Launch Issue 2009

DENTAL TRIBUNE

The World's Dental Newspaper · India Edition

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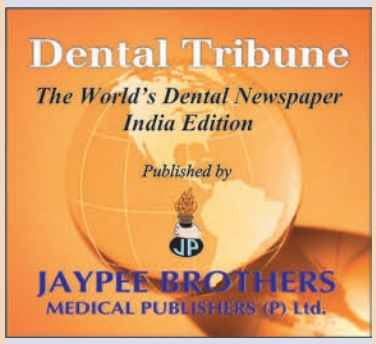
News in brief

Dental trade events

Dental trade events in India for the year 2009 kickstart with the Famdent Show at the capital, Delhi, which begins on July 24. This will be followed later by India's premier international dental exhibition, The World Dental Show staged from October 9-11 and IDEM from October 23-25, both going to be held in Mumbai. Dental manufacturers, traders, distributers and exhibitors from all over world will assemble at these events. In addition, these events will also host a large number of seminars, workshops and poster sesions for the continued education of the dental professionals. These three events are expected to attract dentists, nurses and dental technician from accross the country to enrich the knowledge and enhance practice skills.



Bad breath worries women

Women are more worried about having bad breath than about their partners disliking their appearance. Toothpaste manufacturer Macleans found that 78 percent of women worry about having smelly breath, while only 4 percent said they were concerned about what underwear to wear.

Simulation helps students learn dental implant procedures

A realistic computer game will soon be used to help dental students, worldwide, learn and reinforce dental implants. The virtual dental implant training simulation program is designed by the faculty and students of Medical College of Georgia School of Dentistry, US, to aid diagnostics, decision-making and treatment protocols.

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Dear Readers of Dental Tribune India

Jitendar P. Vij
Chairman, Jaypee Brothers Medical Publishers

Torsten R. Oemus
Chairman & Publisher DT Group

I am extremely happy to see the launch of Dental Tribune India Edition, through our group, in an association with Dental Tribune International. India has a large number of dentists in the private practice who constantly strive to upgrade their skills and practice. I have sincerely believed that, we, as publishers, must encourage opportunities to bring newer and valuable academic content to these professionals. DT India, as part of the DTI network, is one such initiative, through which we plan to bring contemporary global content in dentistry from 2009 onwards. Because the content will be shared in the DTI network, Dental Tribune India, as a newspaper, also allows our own fraternity of dentists to contribute their article, views, opinions and case studies for readers across the world. In the near future, I also anticipate a warm response by our readers to the forthcoming media of magazines and the DT Study Club. DT

It's my great pleasure to welcome Dental Tribune India to the Dental Tribune International (DTI) publishing network. DTI is proud to collaborate with India's largest medical publisher, Jaypee Brothers, to bring the Indian dental profession the latest global and regional dental news.

The Dental Tribune International publishing group is composed of some of the world's leading academic publishers. Its combined portfolio includes more than 100 academic, clinical and trade publications that reach over 600,000 dental professionals in more than 90 countries and 25 languages. DTI's collective

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Easier plaque detection with Inspektor TC

In collaboration with Inspektor Research Systems BV in the Netherlands, scientists at the University of Liverpool have developed a new product for identifying plaque build-up in the mouth before it becomes visible to the human eye. The toothbrush-sized device has a blue light at its tip that allows plaque to be easily seen as a red glow when shone around the mouth and viewed through yellow glasses with a red filter. Dentists currently use disclosing agents in tablet form to indicate tooth decay and plaque, but these often stain the mouth and taste unpleasant. The new product, known as Inspektor TC, has been designed for everyday use in the home and will be particularly useful for those who are vulnerable to dental diseases, especially children and the elderly.

"Early stage plaque is invisible, and so this device will show people the parts of the mouth that they are neglecting when they brush their teeth, enabling them to remove plaque before it becomes a problem," said Prof. Sue Higham, Director of Research at the University of Liverpool's School of Dental Sciences. "Inspektor TC is designed, so that people can easily incorporate it into their daily dental hygiene routine."

Her team has already received a Medical Futures Inno-vation Award that acknowledges significant innovation in science for the product. "We now hope to work with industry partners to develop this prototype, so that people can use it in the home to identify plaque before any serious dental work is needed," Prof. Higham added. DT

Representatives from Inspektor and the University of Liverpool show the new device at the Medical Futures Award in London last year.(DTI/Medical Futures)

India approves new dental schools

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany/ NEW DELHI, India: The Minister of Health and Family Welfare in India, Shri Ghulam Nabi Azad, has approved 150 educational institutions, including a significant number of medical and dental colleges. He also directed the country's Medical and Dental Councils to take up pending recommendations of colleges as soon as possible so that semesters could begin by 1 August, the newspaper the Times of India reports.

In India, each institute offering medical or dental education needs annual clearance from the Ministry of Health and Family Welfare based on recommendation by the two councils.

