Singapore eases registration of devices

SINGAPORE: Manufacturers of dental impression materials, surgical instruments or abutments breathed a sigh of relief when the Singapore Health Science Authority (HAS) recently announced that it would lower its regulatory requirements for low risk medical devices, Dental Tribune Asia Pacific has learned. Registration fees for Class B products like dental abutments and scaling systems will also be lowered soon, the government agency responsible for medical product regulation said.

Beginning in May, manufacturers of Class A devices will only be required to register their devices with HAS for the purposes of market monitoring. The registration fees for approximately 5,600 Class B products will be reduced from S$8,500 to S$5,200 from September.

According to the HAS, about 70 per cent of all medical devices registered in Singapore currently fall under Classes A and B.

The organisation said that it will look into revising fees for Special Authorisation Route registrations and regulations for higher risk Class C and D devices.

"These changes reflect a flexible and responsive regulator that is willing to listen to the teething issues faced by the industry with the introduction of medical device regulation in Singapore, without compromising patients’ well-being," Dr Amy Khor Lean Suan, Minister of State at the Ministry of Health, said. "I am confident that these enhancements, for lower risk devices in particular, will address the concerns of the industry and that HAS will continue to enhance the framework to facilitate access to safe medical devices." Since 2008, medical devices, including dental equipment, have had to be registered with the HAS. Prior to that, regulation was voluntary and followed international regulatory standards, like those of the US Food and Drug Administration. The guidelines have continuously sparked unrest among importers and doctors over the past few years who blamed the regulations for preventing medical and dental professionals from using state-of-the-art equipment and for increasing health-care costs.

First vitamin B12 toothpaste

A German natural cosmetics manufacturer has launched a toothpaste that could benefit people unable to absorb vitamin B12 from food. Developed in partnership with the German Vegetarian Union, the toothpaste allows the absorption of the essential nutrient through the oral mucosa.
Australian dentist sets graduation record

LISMORE, Australia: At the age of 97, most people probably consider learning to be the very least of their priorities. Not Dr Allan Stewart from Australia. The former dentist from Fort Stephens just received his fourth degree – Master of Clinical Science (Complementary Medicine) – surpassing his own world record of being the World’s Oldest Graduate set in 2006.

A father of six children and with 12 grandchildren, Stewart gained his first academic title with a Bachelor of Dentistry from the University of Sydney during the 1950s. After completing postgraduate studies in dentistry in the US, he practised dentistry in Australia and the UK for more than 40 years.

Things took an unusual turn in the late 1980s, when Stewart decided to study law at the University of New England in Armidale at an age when most of his dental colleagues were already enjoying their retirement. Not having completed the programme, he took it up again in 2001 and completed it in only four and a half years, making him then the oldest living person to have ever graduated from university.

According to Stewart, his latest academic endeavour, which ended successfully last Friday with a graduation ceremony in East Lismore near Brisbane, was sparked when one of his daughters began studying arts at Southern Cross University at the age of 70. He enrolled at the same institute in 2009 in spite of his original intention never to go to university again.

“I would strongly encourage any older person to go back to studying.” Stewart told reporters.

University supervisors said that despite his advanced age, he used modern tools of communication, like Skype, during his studies and was actively involved in online discussions and forums.

Besides Stewart, so far only a handful of people worldwide have obtained academic qualifications so very late in life. In 2010, for example, Hazel Soares from the US earned her first college degree from Mills College in Oakland, California, at the age of 94. Three years before, 95-year-old fellow countysman Nola Ochs also graduated with a general studies degree with emphasis in history from Fort Hays State University in Hays, Kansas.

Stewart, who is said to like boating, fishing and playing bridge in his spare time, announced that he would finally hang up his academic robes after 45 years. He is set to surpass his own world record of 78 years and therefore stays первой in his priority list.

Dr Allan Stewart is the oldest living person to have ever graduated. (DTI/Photo courtesy of Southern Cross University, Australia)
Market report forecasts extensive growth of Korean implants in AP

Daniel Zimmerman
DIT

TORONTO, Canada: Dental implants produced in the Republic of Korea have gained significant market shares in recent years. Now a report by the Millenium Research Group (MRG) in Canada has predicted that manufacturers from that country could dominate dental implant markets in the Asia Pacific region as early as 2016 owing to their price advantage.

Implants from Korea are also catching up in terms of clinical data, the report states, a fact that will make them increasingly adaptable for implant specialists in the region.

The total regional market for dental implants is expected to exceed US$800 million by 2016 with the key driving market being Australia, which was historically underdeveloped and is now expected to grow by 10 per cent annually, according to MRG.

Japan, the largest national market in the region, will experience slower revenues despite an overall rise in implant procedures.

Alongside Germany and Israel, South Korea currently has one of the highest rates of dental implants per capita worldwide. This market saturation has recently forced many manufacturers to pursue sales markets overseas. While exports to Western countries have remained relatively slow, Korean manufacturers like OSSTEM already rival established implant providers, such as Straumann or Zimmer Dental, in Asian countries like Pakistan, Malaysia or Hong Kong.

Other significant market players in the region include DIO Implants, a company partly owned by DENTSPLY, as well as MegaGen and Shinhuang.

