Cold plasma jets found useful against oral bacteria

German scientists release promising results for dental applications

Jeannette Enders
DFT Germany

LEIPZIG/HOMBURG, Germany: The use of cold plasma jets could soon improve antibacterial treatment measures in dentistry, results released by a team of German experts indicate. Recent data gathered by scientists from the Leibniz Institute for Surface Modification in Leipzig and the Saarland University Dental Hospital in Homburg has demonstrated increased effectiveness of atmospheric plasma for the treatment of tooth surfaces and infected oral tissue. Among other applications, the technology could significantly improve the treatment of oral diseases, the researchers told Dental Tribune.

Cold plasma jets are ionised local gas flows that are triggered by microwaves in plasma jet sources using inert gases, such as argon, helium or nitrogen. Adding those gases under normal atmospheric pressure produces reactive oxygen species that react with surfaces and are capable of changing it.

Currently, hot plasma jets are used in an increasing number of medical applications, including disinfecting surgical instruments. Their high temperatures, however, have prevented them from being used for the treatment of body tissue. According to Dr Stefan Rugp, the head researcher from the Saarland University Dental Hospital, the application of cold plasma jets will allow significantly smoother treatment compared to mechanical removal with dental instruments.

“Dental pulp in the centre of the tooth is linked to blood supplies and nerves; therefore, heat damage must be avoided at all costs,” he said. “The low temperature of the cold plasma jets means they can kill the microbes while preserving the tooth.”

The study, which won an award in the Competition for Innovation in Medicine Technology in 2006, was funded by the German Federal Ministry of Education and Research. The results were published in the February issue of the Journal of Medical Microbiology.

Sensitive teeth plague India

Cases of sensitive teeth have tripped over the last five years, a nationwide survey in India has found. The findings released by the Indian Dental Association earlier this year also indicate that only 19 per cent of Indians suffering from dentine hypersensitivity visited a dentist to diagnose and treat the condition. Most of these cases occurred in the age group of 50 to 40 years.

Dentine hypersensitivity is recognised as a common dental condition and has been referred to as the ‘common cold of dentistry’. It is caused by dentine exposure through gingival recession, or the loss of enamel or periodontal tissue, resulting from mechanical pressure or chemical forces such as teeth whiteners. Treatment options include blocking neural transmission at the pulp through desensitising toothpaste.

China’s largest hospital expands

The Beijing Stomatological Hospital, one of the largest dental hospitals in China, will be moved from its current location near the Temple of Heaven to the Fengtai District. City officials said that the new venue will be five times larger and increase the hospital’s bed capacity to over 200.

S’pore increases med contributions

The Health Minister of Singapore has announced that the Ministry will increase its contribution to the country’s national medical savings scheme from 6.5 to 9 per cent. The 25-year-old Medisave is intended to cover major hospitalisation. Recently, it has been expanded to include a number of out-patient benefits.

Make no bones about implants

Bone loss around dental implants is far more common than previously thought, a doctoral study at the Sahlgrenska Academy at the University of Gothenburg in Sweden has revealed. The study, which examined X-rays of over 600 implant patients, found that about one quarter had lost some degree of supporting bone around their implants. The more jaw implants a patient had, the more common it was to find loss of supporting bone, the thesis states.

The study also demonstrated that the bone loss was not linear but accelerated with time. Furthermore, soft tissues surrounding an implant with bone loss were often found to be inflamed.

Dental implant companies are investing heavily in the development of new materials and coatings that increase osseointegration and prevent significant bone loss. Latest research has shown that “smart coatings” that include hydroxyapatite encourage bone growth around implants.
Asia News

Continuing education compulsory for all dentists in Malaysia

Daniel Zimmermann

HONG KONG/LEIPZIG, Germany: Private dentists in Malaysia are soon required to participate in a Continuing Professional Development (CPD) scheme in order to continue practising.

Through the scheme, which is an addition to the Malaysia Dental Act of 1971, those dentists will be able collect points by attending CPD seminars and participating in other CPD learning activities organised by the Malaysian Dental Association (MDA) in collaboration with the country’s Ministry of Health.

According to the MTA, the conference is scheduled to take place in early April 2010.

According to MDA president Dr Lee Soon Boun, the new scheme was developed to further advance the quality and standard of dental care in Malaysia. Speaking at the 17th FDI/MDA Scientific Convention and Trade Exhibition in Petaling Jaya in January, he said CPD is essential for dental practitioners to maintain and improve their knowledge and skills throughout their working life.

“CPD has been compulsory for dentists in the civil service for the past five years and we believe that expanding the scheme to private dentists will greatly benefit the profession,” he said. Currently, more than 95 per cent of Malaysian dentists work in the private sector.

Although a specific guideline has not been officially announced, the new scheme could also recognise points collected in other parts of the region. Dr Lee told Dental Tribune Online. He added that his organisation has already established transnational cooperation with the Singapore Dental Association and has been invited to be an accredited CPD provider for Singaporean dentists and oral-health therapists.

Dr Lee also said that the FDE/MDA convention was the first MDA-organised CPD event to be accredited by the Singapore Dental Council and Ministry of Health.

South Korea drives medical tourism with April conference

Daniel Zimmermann

HONG KONG/LEIPZIG, Germany: In an effort to promote medical and dental tourism in Asia, the Medical Tourism Association (MTA) has announced its first Global Healthcare and Medical Tourism Conference, which will be held in Seoul in South Korea. The event, which has support of the government, is expected to draw over 1,000 experts from 25 countries to the capital of South Korea, including healthcare and insurance providers, travel agents and referring physicians.

Tourism Conference, which will be held in Seoul in South Korea.

In an effort to promote medical tourism in Asia, the Medical Tourism Association (MTA) has announced its first Global Healthcare and Medical Tourism Conference, which will be held in Seoul in South Korea.

South Korea is the latest country in Asia to encourage medical tourism. Last year, the Chung government passed legislation to allow hospitals for the first time to advertise for foreign patients. The country is hoping to follow nations like Thailand, India, Singapore and the Philippines, which currently have the largest share of patients in the regional medical tourism market.

South Korea, which has seen some 50,000 foreigners visiting for treatment in 2009, aims to increase the number to 1 million patients by 2020.