Officials have justified the large number of approvals by the many applications that had been pending approval for several years and numerous public complaints of undue delay in the processing of cases. However, the approvals come at a time when there is growing concern for the future employment of dental graduates. According to a Times of India report, many dental graduates in India are forced to quit dentistry and work in other, more lucrative jobs.

Education regulators have also been said to turn a blind eye to quality in their haste to recognise private professional institutions. Azad made clear that no intermediaries would be tolerated in his ministry for clearing any medical institute application. He asked for complaint boxes to be placed at his office and residents to receive complaints against any person seeking illegal endorsement, either in medical councils or in the Ministry.

Shri Ghulam Nabi Azad (third from left) during the celebration of the International Day against Drug Abuse and Illicit Trafficking on 26 June in New Delhi. (DTI/Photo: Viney Bhushan)

"What is needed in India is a national workforce strategy that is carefully devised and implemented," Prof. Raman Bedi, former Chief Dental Officer in the UK and founder of the new Indian dental community Dentalghar, told Dental Tribune Asia Pacific. "With higher demands for quality dentistry by local people, dental tourism, postgraduate training opportunities etc., many dentists will stay in India instead of going abroad."

Dental education in India has grown in recent years and India now ranks first in the world in having the highest number of dental schools. The country has 280 dental institutions, which produce between 15,000 and 20,000 Bachelor of Dental Surgery graduates every year. DT

Americans support dental coverage in health care reforms

Over 60 per cent of Americans consider dental coverage part of an overall health care reform by the Obama legislation, a new public opinion survey has shown. The poll released at the launch of National Smile Month in June and commissioned by Oral Health America revealed that four in five adults agree that dental benefits are as important as general medical benefits in an overall health care benefit package.

Many poor and lower-middle class families in the US currently do not receive enough dental care, in part because dentists prefer patients who have private insurance or can pay in cash. The lack of dental care is also not restricted to the poor, recent data shows. Experts on oral health say that about 100 million Americans have no access to adequate care.

In a recent letter to US president Barack Obama, the American Dental Association (ADA), which represents over 157,000 dentists in the US, recently urged the government to pay more attention to dental health care in the on-going health-policy debate. "Acknowledging that the majority of Americans have access to excellent and relatively affordable dental care [...], we are compelled to point out that too many low-income Americans still suffer needlessly from dental disease," the letter states. "More must be done to ensure that all Americans have access to quality oral-health services."

The ADA recommends increasing funding to the nationwide Medicaid health programme, rebuilding the public dental-health infrastructure & supporting community-based prevention measures, such as fluoridation or school-based education programmes.

Obama's health care reform nitiative aims to extend health coverage to 45 million uninsured people in the US, as well as to preserve consumer choice and lower rising health care costs, by cutting more than US$200 billion in reimbursements to hospitals over the next decade. He has also announced his support of the introduction of a public health insurance plan, a concept similar to the failed health care plan developed by his current Secretary of State and former First Lady Hillary Clinton back in 1994.

US President Barack Obama at the annual convention of the American Medical Association in June. (DTI/ Photo Ted Grudzinski, AMA)

The government's healthcare reform proposals are opposed by the US Congress and other organisations like the American Medical Association, who say that the realisation would cost a total of US$1 trillion over the next decade and still leave millions of people in the US uninsured. DT

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activities also include the organization of continuing education programs as well as congresses and exhibitions. The World Dental Federation (FDI) & regional dental associations, such as the Asia Pacific Dental Federation (APDF) and the Latin American Dental Federation (FOLA) have chosen Dental Tribune International as their official media partners.

DTI's presence within the realm of Indian dentistry has been long overdue & eagerly anticipated. However, establishing DTI's broad media & educational portfolio in India required an outstanding publishing house that is experienced, professional, innovative, committed to quality, and highly regarded within the Indian academic community. There is no question that among medical publishers, Jaypee Brothers not only meets these requirements, but also has a global reach and is well on its way to becoming an essential partner for the dental profession in India. In addition to the Indian Edition of Dental Tribune, "The World's Dental Newspaper," & its related specialty newspapers, Jaypee will bring you clinical journals such as Root, Implants, Cosmetic Dentistry, Ortho & Laser. Given India's global prominence in information technology, I am certain DTI's state-of-the-art ePublishing & eLearning plat-forms will generate a lot of interest among dental professionals as well. Please visit www.dental-tribune.com for daily news feeds, clinical updates, product and company directories, print archives and ePapers. In addition, excellent online education awaits you as a registered member of the Dental Tribune Study Club at www.dtstudyclub.com. This ADA/CERP accredited eLearning platform offers live interactive courses that are also archived for viewing at a later time, discussion groups, video product reviews and peer-reviewed case studies, and all of it is available 24/7. Finally, I would like to invite the Indian dental community to contribute to the Dental Tribune platform as reporters, bloggers, presenters, reviewers, opinion makers, moderators or lecturers no matter whether you are a researcher, clinician or politician. The global dental industry wants to hear more from India, and Dental Tribune will serve as your gateway.

