Overseas dental work troubles Australia
Fourty per cent made offshore – Professionals demand legislative change

Malpractice in Pakistan spreads
Policy makers in Pakistan have urged the government to condemn the spread of medical malpractice through tougher restrictions on the registration of medical and dental personnel. According to the Pakistan Ministry of Health, over 200,000 doctors including 70,000 dentists currently practice without a licence.

Korean kids have better oral health
Korean kids have lower apatite levels compared to the year 2000. According to the National Oral Health Survey in 2007, the country has slightly over 40 per cent had lower caries levels among children. Most improvement was observed in the age group 9 where, in 2006, over 40 per cent had lower caries levels compared to the year 2000.

Dental crisis to worsen on Fiji Islands
Private dentists on Fiji are having a hard time to find enough patients to sustain their business. At least two practices on the main island Viti Levu have closed down in November due to lack of patients, Fiji Dental Association President Dr Sigh commented that dentists are being forced to not apply to imported dental work. More and more dentists in Australia eye for foreign made dental work.

Dental work made in countries like Thailand costs significantly less than in Australia due to cheaper labour and materials. Speaking to different dental labs near the city already lost 40 per cent of their market share to offshore labs, a number similar to those reported for the whole country.

Dentists in the country are now demanding new legislation to make it mandatory for the profession to let patients know where their crowns or bridges are being produced. Momentarily, only dental prosthesis made in Australia are regulated by the government but those standards do not apply to imported dental work.

Dental laboratories in Thailand, India or China have gained a huge share out of the regional dental prosthesis market. Companies like Moderna Dental Laboratory, which maintains a large facility with 5,000 technicians in Shenzhen near the China-Hong Kong border, are increasingly serving customers in Australia making it harder for local labs to compete.

Job prospects for dental technicians have been steady recently but could decline by 50 per cent over the next 10 years, a government report has found.

To compete. making it harder for local labs to

Dental laboratories in Thai-

industries.

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More and more dentists in Australia eye for foreign made dental work. (DTI/Photo courtesy of Xinhua News, China)

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Ivoclar Vivadent AG
Established in 2006, the Depart-
ment of Forensic Odontology (IAFO) at the SDM College
doctorate in 2006, mainly based on research in the field of restoratives, all-ceramics and esthetic prosthetics.

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Malaysia teams with global dental organisation to help kids

Daniel Zimmermann

HONG KONG/LEIPZIG, Germany: The National University of Malaysia’s Faculty of Dentistry is taking on the oral health of children. At the International Conference of the Academy of Preventive Dentistry (AAPD) in Kuala Lumpur in November, the faculty announced that it has signed a Memorandum of Understanding with Global Child Dental Fund, a UK-based international oral health organisation. The agreement is supposed to promote dental research and programmes that could affect disadvantaged children in Malaysia and elsewhere.

The Global Child Dental Fund, led by England’s former Chief Dental Officer and Dentistry Prof. Raman Bedi, was founded in 2006 to support governments worldwide on implementing programmes that could affect disadvantaged children. "I am delighted that such a prestigious university as the National University of Malaysia will be working with us and that Prof. Kadir will be leading this work," Prof. Bedi said. "Only transformational dental leadership will change the rising levels of early childhood caries and for this we need effective leaders within the dental profession."

According to figures from the Ministry of Health in Malaysia, only 15 per cent of children below the age of five are caries-free.

The Therapeutic Goods Administration which oversees medical drugs and devices did not comment on the matter before this edition went to press.

DT Tribune welcomes comments, suggestions and complaints at feedback@dental-tribune.com
Sex virus saves from oral cancer death

Yvonne Bachmann

HONG KONG/LEIPZIG, Germany: Patients who suffer from certain types of head and neck cancer are more likely to survive following treatment if the tumor was caused by a papillomavirus (HPV), scientists from the University of Sydney in Australia report. According to their research published in the October issue of the British Journal of Cancer, patients with HPV positive tumours of tonsil and base of the tongue are four times less likely to die than patients whose cancers did not follow a HPV infection.

Furthermore, the cancer was three times less likely to recur at the primary site in patients with HPV positive cancers.

The scientists examined 198 Australians with advanced oropharyngeal cancer for an average of two years. The patients had received surgery or radiotherapy for the disease. Dr Angela Hong, lead author from the University of Sydney, said: “The beneficial HPV effect was seen regardless of the type of treatment which would reduce the side effects of therapy.”

Dr Lesley Walker, director of information at Cancer Research UK, predicts beneficial effects on prospective treatments: “It’s possible that, in the future, patients with HPV positive cancers may be able to have less intensive forms of treatment which would reduce the side effects of therapy.”

“In addition to its role in cancer of the oropharynx, HPV causes most if not all cervical cancer and increases the risk of cancer of the vagina, penis and anus”, she adds.

HPV is spread through all types of close sexual contact, however, the use of condoms and vaccination reduces the risk of infection, expert say. Smoking and drinking alcohol are other factors to increase the chance of developing head and neck cancer.

(Edited by Daniel Zimmermann, DTI)
Dear reader,

Daniel Zimmermann

There has been a major outcry after my last editorial was released and I have to admit that I expected this due to the mixed reactions that overseas dental work usually evokes among many dental professionals. Offshore production might have become a major business in Asia, however, it is not definitely one that most people involved are happy to speak about.

