Study shows aspirin could repair dental caries

By DTI

BELFAST, UK: According to a new study by researchers at Queen’s University Belfast, aspirin could reverse the effects of dental caries. According to the paper, aspirin can enhance the function of dental stem cells, thus aiding self-repair of the tooth—a result that could drastically reduce the need for one of the most common types of dental work. In England alone, the National Health Service pays for about seven million fillings each year.

Researchers combined genomics and novel bioinformatics to identify aspirin as a candidate drug with properties that stimulate existing stem cells in the tooth to enhance the regeneration of the damaged tooth structure. Treatment of stem cells from teeth with low-dose aspirin significantly increased remineralisation and the expression of genes responsible for forming dentine.

According to the study, this new discovery, coupled with the known anti-inflammatory and pain-relieving effects of aspirin, could provide a unique solution for controlling dental nerve inflammation and pain while promoting natural tooth repair.

Lead researcher Dr Ikhlas el-Karim said, “There is huge potential to change our approach to one of the biggest dental challenges we face. Our initial research findings in the laboratory suggest that the use of aspirin, a drug already licensed for human use, could offer an immediate innovative solution enabling our teeth to repair themselves.”

Caries is the most common dental disease worldwide and places a large financial burden on the NHS. This strain on the system is a particular concern in Northern Ireland, which has the highest prevalence of tooth decay in the UK.

“Our next step will be to develop an appropriate delivery system to test the drug efficacy in a clinical trial. This novel approach could not only increase the long-term survival of teeth but could also result in huge savings for the NHS and other healthcare systems worldwide,” said el-Karim.

The research findings were presented on 7 September at the British Society for Oral and Dental Research Annual Scientific Meeting in Plymouth in the UK.

Phobia of dentists leads to more decay and tooth loss

By King’s College London

People who have a severe fear of the dentist are more likely to have tooth decay or missing teeth, according to a new study from King’s College London.

The study, published in the British Dental Journal, compared the oral health of people with and without dental phobia. The results showed that people with dental phobia are more likely to have one or more decayed teeth, as well as missing teeth. In addition, the study found that those with dental phobia reported that their quality of life is poor.

In the study, researchers suggest that this could be because many people with dental phobia avoid seeing a dentist on a regular basis to address preventable oral conditions. The team also found that once a visit has been made, the phobic patient might also prefer a short-term solution, such as extraction, instead of a long-term care plan.

Anxiety about visiting the dentist is common and becomes a phobia when it has a marked impact on someone’s well-being. Researchers analyzed data from the Adult Dental Health Survey (2009), where out of 10,900 participants, a total of 1,367 (344 men and 1,023 women) were identified as phobic.

This phobia can have a major impact on a person’s quality of life, including on their physiological, psychological, social and emotional wellbeing. Other research has shown that people with dental phobia express negative feelings such as sadness, tiredness, general anxiety and less vitality. An action as simple as smiling will be avoided due to embarrassment of their poor teeth.” Dr Ellie Heidari, Dental Institute

“Our study found people with dental phobia tend to experience a range of dental diseases which result from their avoidance of the dentist. Ideally we would want to help them overcome their dental phobia and attend the dentist, but in the interim perhaps we could be helping them to take good care of their teeth themselves.”

By providing these patients with a detailed at home oral healthcare plan, dental practitioners could help reduce acute conditions with preventative care. Professor Tim Newton, Dental Institute

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Oral care of older patients: Prevention before intervention

By DTI

BRISBANE, Australia: In light of the ageing population, dentists need to be aware of the risks posed by retained dentition and exposed root surfaces in elderly patients, whose oral health problems are multifactorial. A recent article has recommended a maximum interception approach involving all members of the health care team and promoting evidence-based self-care, taking into account salivary, plaque and lifestyle risk factors.

Dental professionals must be prepared for the sheer number of older patients, especially among the baby boomers (the generation born between 1946 and 1964), retaining their natural teeth for longer, stated article author Prof. Laurence James Walsh, from the School of Dentistry at the University of Queensland in Australia. Particular problems include root surface caries in patients with a strong history of coronal caries and those who suddenly develop salivary hypofunction. Furthermore, elderly patients suffer from more chronic diseases and are medically more complex.