Dental Tribune already has many friends in India, and looks forward to making many new ones in the years to come. I am very thankful for the overwhelming interest and trust we have experienced from the Indian dental community thus far.

Sincerely,

Torsten R. Oemus
Chairman & Publisher
Dental Tribune Group DT

Washington cracks down on tobacco, and ADA approves

The American Dental Association (ADA) is applauding new legislation to regulate tobacco. The Family Smoking Prevention and Tobacco Control Act gives the U.S. Food and Drug Administration (FDA) the express authority to regulate the manufacture, marketing and distribution of tobacco products.

The ADA has a long-standing policy that nicotine is a drug and that cigarettes and other tobacco products are nicotine delivery devices and, therefore, should be regulated. "Dentists are the first line of defense in the war against oral cancer and many other tobacco-related diseases," said ADA President Dr. John S. Findley. "About nine out of 10 people who will die from oral and throat cancers use tobacco." "Tobacco products are also associated with higher rates of gum disease, one of the leading causes of tooth loss in adults," Findley said. DT

Mectron expands in India

Bangalore facility to host new showroom for dental products

HONG KONG/LEIPZIG, Germany/BANGALORE, India: The Italian manufacturer Mectron has opened a new production and administration facility in Bangalore in India. Inaugurated with a big opening night back in May, the facility will be under the direction of M. Radhakrishnan, a co-founder of Mectron's India branch. The company, which revolutionised dental surgery with their development of piezoelectric bone surgery, currently distributes a number of well-known dental brands from Germany and Italy, such as Cavex, Euronda, Heraeus Kulzer, KaVo, K-Driller, Schulz and Villa. According to Radhakrishnan, initial planning for the new facility began in 2007. Bangalore was chosen to host the new facility because of its highly educated workforce and the nearby Bengaluru International Airport. With an economic growth of 10.3 per cent, the city based in southern India is one of the fastest growing economic centres in India and host of a number of important industries, such as IT and biotechnology. The number of employees in the Bangalore facility will be increased from 4 to 60, Radhakrishnan said. Besides new offices and meeting rooms, the new building will feature a showroom to exhibit the company's product range to its customers from India. "This investment certainly demonstrates a strong commitment to Mectron India's distribution partners and shows the confidence Mectron has in the potential of the Indian dental market," told Wolf Narjes, Area Manager for Asia, Dental Tribune Asia Pacific. Mectron has been active in India since 2004. It has also branches in Delhi and Mumbai. DT

Experts quarrel over mouthwash

Study in Australian dental journal pushes oral cancer debate

A young woman buys mouthwash in a supermarket. (DTI/Photo Daniel Zimmermann)

Daniel Zimmermann
DTI

LEIPZIG, Germany: New evidence from Australia has revealed that the long-term use of mouthwash containing alcohol can lead to an increased risk of developing oral cancer. The information, which was released after a scientific review was published in the Australian Dental Journal, reports on evidence that ethanol allows carcinogenic substances, such as nicotine, to permeate the lining of the mouth. Top-selling mouthwashes contain as much as 26 per cent alcohol, which is used to kill the bacteria responsible for tooth decay. It is also necessary as a solvent for different flavour oils.

Michael McCullough, Associate Professor of Oral Medicine at the University of Melbourne in Australia, who led the study said: "We see people with oral cancer who have no other risk factors than the use of mouthwash containing alcohol, so what we've done is review all the evidence. Since the article, further evidence has come out, too."

"We believe there should be warnings. If it was a facial cream that had the effect of reducing acne but had a four- to five-fold increased risk of skin cancer, no-one would be recommending it," he added.

The Australian government said although the study was "very interesting", it lacked definite proof that these products would increase the risk of cancer. Ministry of Health dental officer, Robin Whyman, recommended people speak to their dentists when using mouthwash long term.

In a written statement sent to Dental Tribune in January, Johnson & Johnson rejected the claims: "Leading cancer scientists, as well as the US Food and Drug Administration and researchers in dentistry, have found no evidence that alcohol-containing mouthwashes, if used properly, lead to increased risk of developing oral cancer." The company, which is behind the Listerine brand, holds 25 per cent of the global mouthwash market and claims to have conducted more than 100 scientific evaluations of its top-selling brand. DT

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mectron
medical technology

Dear reader,

Daniel Zimmermann
DTI

Do you remember sending your first e-mail? I see myself in 1995 sitting in a dark basement in my first year at university, exchanging short messages with a friend next to me, on a 486 PC that was state-of-the-art at the time. Since then so much has changed. What was just fooling around back then has become an everyday commodity that most of us cannot imagine living without.