Regarding the fact that most of my readers are from countries where these products are made, I do not have to stress how much impact this development had on the local dental industries. In China particularly, over 50 per cent of all lab work is now produced for customers overseas. Similar figures can be expected from countries like Thailand or the Philippines where more and more labs seeking for customers abroad in order to advance their business.

The market cries out for regulation. It seems unfair that products they have regulation. It seems unfair that business. abroad in order to advance their from countries like Thailand or China particularly, over 50 per cent on the local dental industries. In impact this development had where these products are made, come a major business in Asia, many dental professionals. Off-shore usually evokes among work usually evokes among

Yours sincerely,
Daniel Zimmermann
Group Editor
Dental Tribune International

Avoiding the ‘Acid Attack’

I was shocked to see an article in DT Asia Pacific recently about a study at Harvard actually recommending that people apply strongly acidic things to their teeth to whiten them. Lemon juice will certainly whiten teeth, but it does this by demineralising the enamel. How many of you have seen teenagers with white hands around their front teeth at the gym? The enamel is white, all right, but they are well on their way to rampant decay problems.

Remember the school experiment involving placing an extracted tooth in a jar of pop for a couple of weeks? The tooth actually dissolves, because pop is extremely acidic. I maintain that the primary cause of tooth decay is not refined sugar—it’s acid.

My book Acid Attack (see also the website acidattack.com) was based on research involved testing the pH of people’s saliva and testing the pH of commonly consumed beverages. What I found confirmed what I have been observing for decades. People who are prone to decay have a very ‘acid system’. In other words, they have a low salivary pH. And every one of the patients I have seen with severe decay problems also has something in their diet that’s high in acid. The most destructive one is pop. Lemon and grapefruit are also very destructive.

I have seen hundreds of patients with severe decay. But after eliminating the acidic things from their diets (primarily pop), decay isn’t nearly as much of a problem. And, these people often have acid reflux issues. Hydrochloric acid from the stomach causes the same damage that phosphoric acid in pop does.

If you want to really help your decaying patients, there are a few things you can do. First, have them eliminate all acidic things from their daily diet, such as pop, lemons, grapefruit, sour candies or chewing gum. Second, show them a method of flossing that’s really effective (under the gum) and have them buy and brush with Mylanta or Maalox a few times a day to neutralise acid. Finally, chewing gum is helpful—as long as it isn’t sour—for neutralising acid because it increases salivary flow.

To the Editor

Re: Editorial “Digital technology does not make better dentists” (Dental Tribune Asia Pacific No. 1-2, Vol. 8, page 4)

Technology may make an ethical, competent dentist better, but it will not make a “fast food/Peninsula hazzard” practice perform clinically better. I am opposed to the use of technology as a marketing tool without the ability of the clinician to perform in the first place. Technology is wonderful, but it does not substitute for clinical quality.

Dr. James Craig, USA

Re: Editorial “And the battle goes on…” (Dental Tribune Asia Pacific No. 10, Vol. 7, page 4)

Root canals and implants are not interchangeable procedures. Case selection is paramount for successful prognosis for both endodontic treatment and implants. According to Dr Carl Misch in his text Contemporary Implant Dentistry, there are 17 reasons alone for NOT replacing a mandibular second molar with an implant. While an implant will most likely osseointegrate, it does not guarantee long-term success once re-stored and placed in function, particularly in the posterior maxilla.

It is a given that a case focused on aesthetics as the expense of function is not in a patient’s best interest and will have a poor prognosis long term. And, an implant certainly does not guarantee better aesthetics in comparison to a tooth. Not every tooth can or should be saved. However, not every tooth should become the assumption that an implant is better.

An increasing number of endodon-tists are gaining extensive continuing education in the field of implantology. These clinicians will be the best resource for determining which procedure should be done in each individual situation. If the dental community as a whole continues to hold a cavalier attitude about extracting teeth that can be saved, it is the patients who will lose this battle, not the endodontists.

Lisa P. Germain, USA

Dental Tribune Asia Pacific Edition

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Dr Jeff Wilcox

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Contact Info
Dr Jeff Wilcox is a dentist from Ohio in the US and author of several books on acid wear. He can be contacted at jeffwcox50@comcastway.com.
Flouride rich baby food under fire from scientists

Daniel Zimmermann
DTI

NEW YORK, USA/LEIPZIG, Germany: Scientists in the US have warned of the risks of exposing young children to large amounts of fluoride. In a study published in the October edition of the Journal of the American Dental Association they claim that an increased intake of the mineral from drinking water, dentifrice, infant powder products or beverages can lead to a higher risk of developing fluorosis, a condition that discolours and weakens teeth.

The findings confirm earlier evidence indicating a link between dental fluorosis and greater intake of fluoride in early life. The latest study, conducted by researchers from the University of Iowa in the United States, found that a greater fluoride intake from reconstituted powder, a popular choice for infant food in the US, and other beverages with added water increased fluorosis risk in children between the ages of three and nine months. They suggested avoiding the ingestion of additional fluoride through consumption of these mixtures in order to reduce the prevalence of the condition nationwide.

According to the US Centers for Disease Control and Prevention, one-third of children between the ages of 12 to 15 years in the US suffer from some form of fluorosis. The country also has the highest occurrence of fluoridated water in the world.