“Korea is one of the leading countries in the world where the government has made medical tourism a priority, enacted legislation and made other efforts to facilitate fast and stable growth of medical tourism in the country,” said Renée-Marie Stephano, Founder and Chief Operating Officer of the MTA.

She said that medical tourism in Asia will continue to grow because of low-cost, yet high quality medical procedures. “The level of health care there is excellent and advances at a fast rate equal to that around the world in the most advanced countries.”

She told Dental Tribune Asia Pacific that her organisation wishes to expand and hold other regional conferences around the world in the years to come.

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Filipinos back-up improved implant education

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany: Dental implants in the Philippines are on the upswing, attendees at an implantology conference in the capital Manila have agreed. They also indicated their support of the plans of dental colleges and universities throughout the country to include implantology as part of their curriculum by 2011.

The conference, which was organised by the Philippine Academy of Implant Dentistry (PAID), drew almost 200 attendees to Manila. Owing to the demand, representatives of the organisation have announced that more seminars around the country will be arranged with an increased number of foreign speakers in order to advance the speciality further.

“The economic prospects are very good,” said Dr Carlos Buendia, President of PAID. “With the influx of dental implant companies offering affordable implant fixtures and dental laboratories catering to dental implant prosthesis, the overall cost for the dentist has gone down.”

In the last few years, more implant companies have entered the country, assisted by dental awareness programmes and dental tourism campaigns. The Philippines dental implant market, however, is still behind other markets in the region, like Singapore, Taiwan and Hong Kong.

Australian patients are waiting too long

Claudia Salwiczek
DTI

HONG KONG/LEIPZIG, Germany: According to a news report in the Australian newspaper *Sunday Mail*, patients in South Australia are waiting very long periods for dental treatment in the public health system. Of 26 adult community clinics, more than 50 per cent have waiting lists of longer than a year for basic treatment, the article states.

Amongst all clinics, the centre in Berri, a small town northeast of Adelaide, has the longest list, with two years’ waiting time for a dental check. Community clinics in Kadina, Naracoorte, Gawler, Salisbury Downs and Gilles Plains have 18-month waiting lists.

The President of the South Australia Branch of the Australian Dental Association (ADA) Dr Sharon Liberali told *Sunday Mail* that the waiting lists were “absolutely” too long. “People will wait between 12 and 18 months, but once they get in, they’ll get their routine care,” she said.

“But they have to go back on the waiting list for any further work and wait all over again.”

The ADA is opposing plans by the Rann government to address the problem with a new dental health-care scheme called Denticare. This US$3.37 billion scheme recommended by the National Health and Hospitals Reform Commission aims to provide universal dental health care to all Australians. The ADA has released a counter-proposal that aims for a targeted scheme funded by a tax on sugar and soft drinks.

Minister for Health John Hill has defended the government, saying that waiting lists have been cut by half in the last 10 years. He expects the average wait to be down to 15 months by June, regardless of the implementation of Denticare.
Dental Tribune Asia Pacific Edition

In the past few weeks, various media sources have published articles regarding high exposure to radiation from medical CT scans. Unfortunately, these have generated misconceptions about the dental CBCT, or 3-D CBCT, scans. The dental CBCT imaging method allows dentists to obtain vital 3-D information without exposing patients to high levels of radiation that come from medical CT scans. An in-office imaging method is more convenient: it saves the patient travel time to and from the hospital and time for follow-up examinations after treatment. Dentists and other medical professionals ascribe to the ALARA (as low as reasonably achievable) approach concerning radiation levels. This approach guides practitioners to expose patients to the least amount of radiation possible, while still gaining the most pertinent information for proper diagnosis. For example, for dentists placing implants, having this information beforehand is imperative to determining anatomical variations that can affect the procedure’s success or failure.

The differences between dental and hospital scans derive, in part, from the method of capturing the information. The average medical CT scan of the oral and maxillofacial area can reach levels of 1,200 to 5,300 micro-sieverts, the measurement of radiation absorbed by the body’s tissue. These significant levels are attributed to the method of exposing tissues to radiation. With the hospital scan, the anatomy is exposed in small fan-shaped or flat slices as the machine makes multiple revolutions around the patient’s head. In order to collect adequate information, there is overlapping of the radiation. In contrast, the dental scan captures all the anatomy in one single cone-shaped beam rotation, decreasing the patient’s exposure to radiation by up to 10 times. For example, radiation exposure, using the standard full field of view from an i-CAT CBCT machine (Imaging Sciences International) is 50 micro-sieverts. These machines are also available in different fields of view, thereby reducing radiation exposure even more, depending upon the needs of the patient.

For other comparisons of exposure, consider that a typical 2-D full-mouth series runs 150 micro-sieverts, while a 2-D digital panoramic image ranges between 4.7 and 14.9 micro-sieverts. The researchers who developed this technology have achieved the goal of allowing dentists to receive the same information gained from medical CT without the additional radiation exposure.

Dentists who do not own their own CBCT machines can take advantage of this imaging method, by referring patients to imaging centers in order to acquire this valuable information. The knowledge obtained from capturing 3-D scans can influence the effectiveness and efficiency of dental treatment. A dental CBCT scan offers the views and detail required to perform the latest procedures, while avoiding the unnecessary higher levels of radiation from hospital scans. As the technology continues to evolve, the possibilities for improved dental care can only increase. Increased software compatibility with surgical guides and orthodontic applications has made CBCT scans an imperative for some dental offices.

As an oral and maxillofacial radiologist and an educator, I firmly believe that with knowledge comes responsibility to provide patients with the best dental care in the safest way possible—a dental CBCT accomplishes this goal without the additional risks involved with hospital scans.

Dr Bruce Howerton, USA

Contact Info
Dr Bruce Howerton is a board-certified oral and maxillofacial radiologist and an educator, by referring patients to imaging centers in order to acquire this valuable information.

Many of our colleagues in Haiti have lost everything: family, work, resources and, even worse, hope. The dental profession cannot be oblivious to this reality.

The Latin American Dental Federation (FOLA) has launched an international campaign to assist dental colleagues in Haiti by providing resources to rebuild their lives and their professional practices. FOLA, FDI, Dental Tribune and dentists from all over Latin America are making great efforts to collect instruments, materials and equipment to restore oral health services in Haiti. We hope you also join us in this effort.

