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DENTAL TRIBUNE

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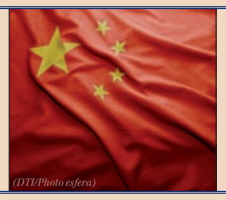

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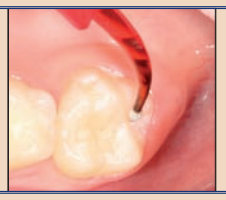

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India extends public dental health care with 2014 budget

Daniel Zimmermann
DT Asia Pacific

NEW DELHI, India: In his 2014 budget speech presented to the parliament in New Delhi, India's Minister of Finance Arun Jaitley has proposed multimillion-rupee funding for the establishment of a number of new government-run hospitals. The 12 institutions that he has said will be established in cities throughout the country will include treatment facilities for oral health care.

In addition to increased funding for public dental services, a new research and referral institute for higher dental studies is to be set up in one of the existing dental schools. The minister did not provide details, however, on where or when the institute will be established.

The measures are just two of a number of initiatives intended to improve access to health care for a large part of the Indian population. The additional investment in this sector for the next fiscal year will amount to 500 million rupees (US$8.3 million), according to Jaitley.

Union Minister for Finance, Corporate Affairs and Defence, Shri Arun Jaitley (left) on his way to present the General Budget 2014/2015. (DTI/Photo: Press Information Bureau, India)

Commenting on the budget, which will also see tax reductions for low-income households and seniors, Prime Minister Narendra Modi said that the new budget will be a ray of hope for

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Fluoridation under review

The National Health and Medical Research Council (NHMRC) has called for submissions from the Australian public on evidence regarding the health effects of water fluoridation. The council is preparing a review of its current recommendations on the subject to ensure that its advice is based on the latest scientific evidence.

On behalf of NHMRC, a team at the University of Sydney will undertake a systematic review focused on scientific studies submitted by the Australian community that examine the effects of water fluoridation on human health published from 1 October 2006. Once the review is complete, NHMRC will prepare a draft information paper summarising the findings, on which the public will have the opportunity to comment.

Currently, the council recommends that water be fluoridated at the level of 0.6 to 1.1. mg/l, a level that is believed to help reduce tooth decay among Australian people without causing dental fluorosis. DT

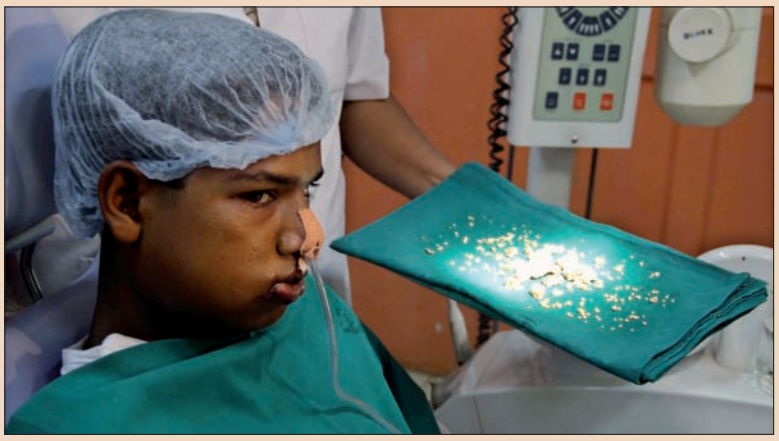

Photo showing Ashik Gavai, an Indian teenager who recently had over 200 tiny teeth extracted from his mouth owing to abnormal growth affecting his right mandibular second molar. (DTI/Photo courtesy of IANS, India)

MH17 records delivered

Malaysia has confirmed that the dental records of all of the Malaysian victims of MH17 have been collected and sent to Europe for forensic identification. Forty-three Malaysian passengers were on board the flight, which is believed to have been shot down by pro-Russian rebels over the Ukraine in early July. DT

Mukherjee joins FDI AWDC

The president of India Pranab has accepted an invitation from the Indian Dental Association in Mumbai to inaugurate the opening ceremony of the FDI Annual World Dental Congress. The annual event will be held at the India Expo Centre in Greater Noida near New Delhi from 11 to 14 September. DT

New caries initiative in the Philippines

A newly established chapter of the Alliance for a Cavity-Free Future in the Philippines is aiming to improve the country's devastating state of oral health. Its goals presented to the public at the recent 105th annual convention of the Philippine Dental Association (PDA) in Pasay City include the development and nationwide implementation of caries prevention and management systems by 2020.