Dr Paul Stone adressing the audience at the EAO congress in Glasgow. (DTI/Photo courtesy of the European Association for Osseointegration, Belgium)

EAO votes first Brit for president

Daniel Zimmermann
DTI

LONDON, UK/LEIPZIG, Germany: Dr David A. Stone has been elected the first British President of the European Association for Osseointegration (EAO). The dentist from Perthshire in the UK, who also serves as Chairman of the Royal College of Surgeons of Edinburgh Advisory Board in Implant Dentistry, took over from Prof. Christoph Hämmerle, Switzerland, during the association’s recent congress in Glasgow in October. He will serve as president for 2011/2012.

The meeting also saw Prof. Søren Schou from Denmark instated as President-Elect. French Prof. Pascal Valentini from Paris will be taking over as new Secretary-General.

“Dentistry is still an ‘empirical discipline’, relying on evidence to provide the most appropriate way of treating patients. A very important part of the EAO’s philosophy is to bridge the gap between science and clinical practice.” Dr Stone told Dental Tribune Asia Pacific. “As president of this organisation I intend to ensure that this is further strengthened in a way that is relevant to modern practice.”

Founded in Munich in Germany in the late 1980s, the EAO aims to promote and facilitate research, clinical applications, and treatment methods based on the principles of osseointegration. The organisation’s recent congress in the UK focused on a wide range of surgical, prosthetic and planning processes in implant dentistry.

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Alaska study supports employment of dental therapists

NEW YORK, USA/LEIPZIG, Germany: Dental therapists can offer adequate dental health care to underserved populations, a US study has found. The two-year evaluation of a dental therapists programme in the state of Alaska supports the use of therapists to perform basic dental procedures, such as sealant placement and filling preparation, to overcome the significant shortage of dental professionals in rural areas.

Dental therapists routinely perform dentist tasks in many countries, including Canada, Australia, New Zealand and Sri Lanka. Montana and Alaska are the first US states to allow therapists to provide higher dental care. Therapists in Alaska have been performing basic surgical procedures under the supervision of dentists in remote native villages since 2005.

While Alaska has a sufficient number of dentists, according to US government statistics, it fails to provide adequate dental care to its widely scattered native population. National and local dental associations in the US have criticised the study. A speaker of the American Dental Association said that the model has not sampled sufficient therapists to provide data that would justify the generalisation of the model to other states.

The organisation, which represents all dentists in the US, has long rejected the idea of permitting non-dentists to perform surgical procedures.

New evidence links mercury to Alzheimer’s

LEIPZIG, Germany: Dental patients with silver fillings are more likely to suffer from senile dementia of the Alzheimer’s type. In a review published in the latest Journal of Alzheimer’s Disease, researchers associated with universities in Boston (USA), Freiburg/Breisgau and Frankfurt (Oder), both in Germany, claim that symptoms of the condition were reproduced or accelerated when brain tissue was exposed to inorganic mercury, the main ingredient of amalgam.

Earlier studies of low-dose human exposure, such as to dentists and their staff, have shown that exposure to mercury is correlated with long-term neurological or psychological harm. The new review is one of the first that has found a systematic link between memory deficits and increased levels of mercury found in Alzheimer’s patients.

According to Prof. Harald Walach, Viadrina European University in Frankfurt (Oder), patients with silver fillings are exposed to 1 to 22 µg mercury per day, of which the majority accumulates in the brain. The metal binds with selenium, a substance responsible for preventing oxidative stress, which can lead to cell death and early ageing. Removing mercury from medical and ecological cycles could slow down cell death and prevent the development of dementia and possibly other forms of neurological disorders, including Parkinson, he added.

“The situation is similar to the early 1970s regarding smoking: substantial experimental evidence existed, but human studies were inconclusive at the time and were under attack by groups with a vested interest,” Prof. Walach told Dental Tribune Asia Pacific. “To wait until irrefutable evidence has accumulated is not the best option in view of what we already know about the toxic potential of mercury.”

Amalgam is still the most common type of filling used by dentists worldwide. It is banned in Sweden and restricted in Norway and Denmark.
Fewer US Americans have dental insurance benefits

Daniel Zimmermann

NEW YORK, USA/LEIPZIG, Germany: The recession is finally baring its teeth at dental patients in the US. The latest data released by the US National Association of Dental Plans (NADP) and dental service corporation Delta Dental Plans Association shows that almost ten million Americans lost or cancelled their dental insurance last year. The decrease is the first decline in dental benefit enrolment since 1994.

At the end of last year, slightly over 95 per cent of the US population or 166 million had some form of dental insurance and only one per cent had its benefits through individual policies. NADP representatives said that the 5.7 per cent dip in subscribers in some employee groups most likely reflects family financial constraints and layoffs. By contrast, enrolment from 2006 through 2008 grew in line with population growth holding steady at 57 per cent of the US population.

Unemployment in the country doubled in 2009, according to figures from the US Bureau of Labor Statistics, putting more than five million people out of work. Latest figures released by the department forecast no significant improvement in 2010.

Currently, Americans with dental benefits have an average spending of US$1,000 per year at their disposal. Dentists’ groups in the US have criticised the system, which they say only benefits insurance companies and limits patients in accessing much-needed treatment.

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DENTAL TRIBUNE Asia Pacific Edition

World News 7

Dentists in the UK show low morale

Lisa Townshend

LONDON, UK: The British Dental Association (BDA) warned that growing bureaucracy is destroying the morale of high street dentists in England and could be driving experienced practitioners to retire early or leave the National Health Service (NHS). According to their research, excessive administration is the primary factor behind a downturn in dentists’ confidence.