We are also planning a dental congress in the Dominican Republic to collect funds for the reconstruction of Haiti.

Dr Samuel Prophet, the President of the Association Dentaire Haïtienne, wrote in an e-mail from Port-au-Prince to Dental Tribune Latin America: “Knowing that FOLA, FDI and Dental Tribune will help dentists in Haiti is great news because it gives us hope!”

This is a call to cooperate with us to help those who are left behind in Haiti, have no medical care, are left without work or resources. Now is the time to show solidarity with our Haitian colleagues.

Dr Adolfo Rodríguez is President of the Latin American Dental Federation in Santo Domingo in the Dominican Republic. He can be contacted at amvcodeat.net.do.
The recent earthquake not only devastated Haiti’s meagre health resources, but also most dental practices. Before January 12th, the country had only 500 dentists for 9 million people. The extent of the aftermath has affected regular people and dental professionals alike.

President of the Latin American Dental Federation (FOLA), Dr Adolfo Rodríguez, launched a campaign for dental hand pieces.

In his e-mail, Dr Prophét said that “many of our colleagues have lost their practices and we are thinking about how to help them. It’s very good news to know that FOLA, FDI and Dental Tribune are trying to help Haitian dentists. If dentists know that they can have help!”

At a meeting in Panama, Dr Rodríguez received the support of the presidents of Central American dental associations, and made an emotional appeal to dental manufacturers to donate much-needed supplies. He said Colgate has already agreed to donate brushes and toothpaste.

Dr Rodríguez added that it was moving to witness dental professionals from countries with few resources, such as Honduras, Nicaragua or El Salvador, commit to collecting funds from their members, second-hand equipment and dental supplies to help their Haitian colleagues.

Some prominent Latin American dental professionals from Brazil, Uruguay and Costa Rica, amongst others, have already expressed their interest in participating in dental teams to attend to the most urgent needs of the Haitian population. Current conditions indicate that these teams will operate in mobile units at the Dominican-Haiti border, once the most pressing health needs are under control. The reason for this is that most of Port-au-Prince is in ruins. The Dominican Republic government has already promised the majority of its health resources to the border in an effort to treat Haitians, and avoid a migratory exodus.

This tragedy “is also an opportunity to build a public health service that includes dental care. We have asked the Pan American Health Organization, FDI, all Latin American dental associations, companies and other institutions for help in putting together teams of dental professionals to travel to Haiti and start working there, and leave in place basic dental treatment centres,” said Dr Rodríguez.

He said that this will be a long-term programme that will include rebuilding the dental school at the university and private practices. He stated further that it will take some time to start the programme and the treatment of children and pregnant women will be priorities.

The Latin American dental leader said he has also asked for funding from the government of the Dominican Republic. Companies and dentists interested in helping the Haiti campaign can contact Dr Rodríguez at arn@dentales.com
NEW YORK, NY, USA/LEIPZIG, Germany: Researchers at the University of Illinois in the US could have discovered the key to regrowing tooth enamel. In a comparative study on animals, they found that repeated simple amino acids, or Prolines (photo), are responsible for making teeth stronger and more resistant. Their findings could help in replacing lost parts of teeth in patients suffering from dental decay. Proline is a major component of the protein collagen, the connective tissue structure that binds and supports all other tissues. It can be also found in protein bubbles that help to form enamel.

In the study, the researchers compared the number of Proline repeats in amphibian and mammal models, such as mice, cows and frogs, and discovered that when the repeats are short, teeth lack the enamel prisms that are responsible for the strength of human enamel. In contrast, when the Proline repeats are long, they contract groups of molecules that help enamel crystals grow. According to the researchers, the findings could aid other important areas of scientific research in addition to dentistry, including the treatment of neurodegenerative diseases, such as Alzheimer’s Disease or Creutzfeldt-Jakob Disease.

LONDON, UK: Children’s toothpaste that contains low concentrations of fluoride fails to effectively combat tooth decay. For optimal prevention of cavities in children over age six, toothpastes should contain at least 1,000 parts per million of fluoride, according to a study carried out by the University of Manchester School of Dentistry.

Toothpaste containing fluoride concentrations of less than this is as ineffective as toothpaste with no fluoride at all.

The study, published in the latest issue of the Cochrane Library, a publication of the Cochrane Collaboration, examined results from 79 controlled clinical studies on 73,000 children and found that the benefits of fluoride are reduced for low fluoride toothpastes.

“ Toothpastes with lower fluoride levels, in the 440 to 550 range, give results that are no better than the results seen with toothpaste that does not contain fluoride,” said co-authors Prof. Helen Worthington and Dr Anne-Marie Glenny.

She added that brushing children’s teeth with fluoride toothpaste before the age of 12 months could lead to an increased risk of developing mild fluorosis. Children’s toothpastes currently range from 100 parts per million to 1,400 parts per million.

“If in any doubt, we would advise parents to speak to their family dentist,” Dr Glenny said.
New job survey gives smiles to hygienists

Daniel Zimmermann

NEW YORK, NY, USA/LEIPZIG, Germany: Dental hygienists rank amongst the best ten jobs in the US, a new survey has found. According to CareerCast.com, a job search site based in Carlsbad (US) and the Netherlands, the hiring outlook for hygienists is second only to software engineers in the top ten list, which includes accountants and computer systems analysts. Dental hygienists held about 174,100 jobs in 2008 according to figures from the US Bureau of Labour Statistics.

The report analysed 200 jobs in North America based on a set of criteria, including work environment, income, outlook, stress and physical demands. Dental technicians ranked 72 in the survey, while orthodontists only ranked 94.

"Dental team members like the dental hygienist and dental assistant can be a great help to improve the delivery of dental care," Dr Jerry Gordon, a dentist from Bensalam in Pennsylvania, told Dental Tribune Asia Pacific. "With the population of the US ageing, more people are seeking dental care than ever before. The field will continue to have a positive outlook for the foreseeable future."

He added that pending health-care legislation in the US will not have a negative impact on the field.