While the declaration was lacking in details, the initiative aims for every child born after 2026 to be cavity free. It said it will first target schools in particular in order to heighten awareness in the education sector that caries is a preventable disease and can result in a lower quality of life if untreated. DT

Cochrane reports no evidence for superior long-term success of dental implants

DT Asia Pacific

MELBOURNE, Australia/ MANCHESTER, UK: Promising superior clinical outcomes, plenty of new dental implants are launched to markets each year. A report by researchers from the Cochrane Oral Health Group in Melbourne and Manchester has recently suggested that there may be no differences in terms of long-term success, regardless of the shape of the implant or the material used.

The researchers reviewed randomised clinic trials conducted around the world from the group's own database. From this, the only statistically significant difference observed was in relation to surface preparations, with smoother (turned) surfaces being found to be less prone to bone loss associated with peri-implantitis than were rougher surfaces.

Smoother surfaces, however, appeared to fail early more often, according to the analysis.

Similar results were reported by the group in a series of earlier reviews, of which the first was published in 2002. In the most recent update, two of the review authors independently compared 38 different implant types, which had been placed in 27 trials involving more than 1,500 patients, ranging from the early 1980s to early 2014. They said that, while their report provided no evidence that one specific type of implant proved superior in terms of long-term success to other types of implants with different characteristics, the results would have to be evaluated carefully owing to the low number of participants and short follow-up periods, which ranged from one to ten years.

Overall, more than half of the reviewed trials proved to be at high risk of bias, they said.

"One well known weakness of such a meta-analysis of several small studies is that it cannot predict the results of a larger study," remarked Prof. Stefan Holst, Global Head of Research and Science at Nobel Biocare, one of the global market leaders in dental implantology, on the report's findings. "With 38 different implant types with highly diverse geometries, surfaces, prosthetic superstructures and clinical protocols applied—several of which are no longer in use—there are many variables. The meta-analysis dilutes any potential effect of a single relevant implant surface or implant characteristic in clinical practice today."

A representative of Straumann also cautioned against the results, saying that the review reflects the fact that there is very little or no published clinical data on the majority of commercially available dental implants, since they have not been clinically tested.

He emphasised that of all the implants available today only 38 tested in randomised controlled clinical trials were considered worthy of review.

"With regard to our own implants, the review excluded studies that we and others feel are important. Furthermore, it did not consider the large body of bench tests and preclinical trials that demonstrate significant differences in some cases," the representative told *Dental Tribune Asia Pacific*.

According to the Cochrane Collaboration, there are more than 1,300 different dental implants available on the market today. The total value of fixed tooth replacements was estimated to be US$3.4 billion in 2011, a figure that some analysts expect to almost double in the next five years owing to the increasing demand of an ageing population and more dentists starting to place dental implants. DT

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Publisher Torsten Oemus

Group Editor/Managing Editor DT Asia Pacific — Daniel Zimmermann, newsroom@dental-tribune.com, Tel.: +49 341 48474-107
Clinical Editor — Magda Wojtkiewicz
Online Editors — Yvonne Bachmann, Claudia Duschek
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Dental Tribune International
Holbeinstr. 29, 04229, Leipzig, Germany
Tel.: +49 341 48474-302 · Fax: +49 341 48474-173
Internet: *www.dental-tribune.com* E-mail: *info@dental-tribune.com*

