Combating peri-implantitis

By DTI

SEOUL, South Korea: The most common cause of peri-implantitis is the formation of a biofilm on the implant surface. Researchers in South Korea have now tested a novel surgical procedure and shown promising results in combating this inflammation.

In two case studies of male patients over the age of 50 who exhibited severe peri-implantitis, the clinicians used the R-Brush (Neobiotech), a round brush with titanium alloy bristles, to clean the affected implant surfaces. In addition, a regenerative approach incorporating bone grafting materials was used to rebuild the bone surrounding the implant.

The titanium brush proved to be highly effective at removing biofilm from the implant surface, the researchers noted. In addition to eliminating the contaminated original rough surface, the brush created a new rough implant surface. This newly created surface made the regenerative process more successful and predictable, the follow-up assessment at three, six and 12 months after treatment indicated. During the two-year follow-up, the bone level was maintained.

The results are in line with those of previous studies that have shown that re-osseointegration can occur on surfaces previously contaminated by dental plaque and surrounded by a bone defect. Although there is no similar protocol in the treatment of severe peri-implantitis yet, the two cases in which the R-Brush was used suggest that open debridement may result in re-osseointegration and that this integration may be more pronounced on a rougher implant surface, the researchers wrote.

Researchers in South Korea have described the protocol for using a newly developed round titanium brush to clean and modify the contaminated surfaces of an implant affected by severe peri-implantitis.

The study, titled “Treatment of severe peri-implantitis using a round titanium brush for implant surface decontamination: A case report with clinical reentry,” was published in the June issue of the Journal of Oral Implantology.

Higher caries risk

ADELAIDE, Australia: A study conducted at the University of Adelaide has suggested that children who are breastfed for at least two years could be at a higher risk of dental caries. The researchers considered this finding against the children’s pattern of sugar intake from foods. Dr Karen Glazer Peres from the Adelaide Dental School explained that children still breastfed at age 2 or older had an increased risk of developing dental problems, including teeth that showed signs of decay, were missing or had a filling.

According to the study, their risk of having severe early childhood caries was also 2.4 times higher compared with those who were breastfed up to 1 year of age. However, the researchers found that breastfeeding up to the age of 15–23 months had no effect on dental caries incidence. Overall, 1,129 children born in 2004 in Pelotas in Brazil, a community with a public fluoridated water supply, were included in the study.

ARTIFICIAL BLOOD VESSELS

US researchers have developed a revolutionary process by which to engineer new blood vessels in teeth using pre-vascularised dental tissue constructs. The technique involves placing a fibre mould made of sugar molecules across the root canal and injecting a gel-like material, similar to proteins found in the body, filled with dental pulp cells. After seven days, dentine-producing cells proliferated near the tooth wall and artificial blood vessels formed inside the tooth. “This result proves that fabrication of artificial blood vessels can be a highly effective strategy for fully regenerating the function of teeth,” said principal investigator Dr Luiz E. Bertassoni. “We believe that this finding may change the way that root canal treatments are done in the future.”

Water fluoridation funding

New Zealand Health Minister Dr Jonathan Coleman has announced that the federal government’s 2017 budget will commit NZ$12 million (US$8.66 million) over the next four years to help build the infrastructure needed to fluoridate drinking water. “Increasing access to fluoridated water will improve oral health and mean fewer costly trips to the dentist,” Coleman said.

ADA: Dental Health Week

From 7 to 13 August, the Australian Dental Association will be celebrating Dental Health Week. Among other things, the campaign aims to motivate dental professionals to become more actively engaged in the community they serve. Dentists can find guidance on running the campaign on their website.

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Plymouth dental experts support Philippine mission

By DTI

PLYMOUTH, UK/MANDAUE CITY, Philippines: Supporting UK charity Dental, two dental experts from Plymouth University Peninsula School of Dentistry will be bringing oral health care to one of the poorest cities in the Philippines. In addition to providing emergency and preventative dental services during their two-week mission, Dr Robert Witton and Ruth Potterton will be providing oral health education for the children and their teachers and set up a school toothbrushing programme.