UK tax campaign targets dentists

Claudia Salwiczek

LONDON, UK/LEIPZIG, Germany: Dentists and other medical professionals in the UK are being encouraged by the government to declare understated income. The campaign launched by the HM Revenue and Customs department earlier this year follows efforts to uncover taxable income hidden by UK taxpayers in offshore bank accounts. In the case of medical professionals, HMRC is looking for taxable income regardless of where it has been hidden.

A spokesperson for HMRC said the tax authorities had been gaining information about doctors, and others, from employers such as National Health Service trusts, private hospitals and medical insurance firms. He said that those dentists or physicians who contact HMRC by 31 March to make a voluntary disclosure will be able to put their tax affairs in order and only be charged a 10 per cent penalty. He confirmed that his department will turn its attention to other professionals—solicitors, lawyers and accountants—later this year.

In its most recent offshore disclosure campaign, which closed earlier this month, the department flushed out 10,000 people who said they wished to pay tax on income hidden abroad.

“Our aim is to make it as easy as possible for people to come forward, make a full disclosure and benefit from the certainty of a reduced 10 per cent penalty that HMRC is making available to those who qualify for this opportunity,” said Mike Wells, HMRC’s Director of Risk and Intelligence.

“This is the first step in enabling those with undisclosed income or gains to avoid a full tax investigation together with much higher penalties.”

Anyone who does not come forward, and is found to have been avoiding tax, could be fined up to 100 per cent of his or her unpaid tax, with a minimum penalty of 50 per cent.
Global health care fraud costs put at US$260 billion
European network finds more than five per cent of spending is lost to corruption

Reuters

LONDON, UK: Some US$260 billion are lost globally every year to fraud and error in health care—enough to quadruple the World Health Organization’s (WHO) and UNICEF’s budgets and control malaria in Africa.

A study by the European Health-care Fraud and Corruption Network (EHFCN) and the Centre for Counter Fraud Studies (CCFS) at Britain’s University of Portsmouth found that 5.59 per cent of annual global health spending is lost to mistakes and corruption.

“Every euro lost to fraud or corruption means that someone, somewhere is not getting the treatment that he or she needs,” said Paul Vincke, EHFCN’s president and one of the authors of the report. “They are ill for longer, and in some cases they simply die unnecessarily. Make no mistake—health-care fraud is a killer.”

The report reviewed 60 exercises in 33 organisations in six countries to measure health care fraud and error losses. The combined expenditure assessed was more than US$490 billion and findings were extrapolated from Britain, the US, New Zealand, France, Belgium and the Netherlands in order to gain a global sense of the situation. Data from developing nations would not have changed the global figure, the authors said, but were difficult to obtain because the study included only exercises based on statistically valid samples with measurable levels of accuracy.

The report found evidence of many different types of fraud, including pharmacists dividing prescriptions into smaller packages to claim extra fees, drug companies forming price cartels, doctors over-claiming travel costs and abusing government grants, and patients submitting fraudulent insurance claims. Two doctors were found to have claimed a government improvement grant for their clinic, which they spent on establishing a car import-export business.

Jim Gee, chair of CCFS’s advisory board, said the report proved it was possible to measure the nature and extent of losses due to fraud and error, which is vital to addressing the issue.

“It may be embarrassing for some organisations to find out just how much they are losing,” he said in the report. “Because of the direct, negative impact on human life of losses to fraud, it is never easy to admit they take place.”

But Gee said the first step to combating fraud is for governments and institutions to acknowledge that fraud occurs in their organisations. “If an organisation is not aware of the extent or nature of its problem, then how can it apply the right solution?”

The EHFCN was established to assist the region’s health-care organisations in determining and reducing losses due to fraud and error so that more money can be better spent on patient care.

Similar networks exist in the US and Canada.

(Edited by Daniel Zimmermann, DTI)
Nobel Biocare forges new partnerships with material specialists VITA and Ivoclar Vivadent

Collaborations expected to expand the company’s NobelProcera and CAD/CAM offerings

Daniel Zimmermann

LEIPZIG, Germany: In a sweeping campaign, Nobel Biocare has established new partnership agreements with VITA and Ivoclar Vivadent, two European-based companies that specialise in dental restorative and prosthetic materials. The agreements, which form part of Nobel Biocare’s newly established Preferred Partner Program, are intended to afford the company access to more state-of-the-art dental materials, the company said in a press note in February.

With the goal of further strengthening NobelProcera’s leading market position in CAD/CAM-based dentistry, Nobel Biocare initiated the Preferred Partner Program in January 2010 with selected providers of dental materials. According to CEO Domenico Scala, the goal of this programme is to make it possible for dentists to take advantage of the most comprehensive portfolio of end-to-end restorative and prosthetic solutions available in the market. Nobel Biocare’s broadened product range will include new products, better veneering solutions, new cost-effective treatment options and complete solutions for restorative and prosthetic materials. The agreement with VITA, which currently has one of the broadest portfolios of veneering solutions on the market, complements Nobel Biocare’s recent launch of a new scanner, software, and new prosthetic products and materials. The agreement with Ivoclar Vivadent will offer the company access to additional high-performance ceramics, including IPS e.max for full-contour crowns and acrylic prosthetic materials for temporary crowns and bridge ceramics. In January, Ivoclar Vivadent was the first company to partner with Nobel Biocare within the framework of the Preferred Partner Program.

“As a leading materials company, we see a partnership with Nobel Biocare as an ideal combination of premium skills—milling systems and materials,” said Robert Ganley, CEO of Ivoclar Vivadent. “NobelProcera is a leader and pioneer in CAD/CAM dentistry, and a unique acrylic provisional material system that is due to be launched in 2010.”

“As a market leader in material systems, we have and will continue to partner with the market-leading digital-based CAD/CAM systems,” he added.

Triodent to extend their New Zealand headquarters

New Zealand Prime Minister John Key (right) inaugurates Triodent’s new laser sintering machine with Dr Simon McDonald. (DTI/Photo courtesy of Triodent, NZ)

Triodent, which specialises in the production of matrix systems and dental instruments, has been named one of the top 10 fastest growing companies in New Zealand. It ranks 154 amongst the fastest growing companies in the Asia-Pacific region, according to a 2008 report by Deloitte Technology.