Regional Offices

Asia Pacific
DT Asia Pacific Ltd.
c/o Yonto Risio Communications Ltd, 20A, Harvard Commercial Building, 105-111 Thomson Road, Wanchai, Hong Kong
Tel.: +852 3113 6177 · Fax: +852 3113 6199

The Americas
Dental Tribune America, LLC
116 West 23rd Street, Suite 500, New York, NY 10001, USA
Tel.: +1 212 244 7181 · Fax: +1 212 224 7185

Patients in Australia favour receiving rapid HIV testing

DTI

SYDNEY, Australia: Despite the necessary technology having been available for a number of years already, rapid HIV testing is not yet widely offered in dental settings around the world. A study, which included 521 dental patients from Sydney in Australia, now found that more than 80 per cent of oral health patients are willing to undergo such tests during dental appointments. Seventy-six per cent of those willing to receive rapid HIV testing at the dentist's office preferred an oral swab, 15 per cent a pin prick test, and 8 per cent a traditional blood test, it also showed.

"Dentists are well placed to offer rapid HIV testing because they are located throughout the community, have ongoing relationships with their patients, and have the necessary training and expertise to recognise systemic diseases that have oral manifestations, such as HIV/AIDS," said Dr Anthony Santella, a public health scientist who led the study. He added that about 45 per cent of dentists are currently willing to conduct rapid HIV testing.

The new findings of the study were presented at the HIV Testing Symposium, which was held on 16 July at the university's Western Sydney Sexual Health centre.

According to the 2014 Annual Surveillance Report, a comprehensive analysis of HIV, viral hepatitis and sexually transmissible infections in Australia provided by the Kirby Institute, approximately 14 per cent of all HIV cases in Australia are undiagnosed. The institute estimates that 24,500–30,900 people are living with HIV in Australia.

Moreover, patients in Australia will soon be able to buy rapid oral HIV tests over the counter. At the beginning of the month, the government removed restrictions preventing the manufacture and sale of HIV home self-tests. Now, companies can sell such tests directly to consumers. DT

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the poor. Despite the trying times, he added, his government is committed to extending every possible assistance to the less off, the neo-middle and the middle classes.

Honorary General Secretary of the Indian Dental Association Dr Ashok Dhoble commented: "IDA has been championing the cause and has undertaken several initiatives to improve oral health and with it the quality of life of people in the country. Setting up a research and referral institute for higher dental studies on a national level as proposed in the budget is the need of the hour, if we are to usher in a new dawn in oral health care."

The measures would be welcome in the country, where the majority of the population is still unable to access even basic dental treatment. According to a report published last year by researchers from the Gian Sagar Dental College in Rajpura near Delhi in northern India, the current dentist-to-patient ratio ranges from an already low 1:10,000 to a devastating 1:150,000 in some rural areas, despite the ten thousands of students graduating from the country's approximately 300 dental schools each year. Lead author Dr Ramandeep Singh Gambhir therefore doubts that the proposed budget concessions will have any long-term effect.

"The budget means no reform for the existing problems, as it only concentrates on dental research which is already being conducted in postgraduate dental institutions," he explained. "Setting up dental clinics in medical hospitals won't solve the problem either, unless there are programmes which can raise the awareness level of the Indian population."

According to reports, most Indians are still unaware of the benefits of oral health measures that are common in other parts of the world. In a 2011 study conducted in public schools in Mumbai, for example, it was found that 40 per cent of students still used their finger instead of a toothbrush to clean their teeth. Even worse results were found with regard to flossing and the use of mouthwash. DT

Dear reader,

Daniel Zimmermann
DTI

Implants are probably a topic in dentistry that has the potential to spark vigorous debate among clinicians. Whenever I talk to dentists in interviews or casually at congresses, I almost certainly encounter two opposing viewpoints: those who are passionate advocates of the devices or those who believe implants signal the doom of dentistry.

The truth, as always, lies somewhere in the middle, but there is certainly a corporate influence in dental implantology nowadays that cannot be ignored. Or to quote a well-known implantologist I recently had the opportunity to interview: "I am afraid these companies own us."