Some experts have claimed that the Internet is one of the most significant inventions of the last 50 years and, indeed, some projects have changed our lives to various levels. With the Internet, it has never been easier to access and share information all around the world within just a few seconds. Today, we are able to buy goods or talk to people around the globe with just the click of a mouse. Giants like Google offer so many services that we can hardly escape them in our everyday lives. However, in dentistry, especially in dental publishing, the race for revolutionary projects is still on. Many publishers, including ourselves, have long underestimated the many possibilities that the Internet has to offer, sometimes because we were afraid of neglecting our print offers & therefore, our main business model for the last 100 years. But this is changing. Dentists have often been conservative when it comes to adapting new technologies but now the age structure is shifting in many countries, making way for a new generation of dentists who have grown up with Internet technologies & are open to their many opportunities. With our new website & the DT Study Club online education platform, both successfully launched in early March, Dental Tribune is striving to take the lead. On these platforms, we do not only offer news that will help you to stay ahead in the profession but also a number of tools that will give you the chance to interact with colleagues and international experts. We invite you to join us in this endeavour. DT

Daniel Zimmermann
Group Editor
Dental Tribune International

Planning for the future

Friedrich Herbst
Germany

The famous German philosopher Friedrich Nietzsche once said, "We have already gone beyond whatever we have words for." Have we already overcome the current global crisis that dominates in the media? If you happened to visit the 33rd IDS in Cologne in Germany this year, you would have been under the impression that this was the case. The floors & booths were crowded, filled with happy faces, and the show broke records in all respects. In spite of this, the main topic at the assembly of the international dental manufacturers (idm) in Cologne was the present shifting in the finance markets and its possible effect on the future. After the gloom at the Chicago Midwinter Meeting in February, the members of the Dental Trade Alliance from the US were particularly surprised by the positive feedback at IDS. The momentary mood and facts, however, are two sides of the coin and apply to any prognosis in the dental sector. Manufacturers of consumables have reported stable or marginally increasing sales figures. In the area of capital goods, however, manufacturers of equipment, such as practice fittings, dental units, imaging devices, & CAD/CAM, as well as manufacturers of dental implants have noticed a clear purchase restraint and the need for cutbacks in staff in order to cope with current market circumstances. In addition, companies that focus on dental technology have noticed the shift of the time-consuming & high-cost production of dentures to countries where labour and material costs are cheaper. Markets will not grow if the services offered are too expensive. Competence and knowledge especially will be required to plan for the future. But the future is complex & cannot be managed by knowledge alone. Human spirit & emotional intelligence paired with ethics give rise to a socially responsible trade. Persistence, hesitation, know-it-alls or daring do not elicit the desire to undertake new ventures. Only something completely new will give rise to new values and prosperity. DT

Contact Info

Friedrich Herbst is the Executive Director of international dental manufacturers (idm), an independent umbrella organisation that globally represents the common interests of the dental trade. He can be contacted at idm-vox@t-online.de.

Dental care in Australia

Hans Zoellner
Australia

Australians enjoy equitable access to medical services supported by universal Medicare insurance, an effective Pharmaceutical Benefits Scheme, community-rated private insurance, as well as the provision of both intern training & service beyond private sector capacity by public hospitals. When the Australian government established the National Health and Hospitals Reform Commission in 2008 to inform structural health reform, it correctly identified exclusion of dentistry from some of these structures as a core problem.

The Commission's interim recommendations for the entire health system range from Option A, which proposes minimal change, to a contentious Option C, in which Medicare would be replaced by federally funded social health insurance. Importantly, the Commission has proposed the establishment of Denticare universal insurance similar to Option C. The 0.75 per cent Denticare levy would be distributed directly to private health insurance companies rather than as patient rebates. Notably, federal Denticare payment to insurers would be risk adjusted breaking the Australian convention of community rating. People without private insurance would receive Denticare via federally funded expansion of public dental services. The Commission has also recommended the introduction of a one-year dental internship, as well as additional funding for oral health promotion and the expansion of school dental services. The Association for the Promotion of Oral Health has long sought internships and oral health promotion, so our response to the Commission on these points is confined to relatively minor suggestions, including the expansion of internships to two years. In addition, we support the intent of Denticare.

However, there are significant difficulties with the Denticare model suggested. In particular, Denticare is currently planned to exclude many important dental services, including multi-canal endodontics, lower partial dentures, and crowns. Also, the restrictive Denticare list would have the effect of constraining the skills of new graduates during internships, rather than expanding their skills. Price water house Coopers, commissioned by the Commission to cost Denticare, makes special note in its document that Professor John Spencer of the University of Adelaide recommended the specific range of services for Denticare. We acknowledge Professor Spencer's eminence as an epidemiologist but believe experienced senior clinicians and clinical academics would have provided better advice. We also do not believe the public sector can expand sufficiently to accommodate those without health insurance, representing 55 per cent of Australians, in order to support Denticare adequately as currently planned. Moreover, Medicare has worked well for medicine in Australia, and we would prefer dentistry to be brought into the proven Medicare system, rather than see oral health experimented with in an untried Option C model. Indeed, comprehensive dental services supported by Medicare have already been successfully trialled for 132,000 Australians with chronic disease, through the Enhanced Primary Care Program established in November 2007. We suggest progressive expansion of current dental Medicare arrangements eventually to include the entire population. This could be converted to Option C–Denticare but only if the rest of the Australian health-care system is similarly modified. We are encouraged by the Commission's approach and hope it modifies its recommendations in accordance with our suggestions. DT