Nearly half of all high street dentists are reporting that their morale has fallen during the past twelve months. More than 60 per cent of those said that growing administration was to blame.

Rising expenses and continuing problems with the 2006 dental contract, including a lack of time to provide preventive care to patients, were also cited as major factors in the declining confidence of the profession.

Worryingly, more than ten per cent of dentists aged 55 and over are already leaving public service each year. The BDA is concerned that the registration of dental practices with the Care Quality Commission in 2011 could exacerbate the problems that are already being seen, and drive many dentists into early retirement limiting patients access to dental care.

John Milne, Chair of the BDA’s General Dental Practice Committee, commented: “Morale amongst family dentists in England is becoming a real problem. My fear is that many of our most experienced practitioners, the dentists that families have relied on for generations, could feel so wrapped up in red tape that they simply choose to walk away. That would be a disaster.”

“The Government is taking steps to address the problematic contract that was introduced in 2006 and we are looking forward to an announcement of how new arrangements will be developed. But it’s also clear that red tape is becoming a major issue, with CQC registration a real concern for dentists. If the new contract is to be a success the Government must look at this carefully, untangle the red tape and free dentists to do what they are trained for – care.”
Straumann wins Asia Company of the Year award

**Daniel Zimmermann**

HONG KONG/LEIPZIG, Germany: Straumann Asia Pacific Senior Vice President Frank Hemm (left) receiving the award from David Freginat, Chairman of Frost & Sullivan. (DTI/Photo courtesy of Frost & Sullivan, USA.)

The global business consultant acknowledged the company’s commitment and ongoing investments in the combined Asian markets, an industry analyst at Frost & Sullivan said.

Straumann has gained a strong position in most major Asia Pacific markets recently with products like the Straumann Bone Level Implant, Roxolid and SLActive, a dental implant surface technology that is said to significantly accelerate osseointegration and enhance healing times.

The company has also been engaging in educational activities across all specialisations in cooperation with their worldwide academic partner organisation International Team of Implantology ITI including the recently held First International Periodontology Congress in Hangzhou in China.

“Our success is driven by innovative, differentiated and clinically proven products and technologies with Swiss quality. With our strength in sales and marketing structure, we provide additional services that focus on our customers’ needs in the region. World-class clinical education, patient education and practice building support have won us the confidence of dental professionals.”

Straumann is doing business from its regional office in Singapore since mid 2008.

Colgate ranks top among Asian customers

**Daniel Zimmermann**

HONG KONG/LEIPZIG, Germany: Consumers in Singapore, Malaysia and Hong Kong consider Colgate one of their favourite brands. A recent survey conducted by the Nielsen Company Singapore & Malaysia has found that Colgate, a toothpaste manufactured and distributed by US-based consumer products giant Colgate-Palmolive, is a brand preferred by the majority of consumers in all three markets. A similar survey in India also put it amongst consumers’ most trusted brands.

Colgate has ranked top amongst consumers in recent years but has had to relinquish the top spot recently to other companies, including Nokia and Internet giant Google. However, the brand was the only one to achieve top ten rankings in all four countries, Nielsen reports.

Colgate, which is based in New York, is one of the largest distributors of consumer dental products worldwide. In 2009, the company reported a record profit of US$631 million, which they said was mainly driven by increasing toothpaste sales globally. Colgate also sells manual and electric toothbrushes, mouthwash, and tooth-whitening products.

“In this time of economic uncertainties, it is even more crucial to have strong brands to retain customer loyalty and sustain business growth. Brands with the greatest equity are more likely to tide over tough times, as customers are willing to pay higher prices for products which they have established a closer relationship with,” said Paul Richmond, Managing Director, Consumer Group, the Nielsen Company Singapore and Malaysia.

The Nielsen reports identified over 500 brands across 95 categories of consumer products and services in Singapore, Malaysia, Hong Kong and India.

Biomaterials and implants stimulate global demand

**Yvonne Bachmann**

NEW YORK, USA/LEIPZIG, Germany: The increasing demand for dental biomaterials and implants is driving the global dental equipment and consumables market. According to a report released by US market research company MarketsandMarkets last month, both segments are expected to grow at a compound annual growth rate of 6 per cent—only slightly below the 7 per cent growth rate predicted for all market segments combined. Total market volume is forecast to reach US$827.6 billion by 2015.

According to the report, the growth of these segments is expected to be highest in North America and the EU, where the generation of ageing baby boomers can afford high-priced dental procedures, including cosmetic treatments and implants. Improved orthodontic products are also in high demand, especially by younger people.

Improvements in the field of dental biomaterials and tissue regenerative material have enabled dentists to offer more natural and long-term dental solutions. The latest technology, such as CAD/CAM, reduces the overall turnaround time for dental procedures, while improving efficiency of dental practitioners further, the report states.
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CAD/CAM tech thrives at world’s largest dental show

Yvonne Bachmann
DTI
LEIPZIG, Germany: Dentists and dental technicians who visit the next International Dental Show in Cologne in Germany will have more dental CAD/CAM systems at their disposal. According to preliminary figures of the organiser Koelnmesse, the number of companies planning to showcase the latest technology in this field has increased by almost 50 per cent. The last show in 2009 only saw 80 companies exhibiting CAD/CAM related products.

