http://www.diabetes.co.uk/children-and-diabetes.html>
3. Holm-Pederson P et al (2005). Dental caries, periodontal disease and cardiac arrhythmias in community dwelling older persons aged 80 and over: is there a link? *J Am Geriatr Soc*, 53: 430-437
4. Oral Health: Prevention is Key. (*The Lancet*, January 2009, Vol 373)
5. BASCD Survey Report 2005/6, March 2007.
6. Law V et al (2007) Factors influencing oral colonization of mutans streptococci in young children. *Aust Dent J* 52(2):93-100
7. New York State Dept of Health (2006): Oral healthcare during pregnancy and early childhood: practice guidelines.

Notes to Editors:

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