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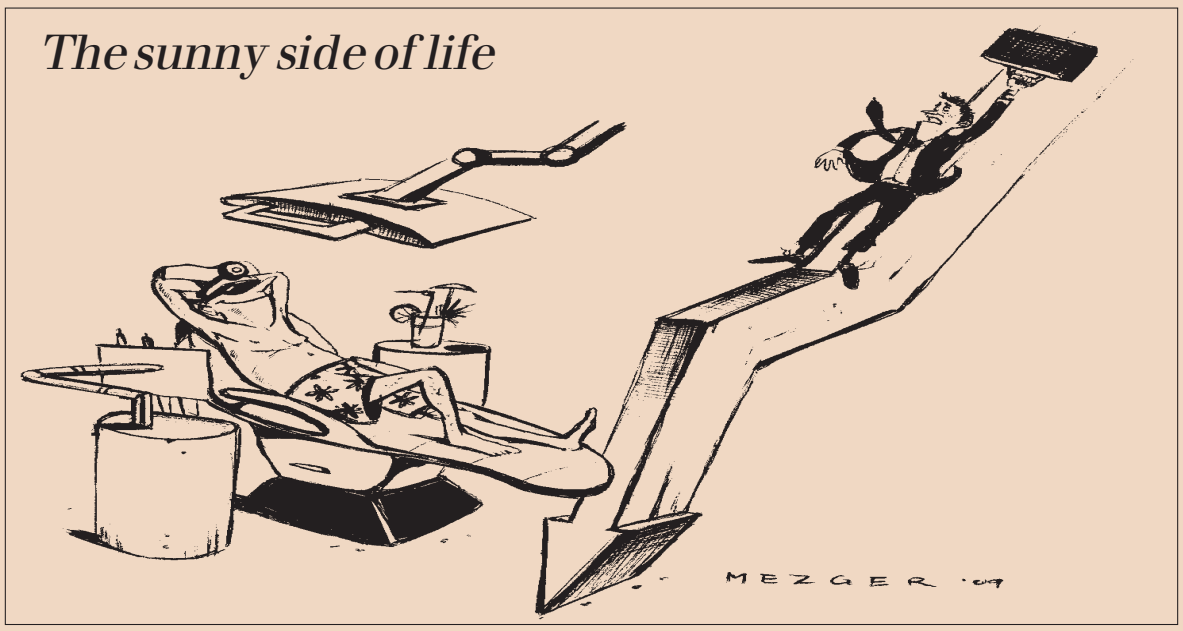
The sunny side of life



Dental Tribune International: A global approach to dental media

Claudia Salwiczek
Editor DTI

LEIPZIG, Germany: In the last 5 years, the Dental Tribune International (DTI) media group has grown from a rather small endeavour to a significant global publishing network. Publishers and editors in more than 20 countries now deliver the latest news & trends in dentistry to over 600,000 professionals worldwide. At present, Dental Tribune International—with head quarters in Leipzig, New York & Hong Kong—has a worldwide network of licensed publishing houses in 23 countries. Local issues of DTI publications are currently available in all relevant markets, including Germany, the UK, Italy, Russia, China, Japan, the US and—new this year—France and India.

With their numerous publications magazines, newspapers and handbooks—the group provides essential dental media as a reliable & easy-to-read source for current dental news and research. The DTI flagship publication Dental Tribune is the first worldwide newspaper aimed at dentists in private practice and published in the local language of the country in which it appears. As the official media partner of the World Dental Federation (FDI), the Asia Pacific Dental Federation (APDF) & the Latin American Dental Federation (FOLA), Dental Tribune keeps its members abreast of the newest trends & developments in dentistry. The specialist magazines—cosmetic dentistry, implants, ortho, roots & laser—present the most significant international developments & clinical experiences to practitioners & specialists around the world. The high gloss English language magazines are published four times a year, sent to a database of 50,000 dentists worldwide & distributed at all major international congresses & exhibitions.

While each publication is supported by a distinguished international advisory board, the magazines are also the official publications of various renowned academies and associations. The content of the magazines is a combination of specialty articles, clinical studies, research news, interdisciplinary concepts, case reports, industry reports, reviews (meetings, products, etc.), and lifestyle articles. Dental professionals from around the world are invited to submit their manuscripts for publication, which are then reviewed by the respective advisory boards.