Triodent founder Dr Simon McDonald said 2009 had been a memorable year for Triodent, owing to the way the company consolidated its position and laid the foundation for a strong future, as well as the numerous awards won.

“With the advantage of our business agility we have been able to respond quickly to the conditions, and despite the increasing complexity of our operations, we are as focused on our goals now as we have ever been,” Dr McDonald explained.

He assured guests that Triodent would not rest on its laurels, and more innovative products would follow in the path of V5.

The product was named Top Matrix System by Dental Advisor in 2009.

Qualitas Medical Group enters Singapore market

Qualitas Medical Group enters Singapore market

KUALA LUMPUR, Malaysia: Qualitas Medical Group Ltd’s subsidiary Qualitas Healthcare International Sdn Bhd has acquired 75 per cent stake in Dr Marcus Cooney & Associates Pte Ltd, which operates a Singapore dental clinic under the trade name SmileFocus. Qualitas’ founder, Chairman and Managing Director Dr Noorul Jameen said the acquisition was in-line with the group’s strategy to expand its market reach into the region and other health-care-related businesses.

“Our acquisition of SmileFocus follows our first foray into the dentistry business in India earlier this year,” he said in a statement in Kuala Lumpur last month.

Located at the Camden Medical Centre, SmileFocus provides a wide range of specialist dentistry services under one roof, including cosmetic dentistry, family dentistry, as well as implant and restorative dentistry services.

Dr Jameen said the expansion of the Qualitas brand into Singapore would complement its esteemed status in the country. The acquisition will be paid in two tranches, either fully in cash or partly in cash and partly in Qualitas shares, with the final valuation equal to 7.5 times SmileFocus’ profit after tax for the financial year 2010. The cash portion will be paid partly from the group’s proceeds from its initial public offering (IPO) in 2008 and partly through internal funding.

The Qualitas Group has one of the largest networks of clinics in Malaysia, with clinics throughout the country.
AMD updates its laser for soft-tissue surgery

Daniel Zimmermann
DTI

NEW YORK, NY, USA/LEIPZIG, Germany: The US-based manufacturer AMD LASERS recently launched the Picasso Lite in dental markets worldwide. As a first in the industry, this new soft-tissue dental laser will be able to use convenient disposable tips or a low-cost strippable adapter. AMD offers a two-year warranty on all its products.

Surgical lasers have no or little experience with soft-tissue surgery, including gingivectomy, frenectomies, troughing, exposing implants/teeth/orthodontic brackets, and treating aphthous ulcers and herpetic lesions. According to the company, it cuts and coagulates tissue with reduced trauma, bleeding and necrosis of tissue.

The US-based manufacturer of consumables and oral health-care products, Colgate-Palmolive has introduced its new toothpaste for the treatment of tooth hypersensitivity in China. Sensitive Pro-Relief, which features Pro-Argin technology, is claimed to block stimuli of pain receptors within teeth by sealing open dentinal tubules with a calcium-rich layer.

According to company officials, the toothpaste has been available at high-street chemists and major supermarkets since January. Until now, the brand had only been available to dental practitioners in Hong Kong.

Colgate leaders who teamed up with representatives from the Chinese Stomatological Association (CSA) at a joint press conference in Beijing said that the new toothpaste will revolutionise the way millions of consumers treat and prevent pain due to hypersensitivity. They said that it can be used before or after dental procedures, such as prophylaxis and scaling. When applied prior to a professional dental cleaning, Sensitive Pro-Relief will also provide a significant reduction in dentine hypersensitivity, measured immediately after the dental cleaning, as compared to a control prophylaxis paste, they added.

Colgate currently rivals with GlaxoSmithKline, a UK-based manufacturer of consumables and oral health-care products, who also claims to offer consumers treatment to dentine hypersensitivity with their Sensodyne toothpaste brand.

As in other countries in the region, dentine hypersensitivity has increasing become an oral health issue in China, according to CSA officials. The results of a recent survey by the CSA Prevention Committee indicate that nearly 50 per cent of Chinese adults aged between 20 and 70 suffer from the condition.

The condition affects up to 57 per cent of people worldwide.
Discover **NEW** Colgate Sensitive **Pro-Relief™** with **PRO-ARGIN™ TECHNOLOGY**

New Colgate® Sensitive Pro-Relief™ desensitizing paste with Pro-Argin™ is **clinically proven to provide instant and lasting sensitivity relief after just one application.**

Colgate® Sensitive Pro-Relief™ with Pro-Argin™ Technology is a breakthrough treatment for patients with dentin hypersensitivity. It can be used before or after dental procedures such as prophylaxis and scaling.

- Significantly reduces sensitivity for an easy, comfortable procedure
- Fast and easy application using a rotary cup, similar to a prophesy paste
- Clinically proven to deliver instant relief that lasts four weeks after a single application

*Graphical representation based on SEM photography; for illustration only*

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[www.colgateprofessional.com](http://www.colgateprofessional.com)
Dentin Hypersensitivity is a Chronic Problem for Patients

Hypersensitivity can affect normal daily activities such as eating, drinking, breathing in cold weather and tooth brushing which may lead to poor oral hygiene, eventually leading to periodontal problems and even tooth loss.

Dentin hypersensitivity is characterized by short, sharp pain arising from exposed dentin in response to stimuli, such as cold, hot, sour or sweet food and drinks, acid (cold weather) or pressure, which cannot be ascribed to any other dental defect or disease. The major portion of the hypersensitivity sufferers are in the age group of 20 - 49 years and females are more likely to be affected than males. There is also variation in the response to such stimuli from one person to another.

The primary causes of hypersensitivity are gingival recession and loss of enamel. Gingival recession can occur as a result of incorrect tooth brushing, aging, periodontal diseases and surgical periodontal treatment which leads the gums to move away from their normal position. When the root of the tooth is exposed through gingival recession, the protective layer of cementum on the dentin can easily be removed and the dentin layer becomes exposed. Also, enamel loss as a result of aggressive tooth brushing, over consumption of acidic food and tooth grinding caused by stress can expose dentin. The dentin layer contains thousands of small tubules starting from the enamel and ending at the nerve of the tooth. When dentin is exposed, stimuli cause changes in fluid flow through the tubules and this causes pain.

