

# 1<sup>st</sup> Systemic Health Round Table Discussion Hong Kong



## Introduction

Periodontal disease including gingivitis and periodontitis represents the single most common bacterial infection in humans. Up to 62.1% of Hong Kong's adult population has periodontal pockets<sup>1</sup>. In addition to being the leading cause of tooth loss in adults, periodontal disease has a significant adverse impact on patients' health, ranging from gum swelling and bleeding, and tooth mobility, through esthetic and psychological effects, to impaired general health and quality of life.

In recent years it has become increasingly recognized that through release of pro-inflammatory mediators, periodontal disease may be a risk factor for certain systemic conditions, notably insulin resistance, diabetes and cardiovascular disease. Conversely, systemic cardiometabolic disorders such as diabetes can cause or aggravate periodontal diseases owing to increased bacterial proliferation and enhanced inflammatory responses.

However, there has been a traditional segregation between the dental and medical professions which poses a barrier in dealing with some systemic conditions. While Hong Kong has the highest level of professional awareness of systemic health (99%) among all countries surveyed<sup>2</sup>, dental-medical segregation remains an issue there. Better professional integration and cooperation in Hong Kong, together with public education, might help improve both professional and public awareness of the connection between oral-systemic health. The main objectives of the First Systemic Health Round Table Discussion were to assess the current knowledge of the oral-systemic health connection among local diabetic patients and the general public, enhance the degree of awareness and identify potential barriers to acceptance of the concept, as well as to discuss various steps to foster this awareness and improve collaboration between the local medical and dental communities in this regard.

1 Sam K.S. Ng and W. K. Leung, A Community Study on the Relationship Between Stress, Coping, Affective Dispositions and Periodontal Attachment Loss, *Community Dent Oral Epidemiol* 2006; 34: 252-66  
2 Project Health Issues – Global Tracking Study on Systemic Health in Hong Kong, 2006, The Nielsen Company

## Identifying the problem

Both the dental and medical specialists during the First Systemic Health Round Table Discussion agreed that if more were known about the mechanism and prevalence of this problem, diabetic patients could be warned they were more susceptible to gingivitis and periodontitis. The awareness of diabetic patients about the connection between oral and systemic health needs to be enhanced, so potential dental problems can be identified and prevented through improved oral hygiene. Public awareness is particularly important because periodontal disease is becoming increasingly common. In addition, improving oral health can improve patients' quality of life, which has become a major issue, particularly in the developed world. However, data and awareness on the link between oral and systemic health needs to be enriched.



## Participants

Participants in the First Systemic Health Round Table Discussion included eminent diabetes specialists from the public and private medical communities, members of Diabetes Hongkong, a local charitable organization aimed at improving awareness and understanding of diabetes via public education, and experts and periodontologists from the Faculty of Dentistry at the University of Hong Kong.

Panel of experts<sup>3</sup> – (from left) :  
Dr. Wai-keung Leung, Prof. Li-jian Jin, Prof. Lakshman P. Samaranyake, Dr. Vincent T.F. Yeung, Dr. Shing-chung Siu, Dr. Kwok-wing Lo

3 Dr. Leung, Prof. Jin and Prof. Samaranyake are from the University of Hong Kong; Dr. Yeung and Dr. Siu are from Diabetes Hongkong; and Dr. Lo is a private practitioner.



## Promoting communication

There is a particular need to strengthen and facilitate the communication among dentists, physicians and patients regarding oral-systemic health. Improving communication can be approached through various channels.

### **Communications among dental professionals**

The dental profession was identified as one of the main target groups as they are at the forefront of managing the oral health of patients.

Although traditional dental curricula incorporate the links between oral and systemic health, the emerging data on the close association between diseases such as diabetes, cardiovascular disease and periodontal disease make it imperative that the relatively new sub-discipline of "periodontal medicine" is adequately recognized in dental undergraduate education. Emphasis should, therefore, be placed on basic teaching on the etiology, pathogenesis and the potential link between oral diseases and various systemic conditions and vice versa.

Dental seminars and workshops, usually focused on state-of-the-art techniques and equipment, should also further explore systemic health and highlight its association with other aspects of dentistry.

### **Communications with medical professionals**

With the projected increase in the incidence of diabetes mellitus, which currently affects about 10% of the Hong Kong population, or around 700,000 people, the incidence of

periodontal disease is also likely to increase. As such, improving the understanding of medical practitioners regarding systemic health is a priority.