While DTI's print sector is showing sustainable growth, the company recently expanded its Web presence. The revamped website www.dental-tribune.com and the DT Study Club, a worldwide online platform for advanced training, were introduced to the public at this year's International Dental Show in Cologne, Germany. The site has a clear, concise design & primarily focuses on news in dentistry with regard to science, politics and the industry. The site is currently available in English and German. Additional websites for the more than 25 local editions in different languages are under development. DT

"The multiple applications of lasers are only going to expand in the future"

Interview with Graeme Milicich, New Zealand

Graeme Milicich

Lasers have been used in different medical fields for many years and have revolutionised many treatments, notably eye surgery and hair removal. The technology is also an established aspect of modern dentistry and is widely used in Europe and the USA. DTI editor Anke Schiemann had a chance to speak to Graeme Milicich, who is a fellow, diplomate, and founding board member of the World Congress of Minimally Invasive Dentistry (WCMID), prior to the recent FDI Congress in Stockholm in Sweden.

Anke Schiemann: In a nutshell, what are the benefits of using laser in clinical dentistry today?

Graeme Milicich: Lasers have many applications in clinical dentistry. My research in the last four years focused on the clinical applications of hard tissue Erbium lasers. The broad range of laser applications has benefits for both the patient and the dentist. Many hard and soft tissue laser treatments are much less invasive compared with conventional approaches. I do not think there is another piece of technology in dentistry that has the ability Erbium lasers have to treat soft tissue, bone, and tooth structure, simply by changing laser-operating parameters.

What is the advantage of lasers over rotary cutting instruments, and are there limits to what a laser can do?

Yes, there are some limitations as to what can be done with a laser, like the removal of metal restorations and crowns. But if you consider the totality of the types of treatments offered by general dentists, these limitations are far less compared to conventional rotary instrumentation. For example, you could run into problems with soft tissue contours or bone levels associated with a deep cavity while cutting tooth structure. With a laser you can remove both bone and soft tissue by simply changing a setting, and are therefore able to complete the procedure in one appointment—something that cannot really be done with a high-speed drill. Generally speaking, what can be done with a drill, scalpel, or bone bur can also be done with a laser. Additionally, many patients have a fear of dentistry based on the sounds and vibrations associated with rotary instruments. These sensations do not occur with the laser, meaning the patients find treatment much more acceptable.

What role does laser fluorescence detection currently play in the prevention of oral diseases?

With the advent of the KaVo DIAGNOdent more than ten years ago, the first general dentistry application of laser fluorescence was introduced. Like with any new technology, it had to be understood first, in order to achieve the best results.

In order to provide patients with accurate treatment recommendations based on the results of early cavity detection, an understanding of minimally invasive concepts is essential. Otherwise, the profession can be open to claims of over treatment. These charges often derive from a lack of understanding of the technology, its accurate application, and the concepts and applications of minimally invasive techniques. Often, astute clinicians are at the forefront of the application of new technology and techniques, and the research literature struggles to keep up with the clinical pioneers. This leads to a period with a shortage of validation for what eventually becomes a new and accepted standard of care. Further developments in the field are occurring and, as they filter into general practice, the standards of diagnosis will continue to improve. For new diagnostic technology to be readily implemented in general practice, it has to be both cost effective and time efficient.

What are the chances of treating peri-implantitis with lasers?

There are many case studies showing excellent results when treating peri-implantitis with a laser. The laser's use for debridement and disinfection gives the competent clinician a tool that previously wasn't available. The laser is safe to use around implants with little risk of damage to the implant. Personally, I have only treated one case of peri-implantitis so far, and it was a complete success.

The use of laser in fields like endodontics or periodontology is highly controversial. What are the main issues here?

Once again, competent laser clinicians are ahead of the research in these fields. Clinical results are being achieved that are now only beginning to be validated by research, until the research results are available, use of lasers in these fields is going to remain controversial for many. Those that are using lasers & are observing the clinical outcomes, have little doubt as to the efficacy of their treatments. Personally, I have been involved in research using the Waterlase (Er,Cr: YSGG) in endodontics. The ability for complete debridement of the canals following conventional canal preparation using radial firing tips in a non-ablative mode is significant, and addresses the issues of air and fluid entrapment at the apex that are associated with conventional techniques used for final canal debridement and rinsing.

In your FDI lecture you talked about new concepts associated with laser therapy. Can you give our readers a brief overview and explain these concepts?

The most common complaint from a new user is that it will not cut fast enough. The most significant contributor to slow ablation rates is the user, not the technology. The single biggest hurdle a dentist faces when beginning with laser is the difference between rotary instrumentation and lasers. When this is understood, a new laser dentist can become competent in a very short time. If these concepts are not well taught, then the new user will become frustrated and may fail to integrate their new laser into their treatment regimes.

The first concept is that lasers are end cutting. We have all become very competent using rotary instrumentation and have developed reflex motions as a result. The natural tendency is to apply these 'reflexes' when using a laser and this leads to frustration for the new user. When using a high-speed bur, we tend to move the bur laterally to extend a cut. This does not work with a laser because it is end cutting, not side cutting. Therefore, the operator needs to learn a new way of pointing the laser directly in the direction where a cut needs to be extended. Anyone who has become competent in the use of air abrasion masters the use of a laser very quickly because the same concepts apply to both technologies.