With an increasing number of dentists expected to start placing implants, this issue will become ever more important. I wonder what your viewpoint on the debate is. DT

Yours sincerely,

Daniel Zimmermann
Group Editor
Dental Tribune International

Dental Tribune welcomes comments, suggestions and complaints at newsroom@dental-tribune.com.

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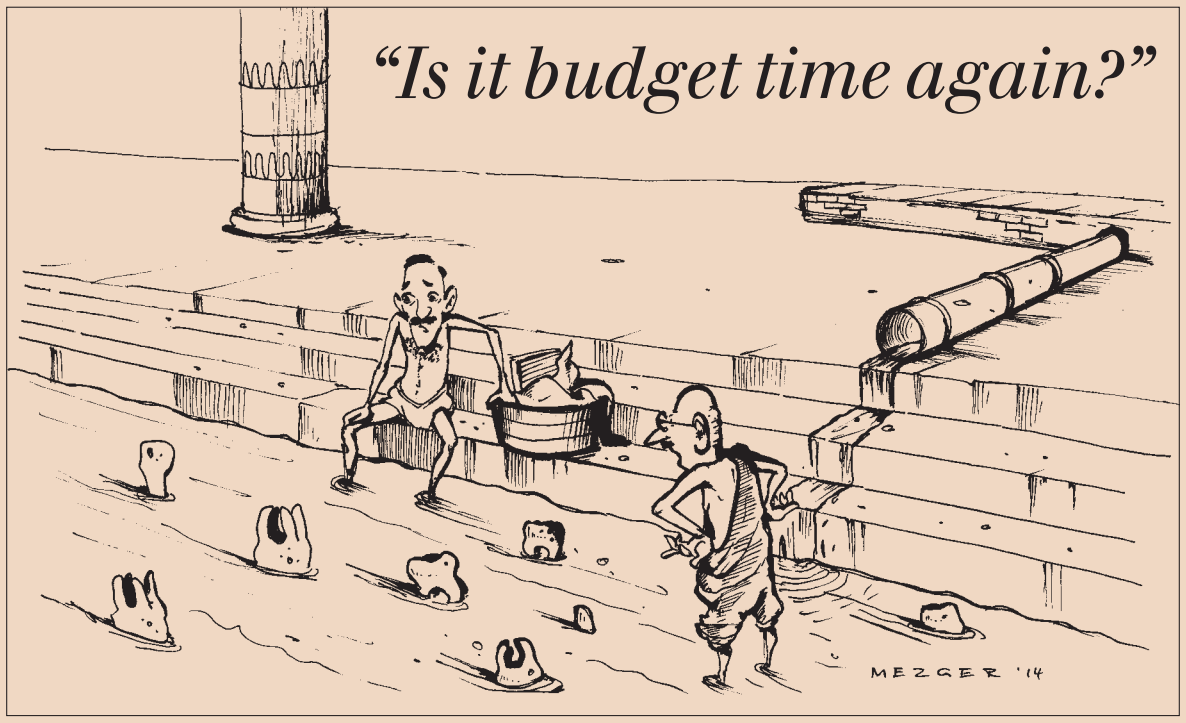

The risk of extinction

Dr Sebastian Saba
Canada

During the past few years, there appears to have been an increase in the continuing education courses being offered. Many of the courses cover implant dentistry, but the conventional courses that form the basis of learning the skills to save teeth have been fewer in number. Apparently, everybody wants to learn how to place a dental implant surgically.

In the past, dentists spent four to five years in dental school learning many of the skills needed to save teeth. These skills involve different forms of dentistry, not limited to periodontics, operative dentistry or endodontics. They spent countless hours learning to negotiate root surfaces in debridement and root canal curvatures in endodontics, as well as multiple techniques in operative dentistry to preserve teeth. But all that has changed overnight. Why spend so much time saving teeth when you can remove them and place a dental implant in half the time? Is this really better for the patient? Why burden the patient with multiple periodontal procedures to save teeth when the alternative is here?