Digital processes are increasingly determining the day-to-day work in dental practices and laboratories due to increasing demand for dental prosthetic devices in most Western markets. In addition, prices for high-value materials like zirconia and ceramics have fallen significantly over the last two years. A 2010 report by the Canadian Millennium Research Group predicted the global dental CAD/CAM market to grow strongly through 2014 despite the economic challenges that dentists have to face because of the recession.

Prof Albert Mehl, currently Guest Professor at the Centre for Dentistry and Oral Medicine at the University of Zurich, sees many advantages in the new technology. “The enormous potential of digital scanning has been recognised by the industry and thus is currently in heavy development,” he told Dental Tribune ONLINE. “As soon as quality and practicability have been demonstrated within clinical environments, amortisation will no longer be an issue.”

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The International Dental Show will be held from 22 to 26 March 2011 in Cologne in Germany.

Q&M to invest in foreign businesses

Daniel Zimmermann
DTI
HONG KONG/LEIPZIG, Germany: Singapore’s largest provider of private dental healthcare services is extending its reach into the Asian markets. Earlier this month, Q&M Dental Group announced to have acquired a majority stake in DWM, a privately held dental practice business in Malaysia, through its subsidiary in Kuala Lumpur. The company also announced plans to merge with Shenzhen New Perfect Exact Research, one of China’s largest providers of dental laboratory services.

Founded in 1999, Q&M currently maintains over 55 dental clinics with over 400 dentists and other dental personnel in Singapore and China. Reported total revenue of the group for the first two quarters in 2010 was S$47.8 million (US$15.5 million). The DWM acquisition, which is considered as first step of achieving bigger market share in Malaysia, will cost the company shares worth S$457,500 (US$330,000).

Q&M also intends to spend RM908 million (US$14.6 million) in cash and new shares for the Group’s acquisition of New Perfect. The transaction plan will be presented to shareholders during an extraordinary general meeting before applying to the Singapore Stock Exchange later this year, the company said in a press release.

Commenting on the Proposed Joint Venture, Q&M CEO Dr Ng Chin Siau said, “Besides generating new earnings streams for the Group, our proposed entry into dental laboratory businesses will provide support to our clinics in the People’s Republic of China with a wide variety of dental products. Our maiden joint ventures have raised the Group’s profile and we intend to continue identifying strategic opportunities there while integrating the operations of our new overseas companies.”

Earlier in August, the Q&M entered the Chinese market by forming joint ventures with two dental groups in Beijing and Nanjing. At the same time, the company also signed a agreement to invest in a dental laboratory company based in the country’s Zhejiang Province.
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Issue 5
November, 2010

Oral-Systemic Health:

What is it?

Good oral health has taken a new meaning today. Studies have shown that diabetes and coronary heart disease have some association with gum disease (periodontitis).

Unfortunately, many periodontists (dentists who specialize in treatment of gum disease/condition) notice that gum disease is frequently disregarded by most patients since early disease cause little to no signs or symptoms.

Studies have shown that diabetics are more likely to suffer from periodontitis. Therefore, gum disease is known and acknowledged to be another potential complication of diabetes. Recent research also suggests association between gum disease and coronary heart disease. Thus patients with untreated periodontitis may be exposed to increased risk of developing coronary heart disease.

What is Periodontitis?

In simple words, it is a chronic mixed bacterial infection of the tissues surrounding the tooth. The World Health Organization has shown that between 5-15% of the population suffer from severe periodontitis. But unfortunately, as opposed to tooth decay, the public has little knowledge or understanding about gum disease or periodontitis. While dentists know that gum disease is a leading reason for tooth loss in adults aged 40 and above plus it is a ‘silent disease’, not causing pain until reaching the severe stage, yet many patients remain in the dark. As it is with diabetes and other medical conditions, it is important for everyone to be screened regularly so as to facilitate early detection. The diagnostic tool used to detect periodontitis is the simple basic periodontal examination and evaluation and dental X-rays.

Since early signs are easily missed, how can periodontitis be recognized, treated and kept under control? Apart from a little bleeding during brushing, accompanied sometimes with bad breath, itchy or vague uneasy feeling in the gums, there are no painful symptoms that could serve as an alarm. Therefore, it is important to consult the dentist to perform clinical tests with X-rays to check for the presence of gum disease.

The good news is that periodontitis can be treated and the best treatment results are obtained when it is detected at an early stage. The 2nd piece of good news is that periodontal therapy can, through surgical procedures in some advanced cases, regenerate bone and gum tissue. The final piece of good news is that with regular professional reviews and practice of good daily personal oral hygiene, with the help of an anti-bacterial and anti-inflammatory toothpaste/mouthrinse, periodontitis can be kept under control and recurrence can be minimized. Regular dental visits with good personal oral hygiene practice can help keep the mouth healthy and even help prevent other serious conditions from arising.

Oral-Systemic Health:

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Dr Ashith B. Acharya is an internationally educated forensic dentist specialist from India. In 2005, he helped to set up the Department of Forensic Odontology at the S.D.M. College of Dental Sciences and Hospital in Dharwad which was recently recognised as the nation’s first referral centre for forensic dental casework. Dental Tribune Asia Pacific spoke with him about the consequences of this decision and how it can help to establish the specialty in India.

**Dental Tribune Asia Pacific:** Your department has recently been recognised as the nation’s first referral centre for forensic dental casework. What impact has this decision had on your department and forensic dentistry in India in general?