The second concept is that slow is fast. Once again, this concept is associated with our reflex motions associated with using high-speed hand pieces. We tend to use a fast painting motion on the surface when contouring a cavity. Exactly the opposite applies when using a laser. Ablation rates are stalled by this rapid painting motion, and initially it requires a mental awareness to slow the motion of the tip, to allow ablation to occur. As competence increases, this phenomenon is used to control ablation rates, without having to alter laser settings, by increasing or decreasing the motion of the tip.

The third concept is focusing and defocusing the beam, to alter ablation rates without having to change power settings on the laser. This technique, in combination with slowing or speeding up the motion of the tip, allows the operator to finesse ablation rates to create very smooth contours.

The final concept is the clinically observable ablation threshold. Many new users focus on power settings and how far the tip should be from the surface, depending on what they want to do. Absolute distances in relation to operating parameters are impossible to give because there are so many variables involved, including the tip being used, the state of the tip, the air/water ratios, and the surface being ablated. As a tip is moved towards the tooth, it reaches a point where the operator can begin to see the commencement of ablation. This then gives a reference maximum operating distance in relation to the current settings and tip being used. New users are taught to start out of focus and move towards the tooth u ntil the clinically observable ablation threshold is reached. This distance can range over several millimetres, depending on the various parameters. Understanding the concept helps new users avoid inadvertent high fluence effects at the ablation surface.

There are two other issues that will be dealt with as separate topics in the lecture in regard to ablation rates in enamel. This is the area that new users find most frustrating, because they tend to use rotary cutting movements with an end-cutting device. Firstly, because laser ablation is a non-contact technique, magnification is essential. Secondly, enamel ablation rates are related to the orientation of the long axis of the enamel prisms in relation to the plane of the ablation face. Ablation rates are 40 per cent greater when enamel prisms are ablated from their sides, rather then on their ends. This requires an understanding of the orientation of the long axis of enamel prisms in different surfaces of a tooth. The culmination of this understanding is epitomised in the time it takes a new user or a competent laser clinician to cut a slot preparation, with a new user often taking more than three times as long to complete the same procedure.

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Stains mistaken as tooth decay

Penny Palmer
DT UK

LONDON, UK: Stains on teeth are often mistaken for signs of decay, according to new research. A study of 200 private dental patients in the UK found that in over 60 % of cases, stains that were hard to remove were mistaken for decay. The stains were only identified using an advanced device that cleans teeth with a blast of fine abrasive particles.

Dental researchers examined a particular 'premolar' situated between the front and back teeth and found signs of decay in 78 per cent of cases. But 63 per cent of them turned out to be false alarms when they were examined again, using the CrystalAir abrasion device instead of mirrors and scrapers.

The research suggests that stained teeth may result in dentists drilling unnecessarily.

Dr Robin Horton, from the Wayside Dental Practice in Harpenden in Hertfordshire, who co-led the study, claimed that "traditional dental check-ups have led to unnecessary dental treatment for millions of patients." The CrystalAir abrasion device blasts away dirt, debris and stains using a narrow stream of aluminium oxide particles propelled by helium. It is used in conjunction with a laser probe that can detect deeply hidden decay by shining a light beam through the tooth. The research found that using the two systems together was 70 % more accurate in picking up decay than traditional techniques. DT

British Asian kids avoid the dentist

Children of Bangladeshi, Indian and Pakistani origin in the UK visit the dentist less frequently than any other ethnic group, according to recent research. Three-quarters of all children under 16 in England have been for a check-up in the last year, but for all British Asian groups the statistics are low. The government claims that Bangladeshi children from deprived backgrounds, who often have a high amount of sugar in their diet, are the worst affected. The Department of Health is developing guidance notes for all Primary Care Trusts, aiming to provide ideas on promoting oral health care to the British Asian community. DT

Dental snapshots in 3-D

Under contract by the German dental company Hint-ELs, an expert team at the Fraunhofer Society in Jena, Germany, has developed a new optical digitisation system that scans the oral cavity and captures 3-D data of the teeth, using camera optics. The system is designed to facilitate the production of dental prostheses, in order to supersede the intricate and laborious route from bite impression and plaster mould to model scanning in dental laboratories.

"The 3-D coordinates of the tooth surface can be determined on the basis of measurements taken in the patient's mouth," says Dr Peter Kühmstedt, Group Manager for 3-D Measurement Technology at the Fraunhofer Institute for Applied Optics and Precision Engineering IOF. "After an all-around measurement, it is even possible to represent the complete jaw arch as a virtual computer image." In order to obtain precise results, the researchers have utilised fringe projections in which a projector shines strips of light on the tooth area to be measured. From the phase-shifted images, a evaluation software determines the geometric contour data of the tooth. Two camera optics provide the sensor chip with image information from different measurement perspectives. After the pixel-precise comparison of various camera images, the evaluation programme identifies any image faults and removes them from the complete image.