This approach appears to be widespread in the thinking of clinicians today. Many are concerned that dentists are not promoting the correct approach to preserving the integrity of the natural dentition. The attitude is so contagious that even some endodontists are learning to place dental implants. Is this not a clear conflict of interest? What is their motivation? Are we doing enough to teach dentists to diagnose and prognose the ailing dentition? When does an ailing dentition become a failing dentition? When is it appropriate to choose implant dentistry over conventional, time-proven and predictable conventional dentistry?

The removal of key aspects of dental training creates dentists who are not confident to diagnose or render the necessary procedures to save teeth adequately. Their clinical skills in recognising and managing ailing dentition are limited. Their ability to recognise when and where dental implants may be used may be influencing their ability or motivation to save teeth. Are we not creating a conflict of interest for our patients? The true need should be to return to the basics and learn to save teeth first, so patients are able to keep the most natural dental implant of them all. DT

Contact Info

Dr Sebastian Saba is Editor-in-Chief of *Dental Tribune Canada*. He can be contacted at sabpros@sympatico.ca.

The Ebola virus epidemic: A concern for dentistry?

Prof. Lakshman Samaranayake
Australia

Twenty-two years ago, a seminal report from the Institute of Medicine (IOM) in the US titled Emerging Infections: Microbial Threats to Health in the United States warned of the dangers of so-called newly emerging and re-emerging diseases. The concept of "emerging infectious diseases", introduced then by the IOM is now well entrenched, and to our chagrin we have witnessed many such diseases over the last two decades. These include variant Creutzfeldt–Jakob disease/bovine spongiform encephalopathy, severe acute respiratory syndrome, and Middle East res - piratory syndrome, and above all the pandemic of acquired immune deficiency syndrome (Aids), which has claimed millions of lives the world over. The re-emerging infectious diseases we have seen include diseases caused by meticillin-resistant *Staphylococcus aureus*, and multidrug-resistant and extensively drug-resistant tuberculosis.

Interestingly, the concept of "emerging infectious diseases" is not new. Indeed ancient Greek, Roman and Persian writers documented the emergence of many new epidemics. In more recent times, the scientist Robert Boyle presciently observed in 1865 that

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"there are ever new forms of epidemic diseases appearing […] among [them] the emergent variety of exotic and hurtful […]". Arguably though, the most noteworthy relatively new emerging infectious disease with the greatest impact on the dental profession has been the human immunodeficiency virus and Aids.

And now we have a severe epidemic of Ebola virus infection. It is back with a vengeance, this time in West Africa, with over 380 cases and a 69 per cent case fatality ratio at the time of writing. The culprit is the Zaire ebolavirus species, the most lethal Ebola virus known, with case fatality ratios up to 90 per cent.

According to the IOM report, there are many reasons that new diseases emerge and re-emerge. These include health care advances with the attendant problems (e.g. transplantation, immunosuppression, antibiotic abuse, and contaminated blood and blood products) and human behaviour, including injectable drug abuse and sexual promiscuity. Societal occurrences, such as economic impoverishment, war and civil conflict, too are critical according to the IOM. The current outbreak of Ebola virus infection is a perfect storm created by a lethal combination of these factors, including rampant deforestation, poverty and the war-stricken situation in many African countries.

So how does Ebola spread? According to World Health Organization reports, Ebola virus disease (EVD) is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. Human-to-human transmission is through direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids, such as saliva, of infected people, and indirect contact with environments contaminated with such fluids. Transmission through the air has not been documented in the natural environment, nor have there been any case reports of transmission through saliva contamination. Infection in health care settings has been due to health care workers treating patients with suspected or confirmed EVD, especially when infection control precautions were not strictly practised. Reports indicate that those who recovered from the disease could transmit the virus through their semen for up to two months after recovery.

