

## Periodontal disease the hidden epidemic

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The WHO is very concerned regarding the impact of periodontal disease on the health of nations worldwide. Periodontal disease affects nearly half of the adult population in the UK. However, periodontitis is both preventable and treatable. The cost of both is relatively low in view of the impact it could have on the healthcare budgets of many countries, including the UK.

With a growing momentum in awareness of the importance of periodontal health, there is likely to be an increase in demand for treatment and information regarding prevention. The scientific rationale is that by controlling periodontal disease, we will be improving the general health of the nation; and additionally, we can expect to see that patients will be encouraged by their medical teams to attend for periodontal health assessment.

Periodontitis is classed as a chronic non-communicable disease and is sixth on the table of the most prevalent disease worldwide. Chronic non-communicable diseases such as cardio-vascular disease (CVD) and diabetes are putting a huge burden on healthcare services and their associated costs. As more research emerges supporting the fact that periodontal disease may well be a contributor to other chronic non-communicable diseases, it would now be prudent to see public health promotion programmes and integrated medico/dental strategies carried out at a national and local level.

### **Partners, working together**

Acteon believe in collaborating/supporting the dental team in developing their patient care. As our understanding of dental science evolves, the technology to treat and prevent is also developed. In the spirit of the EFP Manifesto, Acteon are pleased to launch their new periodontal campaign and would like to know if you would be willing to make the pledge?

Diagnosis of periodontal disease could possibly provide opportunity for referral and diagnosis of other systemic disease at an early stage. Helping patients grasp their role in disease prevention and taking responsibility for their oral health is a difficult and sensitive subject. The use of highly developed technology such as Soprocure can assist in diagnosis and education of patients. Soprocure is an intra oral camera that uses light frequency to aid diagnosis of dental caries and tissue inflammation. Highly pixelated images can then be shown to patients on the computer screen and then saved as part of the patient clinical notes. Reports and bespoke home-care plans can then be produced either electronically or on paper, to be shared with the patient and/or other



healthcare providers. Video footage is possible, allowing demonstration of oral hygiene procedures to be captured. Mature plaque is also differentiated by the varying light frequency and its relationship with inflammation in the adjacent tissues becomes very obvious.

By having access to the latest technology, dental clinicians can not only provide the highest quality of clinical care but also are able to share data and clinical reports with other medical care providers.

## **The evidence**

There are many confounding factors that influence periodontal disease and these other chronic diseases; therefore, a cause and effect relationship cannot be truly established. For example, obesity, smoking, and age all influence both periodontitis and diabetes. How each plays a part is still being studied closely. What is becoming clear, however, is that periodontal disease increases systemic inflammation and creates oxidative stress that could well be contributing to many of these inflammatory diseases. The treatment of periodontal disease is known to reduce the microbial burden of the oral cavity and reducing systemic cytokine levels.

The evidence for periodontitis being associated with systemic disease is stronger for some conditions than others. For example, the evidence for links between diabetes and periodontal disease is more robust than that of preterm and low birthweight babies. There is now reliable and consistent epidemiological data that severe periodontitis affects glycaemic control in diabetes. In addition, other studies have demonstrated that treatment of periodontal disease can produce a 0.4% reduction in the HBA1C count after 3 months. This may appear insignificant but in fact produces the equivalent benefit of taking an additional diabetic drug.

In the case of cardiovascular disease, there is some epidemiological data that periodontitis does increase the risk of CVD, even after removing the influence of confounding factors.

In the case of adverse pregnancy outcomes (APO) such as low birth weight, preeclampsia, stillbirth and preterm babies, the evidence is less consistent. However, the EFP advise that, as the risk is plausible, dental professionals should offer some preventive advice to women wanting to start a family. Periodontal therapy can be carried out safely in pregnancy, but the early studies do not demonstrate a reduction in APOs. For further information, see:

<https://www.efp.org/publications/projects/oralhealthandpregnancy/reports/treating-perio-disease.pdf>

Alzheimers disease and periodontitis would appear to share the same pathogenesis as each other, but the complex processes are yet to be fully understood. As a nation we are living longer and keeping our teeth for longer and 60% of over 65-year olds now present with severe periodontitis. As research into this devastating illness continues, it makes sense that periodontal disease is brought under control and awareness of its



potential damage is highlighted. Education and enlightenment on the importance of oral care and the need for supported oral hygiene regimes is necessary for carers or future carers of patients with Alzheimers disease.

There is more recent evidence that periodontal biofilm could be the source of opportunistic respiratory pathogens in patients in acute care hospital wards and nursing homes which could lead to aspiration pneumonia. There is enough evidence to imply a necessity for better oral hygiene care in these environments to prevent acquired lung infections.

There are other systemic illnesses that are linked to periodontal disease such as rheumatoid arthritis, kidney disease, stroke, obesity, cognitive impairment, metabolic syndrome and some cancers. Whilst more evidence is emerging and strengthening, is it now time to educate our patients, without scaremongering, on the potential damage that periodontal disease may be having on their general health?

### **So what can the dental team do within their practice?**

Many of these inflammatory conditions are expected to become more prevalent as the populations ages. Planning for this shift in dental care will be advantageous to a dental team. Appearing to be ahead of the game to your patients will always be a practice builder and having a knowledgeable team that can communicate effectively is a successful formula. Implementing well thought-out practice protocols and making use of good referral pathways to other healthcare providers is a strong starting point.