Since patients are moving while the images are being, the researchers have ensured that the process is quick. "The image sequence for each measurement position is captured in less than 200 milliseconds," explains Dr Kühmstedt. DT

International Dental Events 2009

July 2009

FAMDENT SHOW 2009
Where: New Delhi, India
Date: 24-26 July 2009
Web site:www.famdent.com

August 2009

34th Annual AAED Meeting and IFED 2009
Where: Las Vegas, NV, USA
Date: 02–05 August 2009
Tel.: +1 312 981 6770
E-mail: info@estheticacademy.org
Web site:www.estheticacademy.org

September 2009

FDI Annual World Dental Congress Singapore 2009
Where: Singapore, Singapore
Date: 02–05 September 2009
Tel.: +33 4 50 40 50 50
E-mail: congress@fdiworldental.org
Web site: www.fdiworldental.org

World Congress on Preventive Dentistry
Where: Phuket, Thailand
Date: 07–10 September 2009
Tel.: +1 703 548 0066
E-mail: research@iadr.org
Web site: www.iadr.com

2009 China Dental Exhibition International
Where: Tianjin, China
Date: 16–18 September 2009
Tel.: +86 10 6216 4099
E-mail: info@globalstar.org.cn
Web site: www.globalstar.org.cn

CEDE 2009
Where: Poznan, Poland
Date: 24–26 September 2009
Tel.: +48 42 632 28 66
E-mail: cede@cede.pl
Web site: www.cede.pl

Dental Expo 2009
Where: Moscow, Russia
Date: 08–11 September 2009
Tel.: +7 495 155 7900
E-mail: info@dental-expo.ru
Web site: www.dental-expo.com

October 2009

ADA 2009
Where: Honolulu, HI, USA
Date: 01–03 October 2009
Tel.: +1 312 440 2876
E-mail: annualsession@ada.org
Web site: www.ada.org

World Dental Show
Where: Mumbai/India
Date: 09–11 October 2009
Tel.: +91 22 26590001
Web site: www.wds.org.in

IDEM India 2009
Where: Mumbai, India
Date: 23–25 October 2009
Tel.: +49 221 821 3267
E-mail: idem-india@koelnmesse.de
Web site: www.idem-india.com

Dentech China 2009
Where: Shanghai, China
Date: 28–31 October 2009
Tel: +86 21 6294 6966
E-mail: mail@showstar.net
Web site: www.dentech.com.cn

November 2009

BDTA Dental Showcase 2009
Where: Birmingham, UK
Date: 12–14 November 2009
Tel: +44 1494 782873
E-mail: admin@bdta.org.uk
Web site: www.dentalshowcase.com

FDI Continuing Dental Education Programme
Where: India
Date: 21–22 November 2009
Contact: Dr. William Cheung
Email:wcheung@dentalmirror.com

SAAAD Aesthetic Dental Conference
Where: Kathmandu, Nepal
Date: 21–22 November 2009
Tel.: +977 142 425 64
Email: skoirala@wlink.com.np

ADF 2009
Where: Paris, France
Date: 24–28 November 2009
Tel.: +33 01 58 22 17 10
E-mail: adf@adf.asso.fr
Web site: www.adfcongres.com

Greater New York Dental Meeting 2009
Where: New York, NY, USA
Date: 27 Nov.–02 Dec. 2009
Tel.: +1 212 398 6922
E-mail: info@gnydm.com
Web site: www.gnydm.com DT

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Recent research on shorter wavelength lasers or the so-called blue lasers has shown them to be effective in diagnosing cancer cells. With this in mind, how do you see the use of the laser in general dental practice developing in the years to come?

Many dentists focused on minimal intervention have embraced laser fluorescence in the diagnosis of demineralisation of tooth structure. With these new applications, such cancer screening becomes cost effective and will become a common part of general dentistry. The main issue is that laser effects are frequency specific, & as applications develop, this will lead to a plethora of technology that becomes difficult for the clinician to incorporate into a practice. I envisage, in the near future, a diode-based laser that will have multiple, switchable frequencies that will allow one unit to accomplish varied tasks that require different frequencies. As uptake of laser technology increases, costs will decrease, making it more attractive to more of the profession.

Do you expect lasers to be an essential part in every dental practice in 10 to 15 years?

The multiple applications of lasers are only going to expand in the future. At the moment, the lasers with the most clinical applications in one unit are the Erbium family, and many dentists have embraced this technology and are constantly expanding its clinical applications. If we look back over 60 years to the initial introduction of the high-speed hand piece, there was initial and significant resistance to the technology, and it took over 10 years before it was readily accepted into general practice. Lasers have had a slower journey, mainly because of the need for advanced technology to make them more applicable in the field of dentistry and the associated research & development costs that are reflected in the price of lasers. Taking the cost of a laser out of the equation, it is very easy to visualise a laser in every practice in the near future.

Thank you very much for the interview. DT