The choices to relieve dentin hypersensitivity by dentists are limited so many dentists recommend home use toothpastes with potassium salts, to desensitize the nerves which typically need 4-8 weeks to be significantly effective and do not treat the cause of hypersensitivity.

"The new breakthrough Pro-Argin™ technology is clinically proven to provide instant and lasting hypersensitivity relief. Pro-Argin™ technology consists of 8% arginine (an amino acid naturally found in saliva) and an insoluble calcium compound. It plugs and seals the dentin tubules and thus provides hypersensitivity relief. The innovative Pro-Argin™ technology is introduced as two products: Colgate® Sensitive Pro-Relief™ Desensitizing Paste for dental office use to provide instant sensitivity relief that lasts for four weeks after a single application, and it can be used before or after dental procedures, such as professional cleaning; and the new Colgate® Sensitive Pro-Relief™ toothpaste containing 1450 ppm fluoride developed for routine daily use. The new Pro-Argin™ technology helps patients with hypersensitivity to get instant and lasting sensitivity relief for a problem that they’ve had to live with for a long time.

Reference: 1. OralCare habits Study by TNS Feb-Aug 2009
Dentin Hypersensitivity is a Chronic Problem for Patients

Hypersensitivity can affect normal daily activities such as eating, drinking, breathing in cold weather and tooth brushing which may lead to poor oral hygiene, eventually leading to periodontal problems and even tooth loss.

Dentin hypersensitivity is characterized by short, sharp pain arising from exposed dentin in response to stimuli, such as cold, hot, sour or sweet food and drinks, air (cold weather) or pressure, which cannot be ascribed to any other dental defect or disease. The major portion of the hypersensitivity sufferers are in the age group of 20-49 years and females are more likely to be affected than males. There is also variation in the response to such stimuli from one person to another.

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6 Docimo R et al J Clin Dent 2009; 20 (Spec Iss): 137-143

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The earthquake in Haiti has left little of what had been an already poor health-care and dental health-care system. Even prior to the earthquake, medical and dental assistance was often only provided through the aid of international volunteers. Dr Gary Godley and his son Lance are two practicing dentists from Naples in Florida who decided to leave their country and bring much-needed dental care to people in Haiti. DTI Group Editor Daniel Zimmermann had the opportunity to speak with them about their experiences on a dental mission in 2009 and the state of dentistry in Haiti prior to the earthquake.

Drs Godley, you recently participated in a dental mission to Haiti. How did you become involved with the programme and for how long did you stay in the country?

Dr Gary Godley: In May 2009, Lance and I travelled with another dentist Dr Garth McCaffrey and pilot Bill Earls to Haiti. We were sponsored by Hope For Haiti, an organisation founded more than 20 years ago by JoAnne Kuehner. Since then, Hope For Haiti has provided aid to the children and adult population, concentrating on education and medical needs. Our trip was an attempt to assess the feasibility to begin providing dental care to the people of Les Cayes, located on the southern coast of Haiti. We were in Haiti for four days and provided basic care to both adults and children. The facilities at which we treated the patients was a medical clinic renovated by Hope For Haiti and staffed by a medical doctor who was trained in Cuba. The patients were most appreciative but many were very ill and required treatment beyond the scope of our ability and resources.

Dr Lance Godley: Unfortunatley, we were hampered by a lack of supplies and loss of dental instruments prior to our arrival. Thanks to a Haitian dentist who loaned us some rudimentary instruments, we were able to provide surgical treatment to the most needy of patients.

What were the main objectives of the programme and were they fulfilled?

Dr Gary Godley: The primary purpose of this mission was to assess the situation and need for dental care. Certainly, the need was ever present and the facility will be adequate once more dental equipment arrives. The people line up for treatment and are very appreciative of the efforts of the volunteers.

What was your first thought when you saw photographs of the recent destruction in Haiti?

Dr Gary Godley: I was devastated and immediately wanted to return to Haiti. My main concerns were how people who have so little could survive the loss of their loved ones, the increase in unsanitary conditions, the rampant spread of disease and the loss of so many volunteers who had provided so much and prior to the quake. Luckily, the world has responded in a manner that is nothing short of a miracle.

My thoughts about Haiti prior to the devastating earthquake were about the lack of food, water, sanitation, adequate housing, medical personnel and high rate of infant mortality (20 per cent of children die before five years of age). Many children eat mud-cookies to satisfy their hunger and are very malnourished. Abject poverty in Haiti is poverty unknown to most Americans and other people of the world. The population is unsustainable without the aid of other countries and their volunteers. The mountains are deme- nuded and the rivers are troughs of mud. Having said this, I found the country to have a natural beauty and a proud and spirited population.

Dr Lance Godley: My thoughts after the tragic earthquake were about the survival and basic necessities of the people of Haiti. This population had so little to begin with in the form of basic necessities, such as clean water, sewage disposal and basic government, that this earthquake probably has destroyed
what little they had in the form of these things. Hopefully the world will help Haiti not just rebuild what they had, but help them to achieve something much better. The people that we met during our time in Haiti were remarkable. And I’m sure with the right tools and systems established they could achieve much.

Who provided dental treatment in Haiti before the earthquake struck? Which dental conditions are treated by the dentists there?

Dr Gary Godley: Most dentistry is provided by volunteers from around the world. There are many organisations that provide dentists, hygienists and assistants and other personnel. Although basic restorative dentistry is provided, treatment consists mainly of oral surgery procedures, as well as the treatment of pain and infections.

Are there any dental schools? Where do dentists receive their education?

Dr Gary Godley: Of course, many people never receive dental treatment. However, there are many volunteer dentists who return many times during their career to help provide an invaluable service to those they are able to reach. Travel within Haiti can be very difficult for both the dental personnel and patients, which limits care for a vast number of people.

Dental Tribune International, in collaboration with the Latin America Dental Federation and the World Dental Federation, is currently organising a congress to help raise money for rebuilding practices in Haiti. Have you heard of any other initiatives?

Dr Gary Godley: Certainly, there is still much aid being sent to Haiti. The American Dental Association, for example, is collaborating with a number of dental and non-dental non-governmental organisations such as International Medical Relief and Flying Doctors of America that work in Haiti to respond to the disaster with both short-term assistance and long-term recovery plans to help rebuild dental infrastructure there. If you want to donate just go to their website www.adafoundation.org. There, you will also find updates on the disaster-response efforts.