Joint lectures between dentists and physicians are effective platforms for promoting knowledge of oral-systemic health. The dental sector could seek collaboration opportunities with medical societies for physician education programs. Dentists should also communicate with the Association of Hong Kong Diabetes Nurses, which aims to educate other nurses and patients on various aspects of diabetes management.

The medical faculties of both of Hong Kong's medical teaching universities should consider including lectures from visiting dentists on the importance of oral health or incorporating dental information into the curriculum of undergraduate medical education.

Interaction between medical and dental experts is also important to transfer knowledge and good practices. Professional associations such as the Hong Kong Society of Endocrinology, Metabolism & Reproduction may consider inviting dentists to contribute to continuing education lectures.

### **Enhancing patient awareness**

Public education was widely regarded by participants in the meeting as vital to heightening the awareness of oral-systemic health. More public initiatives need to be organized to engage patients and the community in understanding the oral-

systemic health connection and winning the support of government in promoting the concept.

Messages about oral-systemic health can be delivered to diabetic patients directly through newsletters and educational materials published by patient groups and other health associations. The quarterly newsletter produced by Diabetes Hongkong now has a circulation of 7,000, reaching its members and the health-conscious public. Input to such publications from dentists on oral care for diabetic patients would strengthen total disease management.

Liaison between the dental sector and other diabetes educator associations could also be improved. Currently, apart from Tung Wah Eastern Hospital, which provides oral screening and dental care information in the initial thorough basic screening for diabetic problems, oral health education is not commonly included as a core component of diabetes educational activities. Incorporating such information in diabetic patient educational materials would benefit patients in terms of their awareness and oral health. Educational leaflets on oral health and diabetes could be produced and placed in out-patient departments, diabetes centers and specialist clinics to further enhance awareness among patients.

The Association of Hong Kong Diabetes Nurses holds workshops for patients. Therefore the Association, which is a highly focused and well coordinated group, could be targeted to help disseminate information to patients, in a similar manner to dental surgery assistants.

Prince Philip Dental Hospital hosts regular talks by international and local speakers, both to the professional community and to dental students. The inclusion of a diabetes specialist in this program would therefore help to foster awareness among dental students, oral health care workers and, subsequently the general public.

Last but not the least, public education programs via the mass media, including newspapers, television and radio programs, possibly with industry support, are also useful means to arouse public awareness.

## Pioneer in harnessing dental care for diabetes management

A community hospital serving approximately 300,000 persons, Tung Wah Eastern Hospital offers a unique interdisciplinary approach to diabetes care. The initial thorough basic screening for diabetic individuals includes oral screening, since these patients have a very high incidence of periodontal diseases, with subsidized dental treatment offered if necessary. All newly-enrolled patients then receive basic diabetes education from a team of doctors, nurses and dentists as part of their treatment.



## Fostering collaboration

There was unanimous agreement that only through close collaboration among dental and medical specialists can messages about oral and systemic health be spread and benefit the public. As such, several areas for collaboration were pinpointed during the meeting.

Referral communication between dental and diabetes specialists can be further explored, as these are currently often verbal and directed through the patient rather than through a formal referral letter. The establishment of a referral system can ensure diabetic patients receive total disease management and mitigate associated complications.

In order to persuade patients and the public to embrace the concept of oral-systemic health management, local data on the relationship between diabetes and periodontal disease and its impact on quality of life need to be produced and presented through evidence-based research and literature.

The oral health care industry can cooperate with local diabetes centers to garner more local data on prevention and management of periodontal diseases and to drive oral-systemic health messages. Hard data from double-blind prospective studies would be useful to prove that dental treatment can reduce the problem and contribute towards diabetes treatment.

One research possibility raised in the meeting was to conduct a comparative study on diabetic subjects treated at Tung Wah Eastern Hospital, which dental treatment has been offered to diabetic patients for the past 7 to 8 years, versus those treated at other centers not offering dental treatment. Such a study should generate some very interesting and useful local comparative data for publication.

The oral health care industry could also provide physicians and dentists with the educational materials needed for diabetes management and as a preventive measure at the very outset of gingivitis and periodontitis. The preventive aspect is of particular importance, as experience from Tung Wah Eastern Hospital has shown that approximately half of their diabetic patients have yet to develop periodontal disease.

Cost-effectiveness studies would also be helpful for acquiring government or other public funding for the establishment of more dental clinics at diabetes centers. This would be done in a similar way to that which was successfully used for acquiring Hong Kong Government funding for mass prophylactic pneumococcal vaccination of infants. Policy-makers also need to be convinced at the legislative level of the need for provision of early dental screening, treatment and prevention for diabetes and for general well-being.