**Dr Ashith Acharya:** Law enforcement in India has traditionally sought the assistance of government-employed personnel and, therefore, forensic dental referrals are commonly made to forensic medical departments at government hospitals or dentists in government service. However, these professionals are often not necessarily required to have undergone formal training or experience in forensic dentistry.

The recognition of our department sets a precedent for formal involvement of qualified forensic odontologists employed in the private sector to contribute to forensic dental casework. It will hopefully encourage public-private partnership in forensic investigations nationwide as well.

**You have lobbied since 2008 to receive recognition by the Karnataka government. Why did it take so long?**

In order to recognise the private sector and permit its contribution to law enforcement, the government had to hear a number of opinions and undertake visits to ensure that a private organisation like ours is well equipped to deal with the queries of the police.

Our application was delivered to the State’s Home Department in December 2008. The Home Minister then sought the opinion of the Director-General of Police and the Ministry of Medical Education, whose Director and Deputy Director paid a visit to my college and department. Their recommendation to the Home Ministry finally paved the way to the recognition of our department as a referral centre for forensic dental cases in October.

India appears to lack forensic dentistry experts in general. Why is that?

The greater focus on dental practitioners and dental clinical specialists in India is perhaps due to the necessity to serve the oral health care needs of the vast Indian population. Less emphasis therefore may have been placed on para-clinical dental specialties such as forensic dentistry. However, this is slowly changing and there has been a steep increase in interest in the field over the last decade.

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Although no formal course in the specialty is offered by dental colleges in India yet, the Dental Council of India (DCI) recognises two overseas forensic odontology qualifications from the University of Adelaide in Australia and Cardiff University in the U.K. This has opened the door for Indians to obtain formal training abroad and help to bring this knowledge to the country. Formal training may shortly commence in India, increasing the number of forensic dentistry experts further.

What are the consequences of this lack of forensic expertise?

A major disadvantage is that law enforcement frequently seeks opinions from unqualified and inexperienced personnel, who may not have a thorough understanding of the nuances of forensic casework, including evidence collection methods, evaluation techniques, and report writing. This lack of expertise has resulted in forensic dental evidence not being used in a manner in which to serve the interest of the judiciary.

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**How many forensic dentists would be required to cope with the demand in India?**

It is difficult to predict the number of forensic dental experts actually required, but certainly much more than the handful available today. There are 29 states and a number of federally governed territories in India and many of them are larger in size and population than most countries in Asia. Hence, there is definitely a need for experienced and trained forensic dental experts throughout the country. I recommend that at least one forensic dental centre be established in each state.

**How is forensic dentistry taught in India?**

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**How is forensic dentistry taught in India?**

Dr Ashith B. Acharya examining X-rays. (DTI/Photo courtesy of S.D.M. College of Dental Sciences and Hospital, India)
In 2007, the DCI revised the undergraduate Bachelor of Dental Surgery (BDS) curriculum, which included the provision for teaching forensic dentistry in the third year of the BDS under Oral Pathology and in the fourth year of the BDS under Oral Medicine and Radiology. This inclusion in two major dental subjects was intended to ensure forensic dentistry would be taught in dental colleges even in the absence of qualified forensic dental teaching personnel. Oral pathologists and biologists can cover areas of forensic odontology related to oral biology, for example, the use of dental histology in age estimation, application of tooth morphology in sex and race identification, and bite mark registration. Oral physicians and radiologists are also able to cover issues like radiographic age estimation or post-mortem radiography.

The curriculum mandates 10 hours of lectures and 20 hours of hands-on/practical training in the basics of forensic dentistry. As far as I know, the depth of the subject and time mandated for teaching it at undergraduate level are on par with those, for example, in Australia or Malaysia.

New digital technologies and DNA identification have made it easier to identify the remains of victims of crimes or mass disasters. How do you keep up-to-date with latest advancements in the field?

Access to all major peer-reviewed forensic sciences journals and leading dental periodicals ensures that knowledge in India is up to date with current trends and practices. However, we do not only believe in staying in touch with recent developments, but also in contributing towards progress in dentistry. An interdepartmental and multi-specialty approach to research in forensic dentistry and publication of research—such as a new method of age estimation and an innovative system of denture marking for post-mortem identification—ensures that my college and department are part of the evolution of the specialty.

What are the general issues that you as a forensic expert are confronted with? Are dentists in India required to store dental records?

Dentists in India are not legally mandated to store data; however, many dentists do make an effort to catalogue their patient records as a matter of good practice. These have already contributed to post-mortem dental identification on several occasions. What undermines routine forensic dental casework in India most is the lack of awareness amongst the general population, as well as law enforcers and the judiciary, of what dentistry can contribute to forensic investigations.

I believe that with joint effort we can educate all stakeholders and gain the recognition that the specialty deserves. However, this will only be possible through immense dedication of all individuals and organisations involved in the field, such as the Indian Association of Forensic Odontology. This organisation was formed by members of different dental specialties 10 years ago and organises national conferences annually with the goal of encouraging interest in the specialty amongst dentists and other professionals.

What, in your opinion, also has to be done to establish forensic dentistry in India?

A number of initiatives need to be undertaken in order to establish forensic dentistry in the country, including mandating dentists with casework experience in the specialty to be part of state forensic investigation and identification teams. Legislation on the compulsory use of dental methods in post-mortem identification and other routine forensic investigations is also required, as well as formal and structured graduate courses in the subject. State officials throughout the country should also push the development of stand-alone forensic dentistry centres incorporating full-time staff.