The operation and project activities will be based around Uma-pad Elementary School in Mandaue City on the island of Cebu. This publicly funded school with approximately 1,300 pupils provides education to a group known locally as ‘scavenger children’, who live in and around the city’s dump sites and earn a living recycling other people’s waste.

“Our mission with Dental is to get all the school children dentally fit,” said Potterton. “We’ll do this by offering pain relief treatments where necessary, traumatic restorative treatment if possible, and fluoride varnish for all the children,” Potterton said.

The two volunteer practitioners will be supporting a wider group of relief teams who will be working together across a range of activities, including providing support in teaching English, IT equipment and community support training, and rebuilding after earthquakes, fires and typhoon damage in the region. Dental treatments will be provided in close cooperation with a local dentist and dental students from the dental school in Cebu.

A sweet remedy? New lozenges aim to tackle dental caries

By DTI

OSAKA, Japan: Osaka-based confectionary company UHA Mikako has introduced flavoured pastilles claimed to be helpful in maintaining a healthy oral flora. According to the company, its UHA dentaclear sweets contain a strain of lactic acid bacteria that is believed to effectively suppress the proliferation of pathogenic bacteria in the mouth and hence reduce the risk of dental caries.

The lozenges are available in yoghurt or clear mint flavour and have been available from Japanese chemists and convenience stores since June. According to UHA Mikako, the incidence of caries and other oral diseases can be reduced by sucking the sweets after meals.

In addition to strains of Lactobacillus rhamnosus 18L20, the pastilles contain various sweeteners, including 0.85 g of xylitol per lozenge. Xylitol has been shown to have caries-preventive qualities, mainly because most plaque bacteria lack the ability to ferment xylitol into cariogenic end-products. Other ingredients include crystalline cellulose, fine silicon dioxide and green tea extract.

UHA Mikako jointly developed the product with Prof. Hiroki Nakawa from the School of Oral Health Science at Hiroshima University and trading company Mitsui & Co. The idea of using the beneficial properties of L. rhamnosus 18L20 to enhance oral health arose after Nakawa discovered the increased presence of the bacterial strain in research on patients with resistance to caries.

The lozenges have a recommended retail price of ¥398 (US$3.75) per 13 g bag. Further information can be found on the Japanese product website at www.uha-18l20.jp.

Aiming to prevent dental caries: UHA dentaclear lozenges.

By DTI

SYDNEY, Australia: With the cost of dental treatment presenting a significant barrier for many Australians, some may consider dental tourism—travelling to another country to undergo a dental procedure—to be an increasingly viable option. With this in mind, the Australian Dental Association (ADA) has been prompted to issue a warning about the risks that may accompany this decision.

“Complex procedures—medical or dental—should not be done over the course of a holiday,” said Foley. “If you have the need for a complex medical treatment or procedure, it is best done in Australia where you can be assured of the safety and quality standards in place, and of the certainty of follow up.”

Australian dental tourists tend to travel to a wide variety of places for cheaper procedures, from South East Asian hotspots like Bali and Thailand to eastern European destinations. Though it is in no way illegal to have dental procedures performed away from Australia—and the initial cost of the treatment may be relatively cheap—there can often be unforeseen complications that are unable to be handled effectively in the time span of the period abroad, the ADA warned.

“The decision to become a dental tourist usually comes to down to one simple thing—saving money,” said Dr Michael Foley, Vice Chairman of the ADA’s Oral Health Committee.

“While it’s true you may save some money in the short term, the reality is that things can go wrong and all those expected savings can quickly disappear and end up costing more than the holiday itself.”

In addition to procedural complications, dental tourists may be subject to less-stringent quality standards and lower-grade materials in comparison with Australian dentistry. If a patient is dissatisfied with dental work performed overseas, the ADA cautioned, it can sometimes be extremely difficult to repair satisfactorily and may lead to the extraction of the affected teeth.

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