Staining susceptibility tested

By DTI

BANGKOK, Thailand/TOKYO, Japan:
With the development of new materials and technology in dentistry, expectations for durable and aesthetically pleasing restorations are ever increasing. In a recent study, researchers from Thailand and Japan investigated how sensitive various restorative materials were to discoloration from coffee.

Just like natural teeth, restorative materials are susceptible to discoloration from certain foods and beverages with high staining properties, including coffee, tea and red wine. In order to avoid discoloration over time, surface quality is thus essential for the success of restorative treatments.

New CAD/CAM composite resin blocks are industrially polymerised under standardised parameters at high temperature and pressure to achieve optimum properties at the microstructural level and a high degree of conversion. As a result, material characteristics have improved compared with direct restorative composite resin.

In the study, researchers from the Tokyo Medical and Dental University in Japan and the Chulalongkorn University in Bangkok aimed to evaluate how modern composite resin block materials developed for CAD/CAM systems react to coffee exposure compared with conventional resin materials.

The researchers measured the change in colour in eight CAD/CAM blocks, including five composite resin blocks (Block HC, SHOFU CERASMART, GC GRADIA Block, GC KZ-CAD Hybrid Resin Block, Yamamoto Precious Metal, Lava Ultimate, 3M ESPE), one hybrid ceramic block (VITADURニー, VITA Zahnfabrik), one PMMA block (Telio CAD, Ivoclar Vivadent) and one feldspathic ceramic block (VITA Mark II, VITA Zahnfabrik), and four conventional composite resins.

The researchers found that most materials changed slightly under coffee exposure, but some showed significant changes in colour.

Artificial enamel

Aiming to create a material that is able to withstand repeated stressors, such as unavoidable vibrations like those on airplanes, which cause objects with rigid structures to age and crack, researchers at the University of Michigan in the US have mimicked the structure of tooth enamel. They replicated the material by sequential growth of enamel following the natural crystallization, mimicking the crystallite size and orientation.
Survey: Misconceptions about oral health practices revealed

By DTI

GENEVA, Switzerland: The results of an online survey, carried out in 12 countries for World Oral Health Day (WOHD) among 12,849 adults, have indicated a significant gap between what people believe to be good dental hygiene habits versus what they actually do and what is recommended by oral health experts.

In eight of the countries surveyed, 30 per cent or more of the respondents said they thought it is important to brush one’s teeth straight after every main meal. This incorrect oral health practice was worst in Brazil, Mexico, Egypt and Poland (42, 49, 42 and 42 per cent, respectively) thought that rinsing one’s mouth with water after brushing is important.

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The majority of respondents surveyed incorrectly believed that brushing one’s mouth with water after brushing is important.

The results showed that the coffee solution significantly discoloured all of the discs over time; however, CAD/CAM materials were generally less affected than the conventional resin materials. After one month, the change in colour of the CAD/CAM composite resin blocks and restorative composites ranged from 1.6 to 3.7 and from 2.1 to 7.9, respectively. According to the researchers, only one material, Durafill VS, was not significantly more discoloured after one month than after one day.

Other key findings on oral health practices included the following:

• Seventy-seven per cent of people surveyed agreed that visiting a dentist once per year is a good oral health practice, but only 52 per cent actually did so.
• Only 28 per cent of respondents identified drinking alcohol in moderation as important for good oral health.

The survey was carried out by YouGov on behalf of FDI. It was undertaken between 20 and 31 January 2017. The figures were weighted to reflect those of Dental Tribune:

 surveyors from India, South Africa, Brazil and Poland (52, 49, 42 and 42 per cent, respectively) thought that drinking fruit juice rather than fizzy drinks was better for good oral health. Fruity juice, however, can also be high in sugar, which causes dental caries. FDI recommends keeping consumption of sugary beverages to a minimum as part of a healthy, balanced diet.

Dr Edoardo Cavalle, WOHD Task Team Chair, stated: “Understanding good oral health practices and adopting them early in life will help to maintain optimal oral health into old age and ensure you live a long life free from physical pain and often emotional suffering caused by oral disease.”

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The respondents in the major countries surveyed incorrectly believed that brushing one’s mouth with water after brushing is important. This myth was found to be the greatest among the participants from Brazil, South Africa, Mexico, India and Canada (77, 75, 73, 67 and 67 per cent, respectively). It is actually recommended not to rinse with water straight after brushing to allow maximum exposure to fluoride, which will optimise the preventative effects.

Nearly half of the respondents surveyed in India, South Africa, Brazil and Poland (52, 49, 42 and 42 per cent, respectively) thought that drinking fruit juice rather than fizzy drinks was better for good oral health. Fruity juice, however, can also be high in sugar, which causes dental caries. FDI recommends keeping consumption of sugary beverages to a minimum as part of a healthy, balanced diet.

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CANBERRA, Australia: Amid fierce criticism from dental groups and the opposition, the Australian government has decided to retain the Child Dental Benefits Schedule (CDBS) at its full rebate amount of A$1,000. Initially, the government planned to terminate the scheme completely according to the 2016–17 budget released last May. In December, it then announced that the scheme was to be saved, but with a watered-down amount of A$700 available per child—both propositions have now been abandoned.

The CDBS, which was introduced by the former Labor Party government and commenced in January 2014, allows low-income families to claim a rebate of up to A$1,000 per child every two years for dental care. However, at about A$312 on average, most families claimed less than a third of the full rebate in the past. “In light of this, the Government had previously set the cap at A$700 per child over a two-year period, which would still allow children to visit a dentist regularly,” Minister for Health Greg Hunt said previously in a statement.

However, after both Labor and the Greens indicated that they would veto the change in the Senate, Hunt announced the reinstatement of the full rebate just hours before the motions were to be voted on in February. According to Hunt, the decision followed consultation with the Australian Dental Association.

Commenting on the move, Australian Dental Association Vice President Dr Carmelo Bonanno said it was a common sense decision by the government. “The reduction of A$700 meant that about 20 per cent of children were going to miss out if they were going to try and utilise the scheme fully,” Bonanno told ABC News.

Regarding the low amount claimed on average in the past, Bonanno reasoned this could be attributed to a lack of awareness of the scheme. “Improving people’s awareness of that means that there’ll be better utilisation of the scheme and the outcomes are going to be far better,” he said, adding that the dental association had already discussed the need for better marketing of the scheme with the government.

Estimating general dental care costs, the Australian Health-care and Hospitals Association calculated that children with the top 10 per cent highest need would be likely to require up to A$1,050 worth of dental work over two years and children at moderate risk would need up to A$1,253 worth of work. Keeping the scheme at A$1,000 would therefore help parents to continue to provide much-needed dental health care for their children, rather than delay treatment because of a lack of money, the association stated.

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