EVD is a severe acute illness characterised by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and both internal and external bleeding in some cases. Oral manifestations, such as acute gingival bleeding, have been reported. The mortality rate of EVD is very high and 50 to 90 per cent of patients die owing to the profound systemic haemorrhage or its complications. The incubation period of EVD is 2 to 21 days.

"…we cannot afford to let our guard down…"

Up to now, there have been no reported cases of transmission of EVD in any dental settings. However, the fact that it is transmitted through human secretions, which includes saliva, and that the incubation period could last up to 21 days implies that dental care workers in the endemic areas of the virus, such as West Africa and sub-Saharan Africa, may run the risk of acquiring the disease if strict standard infection control measures are not routinely followed.

In dentistry, we are constantly exposed to these emerging and re-emerging infectious threats and we cannot afford to let our guard down. Vigilance, awareness and good clinical practice with standard infection control at all times are fundamental to prevention, as yet-unimagined new diseases surely lie in wait.

Although we have made spectacular technical and scientific advances since the release of the original IOM report some two decades ago, it appears that humans are still defenceless in the face of the relentless march of our microbe foes. DT

Contact Info

Prof. Lakshman Samaranayake is head and Professor of Oral Microbiomics and Infection at the University of Queensland School of Dentistry in Brisbane in Australia. He can be contacted at l.samaranayake@uq.edu.au.

Dental Tribune Asia Pacific Edition No. 7+8/2014

Uruguayan football player Luis Suárez bit an Italian defender during a World Cup match in Brazil. (DTI/Photo AGIF)

"A bite inflicted by a human can have serious health implications"

An interview with former FIFA-appointed dentist Dr Dietrich Fischer-Brooks

During the last two months, 32 football teams from around the globe were competing for the World Cup trophy in Brazil. Dental Tribune Group Editor Daniel Zimmermann had the opportunity to speak with Dr Dietrich Fischer-Brooks from Germany, a former FIFA-appointed dentist who also provides dental care for German Bundesliga club Eintracht Frankfurt, about the oral health of players and why the infamous bite inflicted by Uruguay superstar Luis Suárez during his team's match against Italy could have rather serious implications for his opponent.

Daniel Zimmermann: Dr Fischer-Brooks, the biting incident involving Luis Suárez has made headlines during this year's World Cup tournament. In addition to a long-term ban, could this incident have any implications for his oral health?

Dr Dieter Fischer-Brooks: Only for his Italian opponent, Giorgio Chiellini. A wide variety of harmful bacteria live in the oral cavity and a bite inflicted by a human can have serious health implications. I know of some severe infections that have resulted from such bites.

Suárez appeared to have suffered from pain directly after the incident. Was this real or just an act?

I believe that this was just an act. Upon realising that he had been bitten, the Italian would likely have struck out at Suárez, but whether he really hit Suárez is subject to speculation.

Would you have recommended that Suárez visit a dentist after the game?

Only if he had really been struck on the mouth. Shortly afterwards, I saw him giving an interview, however, which indicates that it could not have been that bad.

Are elbow impacts a frequent cause of dental injuries in football?

Definitely. Many of the players I treat here in Frankfurt on a regular basis have sustained injuries to their anterior teeth at some time in their career. Therefore, many players wear mouth guards while playing. One often sees them during post-match interviews.

Do players have to undergo dental check-ups during a tournament like the World Cup or is oral health considered their personal responsibility?

This really depends on the professionalism of the staff. As a principle, players should be checked in advance of the tournament for any signs of infections in the mouth, or in the jaw and face area.

Cases of players suffering sudden cardiac death on the pitch are not uncommon. In many of these cases, the cause was a serious infection, which may have resulted from dental problems, including infected third molars, severe periodontitis or infections in endodontically treated teeth, to name a few.

What impact can these problems have on the health or the performance of players?

Bacteria migration from anywhere in the human body can affect the heart valves. Moreover, it can lead to inflammation in joints like the knee. I remember a case here in Frankfurt in which a player, who also played for the Czech national team, was unable to wear football shoes for months owing to a fistula on his small toe. We were finally able to attribute this to an infected third molar. When we removed the molar, the fistula disappeared within days, allowing the player to resume training.