## Conclusion

Educating and increasing awareness among the public will help encourage both dental and medical professionals to play an increasingly active role in the communicating and clinical management of oral-systemic health. In the longer term, the establishment of a co-management scheme, whereby dental and systemic health care is delivered together in order to provide better patient care, is desirable to promote oral-systemic health. Setting an oral hygiene target can also provide a clearer indicator for diabetes centers in preventing and managing the complications of diabetes. All these measures would require strong commitment and seamless collaboration between dental and medical professionals in order to improve the systemic health of both people with diabetes and the community in general.



## Consensus and next steps

The panelists of the Round Table Discussion are committed to promoting the concept of oral-systemic health and encourage the dental and medical sectors to collaborate in supporting the following future actions:

- Medical and dental communities to interact, shape and exchange ideas, and to educate the public about oral-systemic health.
- Regarding strategic planning, a small task force will be formed to produce educational leaflets for patients and the general public. Invitation to the task force will be extended to other professional bodies such as the Hong Kong Dental Association.
- Readers of the Diabetes Hongkong newsletter would provide an ideal target group for dissemination of patient information materials.
- Finally, although diabetes should be the starting point when discussing oral-systemic health, it should be remembered that other areas of medicine are also important in this regard.

Thanks to:  Faculty of Dentistry  
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 香港糖尿聯會  
Diabetes Hongkong

Supplement

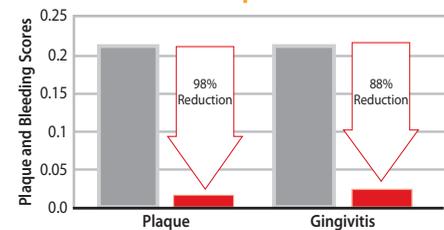
## Fighting plaque and gingivitis, improving systemic conditions

The average human mouth contains approximately 6 billion microbes, 25% of which occur on the tooth surface, with the remainder being found on the tongue and gums. Given that gingivitis and periodontitis account for 70% to 80% of tooth loss in adults, due to pathogenic plaque bacteria leading to inflammatory destruction of tooth-supporting tissues and bone, improved oral hygiene is essential, especially in susceptible individuals such as patients with uncontrolled diabetes. Responding to this need, Colgate Total® has developed toothpaste which contains the broad-spectrum bactericidal agent, triclosan, plus a unique co-polymer formulation which, combined with proper brushing, kills plaque bacteria for a full 12 hours to help reduce plaque by up to 98% and gingivitis by up to 88%. In addition, figures have shown that it can directly reduce gingival inflammation at sites without visible plaque. Due to increasing recognition that oral health is closely associated with better overall health, including improved diabetes control, Colgate Total® has been endorsed by the Hong Kong Dental Association, and is the US FDA-approved triclosan/ copolymer/ fluoride toothpaste.

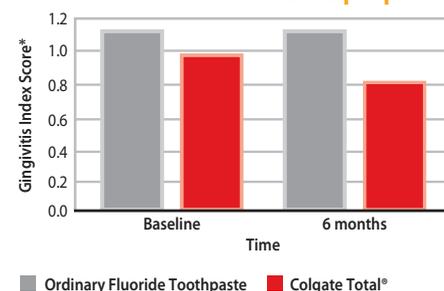
As a market leader and a forerunner in championing dental care, Colgate has been working with professional associations around the world especially the Americas and Europe to promote oral-systemic health. In the past two years, over 100 congresses and seminars have been organized, providing effective platforms for dentists, physicians and patient groups to exchange views and foster collaboration. Set up of the global and local advisory boards has demonstrated the commitment of dental and medical experts in enhancing oral-systemic conditions. Educational tools produced help raise the awareness of patients and the public. The First Systemic Health Round Table Discussion in Hong Kong was one of the first initiatives in Asia in spearheading the concept of oral-systemic health. Colgate will continue to partner with the dental and medical communities in the region to educate the public and raise awareness of oral-systemic health.

### Colgate Total® reduces plaque and gingivitis versus ordinary fluoride toothpaste

#### Reduction compared with control



#### Reduction of gingival inflammation at sites without visible plaque



\*At site with Plaque Index Score = 0

1. Panagakos F, et al. *J Clin Dent* 2005; 16(Suppl): 51-520. 2. Lindhe et al. *J Clin Periodontol*. 1993; 20: 323-334, supplemental report on file. 3. Amornchat C, et al. *Mahidol Dent J* 2004; 24: 103-111.