Thank you very much for the interview.
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Combination of digital and analogue techniques

Dr Gunpei Koike

Nobody will deny that aesthetics play a crucial role in the restoration of anterior teeth, irrespective of whether the restorations are placed in male or female patients. As the final outcome is dependent on the skills of the patient, the aesthetic differences may be tremendous even if state-of-the-art techniques and materials are utilised.

For the anterior restorations in the case presented, I used IPS Empress CAD/lustrous glass-ceramic blocks. These blocks are offered in two different levels of translucency by the manufacturer. Additionally, a Multi block featuring multiple shades is available. As these blocks are industrially processed, restorations of consistent quality are achieved. The glass-ceramic material is easy to polish or reduce, which enables the milled restoration to be veneered subsequently. As a result, the final aesthetic outcome can be optimised in a simple fashion.

I usually work with the polychromatic IPS Empress CAD Multi blocks, as they feature a true-to-nature gradation of shades combined with quick healing, but also long-term stability or enhanced aesthetics. The use of IPS Empress CAD Multi blocks in combination with CEREC 5 (Sirona) combined with CEREC/CAM system allows restorations to be fabricated that meet the needs of today’s patients. In the case presented, a restoration was fabricated with IPS Empress CAD Multi block, highly aesthetic result was achieved that left nothing to be desired.

Case study

A 52-year-old female patient presented to my office dissatisfied with the aesthetic appearance of her upper anterior teeth. The incisal edges showed an irregular contour and discoloration was present (Fig. 1). The initial examination revealed an inconsistent incisal line and dark discoloration visible during smiling. Tooth #12 had previously been restored with a crown, while tooth #22 had received a composite restoration (Fig. 2). Prior to the start of the treatment, a CERI test was conducted. The results indicated a low curing risk level and good oral hygiene. Therefore, the restorative treatment could be started immediately.

The restorative options available to the patient were discussed with her. Her priorities included the lightening of the discoloured teeth, as well as the creation of softer, more feminine tooth shapes and the creation of long-lasting restorations. Based on her wishes, an amanysis and a diagnostic analysis were conducted. In the next step, I set up a treatment plan that included teeth #11, 12, 21 and 22.

Fig. 1: Pre-op situation showing an irregular incisal line. The patient considered her teeth too “angular and big.” — Fig. 2: Tooth #12 had been restored with a crown and tooth #22 showed lightening of the discoloured teeth.

For the anterior restorations to be fabricated that meet the needs of today’s patients, it is advisable to check the size and dimension of the incisal build-up from the palatal aspect carefully. This enables the operator to take an accurate registration, which is further enhanced. After the restoration had been milled, it was seated on the model. The restoration had an excellent fit. Moving on to the grinding of opaque and translucent shades from the cervi- cal part to the incisal region, the restoration had a very natural appearance. The versatility and flexibility of the IPS Empress CAD Multi block is thus further enhanced. After the restoration had been milled, it was seated on the model. The restoration had an excellent fit. Moving on to the grinding of opaque and translucent shades from the cervi- cal part to the incisal region, the restoration had a very natural appearance.

In the case presented, the restorations were glazed but did not have to be characterised because of the IPS Empress CAD Multi block’s lifelike aesthetics. The reason that I glazed the restoration was not primarily to improve its aesthetic appearance, but to impart it with even higher strength. In the literature, glaze firing is generally recommended after finishing the strength of IPS Empress CAD restorations. I would like to point out that the IPS Empress CAD restorations also possess sufficient strength to ensure successful long-
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Dr Gunpei Koike is founder of Koike Dental Clinic in Kanagawa in Japan. He can be contacted at www.koikedc.com.

Particularly in the cementation of veneers, strict adherence to the cementation protocol is crucial to ensuring long-lasting results. Normally, I use Variolink II luting composite, since it allows (thin) all-ceramic restorations to be reliably, durably and aesthetically cemented. In the case presented, I decided to use the universal luting composite Multilink Automix, as it is very easy to use and convenient. The restorations were reliably cemented in just two steps. The high bond strength and long-lasting adhesion that are achievable with this system have been confirmed by numerous studies conducted in recent years. In contrast with Variolink II, Multilink Automix is only available in three different shades (yellow, transparent and opaque). As the patient’s teeth did not show any severe discolouration, the choice of materials was sufficient in this case.

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Figure 10 shows the restorations three years after completion of the treatment. The restorations still look attractive and the gingival tissue has a healthy colour. We are proceeding on the assumption that the dark triangle between the two front teeth will become smaller over time. The four teeth were restored with IPS Empress CAD Multi in a very satisfactory fashion, and the patient was very pleased with the result.

Summary

In Japan, it is generally assumed that conventional, laboratory-based restorative procedures are superior to computer-assisted techniques. Some experts are of the opinion that CAD/CAM-based systems even pose a threat to the profession of laboratory technician as a whole. In my opinion, this is a huge misconception. On the contrary, CAD/CAM technology and the manual skills of laboratory technicians can be ideally combined to achieve optimal results. The flexible use of digital and analogue techniques helps to better fulfill patient needs and advances modern dentistry.

This position is corroborated by the case presented in this article, which was restored by making full use of the possibilities offered by the CEREC system and the IPS Empress CAD Multi block. I will continue to provide my patients with high-quality restorations, also by using sophisticated procedures. These procedures ensure that durable results and thus a high level of patient satisfaction are achieved.