Team physicians often struggle with these symptoms because they are not able or trained to recognise such associations. This example demonstrates clearly that bacteria in the mouth can migrate to distant parts of the body. In most cases, the heart primarily is affected.

Football players have celebrity status and pay significant attention to their body image. How important are good teeth in this regard?

Straight and attractive teeth have become a symbol of success. I have to say, however, that some players have developed a downright tooth fetish, as they visit me every two or three months to have their teeth checked. In many foreign players, particularly those from Eastern Europe, it is evident that they did not receive adequate dental care while they were children. Consequently, I usually have to perform extensive dental treatment on them.

During the 2006 tournament in Germany, you were responsible for dental treatment for the teams from England and Saudi Arabia. Did you observe any differences with regard to their oral health?

There are significant inequalities internationally. Dental care (similar to general health care) in England, for example, is not the best. This is evident in the poor state of dentition, including defective fillings and other signs of second-rate dentistry. High-quality oral health care as practised in Germany or Switzerland, for example, is not common.

Owing to your work, do you pay more attention to the teeth of footballers, and are there any players whose teeth have impressed you lately?

I am really fascinated by James Rodríguez from Columbia. This young player has very attractive teeth. At the moment, I have also been paying attention to the teeth clenching that one commonly sees in players during interviews. Aesthetics is one thing, but there are also medical aspects to this.

Thank you very much for the interview. DT

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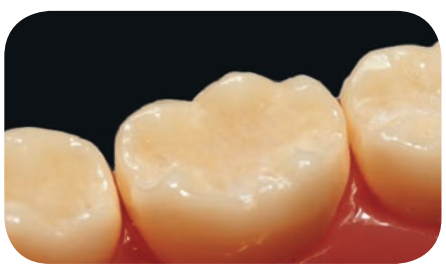

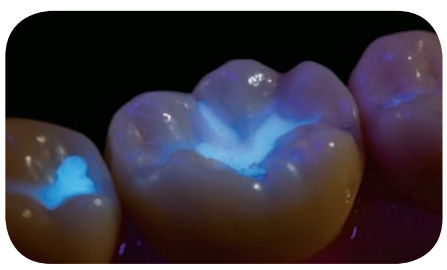

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Ivoclar Vivadent discusses monolithic restorations in London

DTI

LONDON, UK: For over 150 years, the Westminster Hospital in London took care of the sick and disabled until making way for the Queen Elizabeth II Convention Centre in 1994. One of the most high-profile convention venues in the British capital today, this modern flat-roofed building opposite Westminster Abbey now stages over 350 events each year.

Recently, dental manufacturer Ivoclar Vivadent from Liechtenstein hosted hundreds of professionals from all over the globe at the prestigious venue to discuss the latest in monolithic restorations. Following the principle that dental restorations should always mimic the natural dentition, prominent clinicians from Europe and the Americas presented a number of clinical cases that demonstrated what can be achieved with dental ceramics. Impressive restorative work was shown by German dental technician Oliver Brix and the UK's own Dr James Russell, among others, who discussed clinical cases treated using Ivoclar Vivadent's IPS e-max. While it is still not able to reproduce nature entirely, the restorative system, along with other modern dental materials, has not only changed how cosmetic dentistry is performed, but also allowed it to be increasingly less invasive, Russell said.

US dentist Dr George Eliades (second from right) in discussions with other experts. (DTI/Photo Daniel Zimmermann)

The use of CAD/CAM technology, was further shown by Italian technician Michele Temperani to achieve higher aesthetic outcomes when combined with all-ceramic materials. Issues in the field were also addressed, including the correct bonding technique, which, according to Belgian presenter Bart van Meerbeek, depends on functional monomers. While research has shown that self-etching is often the most effective approach, the etch and rinse technique is still required in many cases, he explained.