Are you planning to go back to the country soon?

Dr Gary Godley: We had planned a return trip in December 2009, which was cancelled for unknown reasons. Hopefully, the mission will be rescheduled once the current problems are under control. I also volunteer with the East Meets West Foundation (Oakland, California) and make an annual mission trip to Vietnam. This has been my primary objective for several years, but now that I am aware of the great need closer to home, I will certainly avail myself as needed.

Thank you very much for the interview.

(All photos courtesy of Godley Family Dentistry, USA)
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When aesthetics matter

Dr Stefen Koubi, France, and Hilal Kuday, Turkey, about the use of new materials in dental aesthetics

One of the major issues leading to unsatisfactory results in fabricating several ceramic restorations in the anterior region is shade integration. Commonly, patients have a combination of discoloured prepared teeth, metal constructions and teeth showing no discolouration. Achieving a harmonious overall appearance in these situations is a challenge. Currently, the use of glass-ceramic materials, such as IPS e.max Press lithium disilicate (Ivoclar Vivadent), is the textbook approach in terms of aesthetic integration. These materials offer the possibility of creating unique translucent restorations that mimic dental enamel. A wide array of possibilities for cementation also facilitates the creation of lifelike results.

In the past, severe discolouration was often a reason that glass ceramics could not be used to fabricate restorations. The continual improvement of the materials, however, has led to the development of comprehensive systems such as IPS e.max. This system offers the advantages of press ceramics, including accuracy of fit and aesthetics, while eliminating previous drawbacks, such as restricted use on dark preparations. That we have glass ceramics in various levels of opacity and translucency at our disposal opens up a whole range of new possibilities. We can now cover the entire spectrum of single-tooth and small bridge restorations with glass ceramics, regardless of the underlying tooth structure. Discoloured teeth or metal structures are also no longer reasons for avoiding lithium disilicate glass ceramics.

The use of frameworks and restorations in different levels of translucency is illustrated here by means of a multidisciplinary case study. The objective in this case was to recreate the aesthetics of the patient’s anterior teeth on a natural tooth and a metal core build-up. The patient expressed the wish to improve the appearance of his anterior teeth. Clear communication between the dental practice and laboratory was essential to ensuring that both the clinician and laboratory had the same information regarding the preparations. After the initial treatment, the condition of the periodontal tissue had improved enough to allow the restorative procedure to be conducted with adhesive cementation. An analysis of the situation presented by the patient from an aesthetic point of view revealed that older ceramic restorations were layered with one layering composite root canal posts created an inharmonious appearance.

The initial examination revealed that the periodontal tissue was inflamed and in generally poor condition (Figs. 1 & 2). The initial situation (Fig. 1). The optical properties were harmonised by layering IPS e.max Ceram onto the pressed framework and thus create the desired chameleon effect. A view of the pressed opaque translucent framework illustrates the versatility of the IPS e.max system (Figs. 7 & 8). The optical properties were harmonised by layering IPS e.max Ceram onto the pressed frameworks (Figs. 10 & 11).

The IPS e.max Press frameworks were layered with one layering ceramic (IPS e.max Ceram), regardless of their translucency level, which yielded a balanced appearance. The optical properties were harmonised by layering IPS e.max Ceram onto the pressed frameworks (Figs. 10 & 11).

TheIPS e.max Press frameworks were layered with one layering ceramic (IPS e.max Ceram), regardless of their translucency level, which yielded a balanced appearance. The design of a macro- and micro-pattern in order to achieve natural-looking light effects (Fig. 12). After try-in and adjustment, the restorations were cemented with Variolink (transparent, Ivoclar Vivadent), while using a rubber dam to ensure that every restoration was isolated (Fig. 9). By using a versatile ceramic and cementation system and by imitating the light effects, lifelike restorations were fabricated in spite of the unfavourable initial situation (Figs. 13–15).
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The endo-implant algorithm

A clinical case demonstrates the surprising importance of endodontists in dental implant treatment planning

Fig. 1: Pre-op radiograph prior to extraction. --- Fig. 2: Raising 3 years after decay had been removed. --- Fig. 3: Grafted socket following extraction. --- Fig. 4: Post-op tomography looking at grafting material after four months.

Dr. Jose M. Hoyo

There’s a new vision in dentistry that is gradually being recognised and is referred to as the endo-implant algorithm. This new approach considers the role of the endodontist as critical in considering whether a tooth can be saved or whether extraction and replacement with a dental implant is the correct treatment protocol. An endodontist is in the unique position to evaluate critical factors leading to endodontic failures in order to determine whether another endodontic procedure will lead to a predictable and successful outcome. Should the outcome not be favourable, then extraction and replacement with a dental implant would be the protocol to follow.

In considering the ideal treatment plan, it is imperative to provide the patient with all treatment options, as well as the financial cost and procedures associated with each treatment option. The patient is thus given the opportunity to make an educated decision as to the best treatment protocol for him or her.

The information presented to the patient should include the endodontist’s opinion regarding which treatment option is more practical and predictable.

A patient with a non-contributory medical history was referred to my office for evaluation of the maxillary left first molar. The patient was asymptomatic and the tooth had been endodontically treated by a general dentist approximately seven months prior to the consultation and had never been restored. Clinically, it presented extensive probing, probing depths of 5 mm all around, exposure of the obturation material to the oral cavity, and no temporary restoration. Radiographically, no peri-apical lesions were detected, and the bone levels around the tooth were adequate (Fig. 1).

In order to determine the integrity of the tooth structure, some excavation was performed using 4.5 x magnification and supplementary illumination, provided by a fibre-optic headlight, with a dental rubber dam for isolation. After the removal of some decay, a bitewing X-ray was taken (Fig. 2) and the following was determined:

a) the floor of the pulp chamber was too shallow;

b) it was too close to perforation and
c) the peri-radicular dentine was insufficiently strong to support a permanent restoration.