Dr Gunpei Koike is founder of Koike Dental Clinic in Kanagawa in Japan. He can be contacted at www.koikedc.com.
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**Compression of the papillae**

It is much more difficult to obtain a good contact point with composite compared to amalgam because of the way composite material needs to be light-cured. If the proximal matrix does not have a good adaptation to the tooth, then too much compression on the composite filling material will result in cervical overhang. This in turn will compress the interdental papillae and may cause periodontal damage to the patient’s tooth (Figs. 1 & 2).

**The matrix**

It is easy to understand the importance of the role of the matrix both in forming the filling proximally and channelling the filling material to the correct position. Directa’s FenderMate matrix perfectly fulfils the clinical needs of completing Class II cavities (Figs. 3 & 4). The concept of a steel plate and plastic interdental wedge in one piece was initially introduced by Directa in the concept of FenderWedge, a device for protecting the adjacent tooth during preparation, and replicated under the name FenderMate as a matrix system. The aim is to facilitate the insertion of a wedge and an anatomically adapted matrix at the same time.

The matrix can be removed in two stages. The interdental wedge, which separates from the steel matrix, can be taken out first and the steel matrix can then be removed next. The matrices are available in two sizes—narrow and regular—and for right and left application. They are colour-coded—green and blue—for ease of identification. FenderMate may be applied either buccally or lingually.

**The contact point**

The interdental wedge with a flexible wing keeps the lower part of the matrix in contact with the cervical walls of the cavity. This causes a slight separation of the teeth so that when the filling is made, it is slightly larger than usual in the proximal direction. Once the matrix has been removed, the patient’s teeth will return to their natural position, assuring tight contact between the proximal spaces with the adjacent tooth.

The matrix’s convex shape positions the interdental contact point in the highest third of the tooth and avoids a papillary splay. The curved shape of the combined matrix and interdental wedge forms the matrix around the buccal and lingual limits of the cavity box, and the pre-shaped contact former creates a natural contact point on the patient’s tooth (Figs. 5–7).
NEW YORK, USA/LEIPZIG, Germany: Treating tall people can be a challenge but what if your patient measures a staggering 2.46 metres? Ask Dr Eric Johnson, a Californian dentist. Two months ago, he treated Sultan Kösen, the world’s tallest man according to the Guinness World Records.

The part-time farmer, born and raised in a small town in Turkey, was diagnosed with pituitary gigantism after doctors discovered a tumour behind his eyes triggering the overproduction of growth hormones. One of the many problems resulting from this condition was an increased spacing of his teeth. After watching the documentary World’s Tallest Man on American TV, Dr Johnson offered Kösen a free dental makeover in the US.

According to Dr Johnson, Kösen’s dental anatomy is of average size. However, his growth escalated after his dentition was complete. Prior to his makeover in the US there was a skeletal discrepancy due to the continual growth of his facial structure. Johnson assembled a team of specialists in Orange County, including oral surgeons, periodontists, endodontists, technicians and emergency medical personnel.

The overall treatment involved two hours of periodontal therapy, as well as ultrasonic scaling, root planning and the extraction of three unrestorable teeth. The team restored 25 surfaces with direct composite, placed 16 veneers, one CEREC crown, one 3-unit FPD and a maxillary partial denture, as well as did root–canal treatment on one tooth.

However, treating the tallest man in the world was not without its challenges. For Dr Johnson, it was the first time he had treated someone of this stature. The top of Kösen’s head touched the ceiling in his office and he had to dodge the light fixtures. The team also had to place a table at the end of the chair to support about one metre of Kösen’s body that extended past the chair. Special instrumentation, however, was not necessary, as his dentition corresponded to normal size.

In addition to these difficulties, Dr Johnson and his team faced a language barrier. “Since Sultan had very limited dental care in the past, I had to try to communicate with him about the treatment,” Dr Johnson remembers. “We relied on Google Translator and Ms Kelly Garrett, International Director of Human Resources for Guinness World Records. However, things were lost in translation because Sultan would often laugh at our translation. But we worked it out. Patients understand touch, body language, and tonal inflection.”

The team of specialists worked hard to give Kösen a successful makeover. Dr Johnson makes special mention of Gary Vaughn from Frontier Dental Laboratories. He worked around the clock for three days fabricating 16 veneers and one 3-unit bridge, all while running his laboratory. “This is an exemplary example of a great relationship between a dentist and his laboratory. We worked together on a huge project in a very little amount of time. This was possible due to excellent trust and communication”, Dr Johnson says.

The team also included Dr Wyatt Simons, who performed the necessary endodontic procedures. Well known for his ability to treat complex pulpal anatomy with precision, Dr Simons says, “I was inspired and honoured with the potential to help Kösen obtain long-term successful results. Not only with this tooth, but also with his entire case, as the tooth was particularly important in increasing his overall treatment outcome due to the unique size of his bite and the need to stabilize his new veneers.”

According to Dr Johnson, should Kösen continue to grow, his Class III malocclusion will continue. He has contacted a dentist in Kösen’s home-town who will do the follow-up dental care. Kösen will also need to continue to have regular periodontal maintenance and have a few more direct composites completed. “Appropriate evaluations and on-going maintenance are key in ensuring longevity for his restorations,” he concludes.

(Edited by Daniel Zimmermann, DTI)
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