During a round-table discussion held on the first day, all experts agreed that a thorough diagnosis and a good working relationship between the clinician and dental technician are still among the most important criteria for achieving the best results.

Overall, Ivoclar's latest expert event drew over 750 delegates to London. Organised in collaboration with King's College London Dental Institute, one of the most prestigious dental institutions in the UK, it was the second edition of a series that started in Berlin in Germany two years ago. A follow-up event has already been scheduled for 2016 and will be held in Madrid in Spain, Chief Sales Officer at Ivoclar Vivadent Josef Richter said.

Delegates can look forward to a number of new products to be launched by Ivoclar Vivadent during the year, including the much-anticipated IPS e.max Press multi, which will allow horizontal pressing for long-lasting clinical success.

Also announced were new furnaces in Ivoclar Vivadent's Programat line with a new design that will offer guided pressing, among other features, to make restorations easier and faster.

In response to increasing demand, Wieland Dental, part of Ivoclar Vivadent since 2012, will be launching a new version of its compact CNC milling system Zenotec that will allow wet pressing. The company's offering of Zenostar zirconia, as well as abutment solutions, will also be extended. DT

Improved zirconia announced by Kuraray Noritake

DT Asia Pacific

TOKYO, Japan: Kuraray Noritake Dental has said it has developed a new kind of zirconia that, according to the Japanese company, features higher flexural strength and fracture toughness than any other material of its kind. The material demonstrated significantly improved flexibility in a three-point flexural strength test when compared with results from a test conducted with a conventional zirconia.

Fracture toughness was even found to be twice as high in the new material, the company reports. More importantly, unlike in most conventional zirconia, the crystal structure of the new material does not appear to change to a monoclinic phase under high pressure and temperatures. This process usually makes materials more prone to damage by inducing stress.

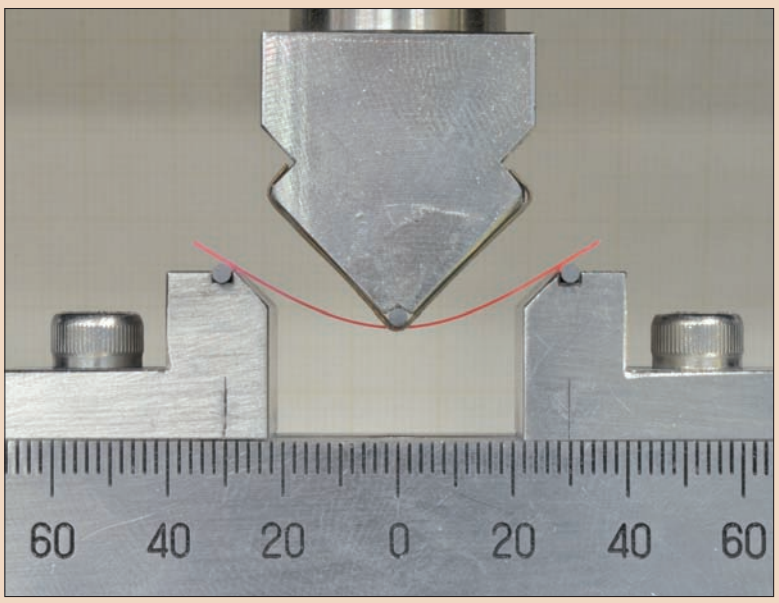

Photo showing a side view of the material being subjected to a three-point flexural strength test. (DI/Photo courtesy of Business Wire)

According to Kuraray Noritake Dental, the material also does not need to be subjected to hot isostatic pressing, an industrial process for improving physical or chemical characteristics of ceramics and metals.

The yet unnamed material is intended to be used in the production of a new generation of durable and more resistant dental materials. In addition, it will offer benefits for the development of prosthetic joints and other industrial applications.

In the next step, the company said it will ready the material for launch to dental markets and other commercial industries.

The material is the first joint development announced by the company, which was formed from a merger of dental material manufacturers Kuraray Medical and Noritake Dental Supply two years ago. DT