These critical factors, in my opinion, rendered the tooth non-restorable. A cornettement and cavity were placed in the access cavity and a follow-up call with the referring dentist was conducted in order to update him on the condition of his patient and to determine what recommendations should be given regarding the tooth. It was recommended to the patient that the tooth be extracted and the socket preserved through a minor grafting procedure. This would allow for an ideal amount of bone to receive a dental implant approximately four to six months later. It was also recommended that he receive some orthodox endodontic treatment prior to the placement of the implant so that all the diastemata would be closed and the dentition properly aligned for this procedure.

The patient clearly understood the concept and the logistics of the orthodontic treatment recommended but expressed no interest in this approach.

The bigger picture

It is very important in evaluating treatment using implants to consider the whole dentition and not just the space or tooth in question. It should be borne in mind that implants, unlike teeth, do not move, so if there are any misalignments in the dentition, orthodontic treatment prior to implant therapy is imperative should the patient proceed with the dental implant at a later stage. If the treatment plan is not in this sequence, the dental implant would become a challenging obstacle during the orthodontic treatment.

The patient was prescribed Amoxicillin 500 mg (one every six hours, beginning two days before the next appointment) and Chlorhexidine rinses (three times a day, also beginning two days before the next appointment). The use of tartar control toothpaste was also recommended in order to avoid staining of teeth. On the day of surgery, the patient’s blood pressure was 119/75 with a heart rate of 76.

Under local anaesthetic (Lidocaine 2% HCl with epinephrine 1/50,000 x 2 ml) and using a dental rubber dam, magnification loupes and supplementary illumination, the tooth was sectioned into three pieces. The rubber dam was removed, and using FEL-Evator elevators (Salvin) all three roots were extracted without any complications. Spoons were used to curette the socket in order to clean any granulation tissue and engage the cancellous bone. This crucial step results in some bleeding and thus promotes angiogenesis. The crest of the interradicular bone was engaged with the socket cupped part of a XIVE ostetome (DENTSPLY Friadent), and a sinus lift was performed using the Summer’s technique.

There were no signs of a sinus perforation based on the Valsalva test. The sockets and sinus-lift area were then grafted with a mixture of DBX and MCP using a marshmallow technique. This grafting mixture helps to fill the site and provides new bone in terms of mineral and collagen from the DBX, and it provides a better scaffold for the MCP. A layer of Cavit was placed in the access cavity.

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suture removal, the patient was seen again for the removal of the membrane. This was done by gently picking at the membrane with cotton pliers and exerting pull on it—there is often no need for anesthesia. The benefit of using this allograft cocktail is that the waiting period for re-entry was approximately four to six months versus six to nine had a xenograft been used. The quantity and the quality of the bone appeared to be much better with the use of this allograft cocktail.

At the time of re-entry, the patient’s blood pressure was 113/69 with a heart rate of 64 (Figs. 4 & 5). Under local anaesthetic (Lidocaine 2 per cent HCl with epinephrine 1/50,000 x 2 cpl), a tissue punch access was done using a 3.8 tissue punch XiVE drill (DENTSPLY Friadent).

Under local anaesthetic (Lidocaine 2 per cent HCl with epinephrine 1/50,000 x 2 cpl), a tissue punch access was done using a 3.8 tissue punch XiVE drill (DENTSPLY Friadent). The pilot drill from the ANKYLOS implant system (DENTSPLY Friadent) was then used to drill 6 mm, just short of the sinus floor (Fig. 6). A series of XiVE osteotomes, from size 2.0 up to 3.4, were used to perform a sinus lift using the Summer’s technique. The osteotomy was prepared to a depth of 11 mm (Fig. 7).

A Valsalva test was performed to ensure that the sinus had not been perforated. An ANKYLOS implant A11 (3.5 mm x 11 mm) was placed and primary stability was obtained. The density of the bone perceived as D-3 during the drilling stage, likely changed to D-2 with the use of the osteotomes. The implant-transfer mount was removed, as was the cover screw that came pre-mounted inside the implant, and a 1.5 mm sulcus former (healing abutment) was placed into the implant (Figs. 8 & 9).

This case clearly demonstrates one of the reasons that endodontists are becoming increasingly involved in implant dentistry. They are able to provide a comprehensive evaluation of the tooth in question, and they are able to present the patient with the best options based on clinical assessment.
There’s no dentistry like no dentistry

Shirley Gutkowski
USA

The title sounds arrogant coming from a dental hygienist. What if it came from one of the premier dental schools in the United States or from two of the most noted caries researchers. University of Pacific’s Dr Doug Young or Dr Kim Kutsch? That’s the message from the World Congress of Minimally Invasive Dentistry (WCMID), and it doesn’t mean there’s no reason for dentists to be around. It means there’s just nothing like an intact tooth, and everything we do to repair it comes in at a distant second place.

For clinicians to understand the true meaning of the phrase, they have to really own a few things—such as germs are small, so small that a margin is not a margin, it’s a canyon. Finding out why enamel breakdown is occurring must come first; the time of watching and waiting before taking action is over. Remineralisation therapies have made it easier to digest the idea that any prosthesis is inferior to the natural tooth.

Novamin, Recaldent and xylitol are adjuncts to fluoride and allow clinicians to follow the science of fluoride workings. For instance, fluoride works best on the broad or smooth surfaces of the teeth, although a hefty majority of decay starts in the pits and fissures, and clinicians continually use fluoride as the only topical to lessen decay incidence.

No longer. At the WCMID meeting last summer, a new paradigm was offered. Dental decay is not a bacterial disease, it is a pH disease. Bacteria will not survive in an alkaline environment, so it’s no wonder they’re only found in mouths with low pH—the chicken/egg dilemma. The chemical reaction that occurs in a low pH can be altered by forcing the pH upward. Recalciﬁd does this by releasing amorphous calcium and phosphates during an acid challenge.

Xylitol can increase pH when used as a sweetening agent in gum and candies, over and above the pH increase of chewing parafﬁn, as shown in a group session of a hands-on workshop. This does not include the damaging effects of xylitol on bioﬁlm construction, cell walls and strep metabolism.

The science of Novamin also incurs more and more fluoride? Call a cavity a hole, call a ﬁlling a prosthesis and call on all of your education to help those who can be taught and take the burden off those who cannot.

Editorial note: A list of references is available from the publisher.
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