The need to demystify the oral - cardiovascular association

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The dental practitioner encounters patients with various types of medical conditions. More often than not, these medical conditions go unrevealed in a dental setting as a result of either the patient’s belief that oral health is dissociated, a distinct entity from general health or that the dental practitioner’s complacency in developing a complete understanding of the patient as a whole. Good communication forms the basis for provision of optimum health care that can be achieved through thorough history and evaluation.

My observation reveals that lack of effective communication in academic institutions (teaching dental hospitals) on medical conditions are due to the ignorance on medical conditions, dental students apathy towards medical conditions, students being more quota oriented than establishing effective communication with the care receiver, staffs in dental institutions, poor student teacher ratio, and unscheduled appointments. However, this problem is not just confined to academic institutions, but is also existent in other healthcare facilities. Overflow of patients in dental clinics, patients’ ignorance on medical conditions, and limited knowledge on the association between oral and systemic conditions among the medical fraternity are some of the reasons why medical history goes unnoticed and oral indicators of systemic illness are not taken advantage of.

According to world health report 2002, deaths due to coronary artery disease in India rose from 1.17 million in 1991 to 1.59 million in 2000, and to 2.03 million in 2010. India suffers highest loss due to death from Cardiovascular Disease (CVD) in people aged 35-64 years, with 2-3 times higher prevalence in urban areas as compared to rural. CVD are a group of disorders of the heart and blood vessels and they include: coronary heart disease, cerebrovascular disease, peripheral arterial disease, rheumatic heart disease, congenital heart disease, deep vein thrombosis, pulmonary embolism, aortic aneurysm and dissection (dilatation and rupture of aorta) and tumours of the heart, vascular tumours of the body, disorders of the heart muscle, heart valve diseases, and disorders of the lining of the heart. Despite increasing evidence on the emergence of chronic infection and chronic low grade activation or inflammation and haemostasis as risk predictors for cardiovascular diseases, fewer medical practitioners and their patients are aware that oral cavity is a major site for chronic infection, periodontal disease in particular. Periodontal disease, the most common reason for tooth morbidity and mortality, has also been implicated in etiologic and modulating role in CVD through systemic dissemination of locally produced mediators and by an indirect effect, the pathogenic periodontal microflora could involve in a cascade of events that contribute to atheroma formation. It is also postulated that common genetic mechanisms provide the link between periodontal diseases and cardiovascular diseases.

The potential conditions that a dental practitioner is likely to encounter are ischemic heart disease, hypertension, dysrhythmias, pacemakers, valvular
heart disease, cardioactive drugs, and vasoconstrictor therapy. The following are some points to remember while dealing with patients with cardiovascular disease:

1) Vigilant about the medication being taken by the patient.
2) Patient should be advised to bring their antianginal therapy with them.
3) Measuring blood pressure in all patients attending for dental treatment, since many patients with hypertension remain undiagnosed.
4) Consider electrocardiographic monitoring in patients treated with Digoxin for atrial fibrillation or congestive cardiac failure.
5) Keep in mind that the combination of insufficient analgesia, adrenaline, and cardiovascular disease may cause cardiac dysrhythmias.
6) Modern pacemakers, though tolerant of external insults, may be problematic while dealing with diathermy procedures.
7) Understand the patient condition with reference to valvular lesions as some conditions are at high risk of developing endocarditis.
8) Evaluate the patient drug history with regard to anticoagulant therapy (INR value should be 2.5 or below).
9) Maintain close liaison with the patient’s physician or cardiologist.
10) Assess concomitant renal and liver diseases, which increase the risk of bleeding.
11) Consider prophylactic antibiotic therapy if necessary.
12) The potential risk from drug interaction during dental treatment must be considered.
13) Patient should be advised not to fast before dental appointment.

Though the aforementioned facts and precautions are to be known and followed by healthcare professionals in order to fulfill their ethical responsibility of delivering optimum care, it must also be understood that developing deeper insights into possible systemic association of oral diseases is also important for healthcare professionals. This is to protect them, especially in light of the increasing incidence of medical negligence liability under the consumer protection act.

References