Treatment options need to be adjusted to each patient’s situation. This includes considering how treatments can maximise the patient’s quality of life and make him or her comfortable and pain-free, as well as treatment being within their economic reach, argued Walsh.

Older patients sometimes cannot maintain sufficient oral health, owing to a decline of fine motor skills and reduced sight. Hence, Walsh advised a multidisciplinary approach with doctors, nurses and carers working together to provide good oral health for patients living in long-term care facilities. A key message must promote oral health as part of overall health, he said.

“A central tenet of modern preventive dentistry is to avoid intervening before prevention has been given a chance to work,” emphasised Walsh.

The older population is at risk of falling into the cycle of dental neglect or worsening oral disease. Carers might be reluctant to perform oral hygiene, since they may feel they lack the necessary knowledge and skills to do so safely, wrote Walsh. This adds to the perception that the mouth is an intimate personal space. Consequently, many carers believe that patients should be looking after their own teeth and dentures. In the case of patients who develop dementia, these barriers to oral care can magnify.

“Protocols for oral care must be tailored to the patient’s needs and be realistic given the limitations in time, finance and energy which can be expended,” said Walsh. Furthermore, the lack of education is a need that should be addressed.

The article, titled “Minimal intervention management of the older patient”, was published online on 11 August in the British Dental Journal.

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Combating pregnancy gingivitis: EFP and Oral-B launch joint campaign at FDI

By DTI

MADRID, Spain: At a press event on Wednesday, long-standing partners Oral-B and the European Federation of Periodontology (EFP) announced that they have joined forces in a Europe-wide campaign to raise awareness of the importance of oral health during pregnancy. The initiative aims to educate and support expectant women, as well as health care and dental professionals, by introducing guidelines for both audiences, among other measures.

Owing to hormonal changes, pregnant women have a higher risk of developing periodontal disease—a link that has been well established through research. However, according to a new US study, gingivitis affects far more pregnant women than previously thought, its occurrence and severity substantially exceeding US national averages.

Presenting the findings of the Oral Hygiene and Maternity Outcomes Multicenter Study, Dr Robert Gerlach, a research fellow in clinical investigations at P&G, which supported the research, said that moderate-to-severe gingivitis was very common among the 648 women evaluated. The study found a substantial disease onset across broad demographic and socio-economic subgroups beginning in the first trimester of pregnancy. Moreover, severity was extraordinarily high, averaging 121 bleeding sites, which represents nearly one-third of the gingiva.

Highlighting the fact that gingivitis is a preventable and manageable disease, Gerlach said it should be every expecting mother’s priority to avoid excessive plaque accumulation to prevent gingivitis becoming an issue. He stressed that many pregnant women, especially in their first pregnancy, are willing to seek advice and will actively change their behaviour, which is why this is an optimal time to reach them in raising awareness of the risk.

Supporting the educational purpose of the campaign, three reports will be published. One will shed light on the various aspects of women’s oral health during pregnancy, another will highlight the mechanisms of pregnancy gingivitis, and a third will cover treatment options and their effects on expecting mothers’ health and that of their children.

“We want to have an impact,” said Prof. Mariano Sanz, Chairman of the EFP Workshop Committee. “We believe that the mission of the EFP without the power of our partners—in this case Oral-B—would not be efficient, so partnership is key!”

Giving a preview on the new guidelines to be published, Sanz remarked that the FDI World Dental Congress is the perfect platform by which to reach dental professionals worldwide, since the federation represents the unified voice of the dental industry. The guidelines will be available by mid-September at www.oral-healthandpregnancy.efp.org.

New Oral-B toothpaste launched

Complementing the event was the introduction of Oral-B’s latest addition to its portfolio, the Oral-B Gum & Enamel Repair toothpaste. Already available in most European markets, the toothpaste is intended to help restore gingival health and prevent enamel erosion. According to the company, its ActivRepair Technology (with stannous fluoride and stannous chloride) actively remineralises weakened enamel and builds a protective smear layer that protects teeth against acid erosion even beyond a pH < 3.5. With continued use, Oral-B Gum & Enamel Repair will make the teeth stronger against enamel erosion while increasing bacterial control through the inhibition of plaque accumulation, the company said.

Prof. Mariano Sanz, Chairman of the EFP Workshop Committee, in an interview at yesterday’s press event. (Photograph: DTI)