Research suggest old folks should clean teeth

Dental Tribune Asia Pacific

TAIPEI, Taiwan: Data analysis of patients with public health insurance in Taiwan has backed up the claim that oral health and heart disease might be associated later in life. People over the age of 50 who had received at least one tooth scaling showed slightly lower incidence of myocardial infarction, other cardiovascular events and strokes than those who had received none, according to a paper recently published in the American Journal of Medicine.

In the study, which took seven years to complete, the records of more than 22,000 patients selected from the country’s National Health Insurance Research Database were analysed.

According to the researchers at the Taipei Veterans General Hospital and National Yang-Ming University’s Cardiovascular Research Center, the results made public this month revealed less heart disease in those people who had had their teeth cleaned.

The incidence of stroke was 1.1 per cent higher among those whose teeth had not been cleaned, and acute myocardial infarction occurred in only 0.6 per cent more people who had not undergone tooth scaling.

Lead researcher Dr Zu-Yin Chen told Reuters Health in London that the results, although convincing, did not prove that better oral hygiene can lower the risk of heart disease but that dental problems like gum disease most likely increase the risk of these conditions.

Chen said that the new study followed research that suggested that there might be a link between heart disease and oral health.

The association itself and the way in which bacterial inflammation in the mouth contributes to heart disease is still highly debated in the dental community.

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Dear reader,

Daniel Zimmermann
Group Editor
Dental Tribune International

Being a dental trade journalist, I usually come to visit a lot of trade shows during the year. On many occasions I have heard Western manufacturers to complain about the registration of dental products in Asia.

While things have somehow improved in this regard, the regulatory situation here is still far from being perfect. Companies producing high-end equipment in particular find it difficult to roll-out their product simultaneously throughout the region and dentists are being forced to import devices by themselves for which they have to pay larger fees.

Unfortunately, the situation is unlikely to change in the years to come, despite efforts to establish common regional standards. It will hinder Asian professionals to come, despite efforts to establish common regional standards. It will hinder Asian professionals to keep up with international dentistry.

Yours sincerely,

Daniel Zimmermann
Group Editor
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The recent sweeping changes to the medical device regulations in Singapore are certainly a welcome relief for many medical practitioners and industry players. But the changes might not necessarily be good news for all those involved, in particular, diligent companies who had taken the initiative to have their products registered before these new rules were first announced.

Firstly, there will be no refund of application fees in respect of non-sterile Class A devices registered before 1 May 2012. It remains to be seen whether the registered non-sterile Class A devices, which now enjoy the exemption scheme, will need to be refiled in the localised. An immediate question that arises is whether the registrants are still subject to the registration conditions and duties, as prescribed in the medical device regulations. For instance, must these registrants ensure that the devices comply with the prescribed safety and performance requirements, or notify RSA of any change that may affect the safety, quality or efficacy of the devices? Technically, the answer is yes, until RSA decides to amend the law.

For Class B devices, industry players may have learnt to hide their time, as it has been announced that the registration fees for this risk class of devices will be reduced from September this year.

No news has been published yet regarding the potential issues RSA might see a need to address. In any case, the recent changes do not mean that dealers manufacturing and importing products that enjoy the product registration exemption or reduced registration fees can afford to be complacent. The RSA has already made it clear that dealers will continue to be required to declare the list of such products in the manufacturer’s and importer’s licences and update this list biannually. “We will manage risk by putting more emphasis on post-market vigilance, compliance, audit and enforcement,” said Associate Professor John Lim, CEO of RSA.

The message is clear: while premarket approval requirements for medical devices have been relaxed, RSA will be casting a keener eye on post-market activities.

The increase in the use of dental implants is partly due to the developments in the design of the implants themselves and of the components available to complete the restoration.

All of these advances, however, would be of little use without well-outlined decision-making criteria when considering treatment in the context of either damaged or missing teeth. Accurate diagnosis is essential, and the clinicians involved must all ways have the aesthetic aspects of the treatment foremost in mind when dealing with sites located within the appearance zone.

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The results of a study conducted at the New York University College of Dentistry seem to confirm the hypothesis that the use of oral bisphosphonate is connected to dental implant failure. In the case-control study, more than 300 middle-aged female patients with failed dental implants were compared with woman from the same age group whose implants were still intact.

Clinical evaluations at the Department of Periodontology and Implant Dentistry were conducted between 1997 and late 2004. According to the researchers, the clinical data gathered from these examinations showed that in women whose implants had failed the odds of having taken bisphosphonate orally were almost three times higher. Dental implant failure related to the use of oral bisphosphonate also seemed to be more likely to occur in the maxilla.

Neither the quantity nor the duration of bisphosphonate use was evaluated. Although the risk of implant failure is low, the researchers concluded that oral bisphosphonate could pose a risk to the success of dental implant therapy and should be prescribed with caution.

Earlier research on the association remains ambiguous, as results from Sweden and Australia have not found increased risks for implant failure when bisphosphonate was taken by patients before or after implant placement. However, the majority of clinical organisations still recommend that long-term users stop taking bisphosphonate before undergoing dental implant procedures to avoid complications.

Several morphometric studies have proven sexual dimorphisms in human teeth, for example that women’s teeth are smaller than men’s teeth. The German Society for Sex-Specific Oral and Maxillofacial Surgery recently reported on a study that found no obvious differences between male and female teeth.

Headed by Prof. Ralf J. Radlanski from the Centre for Oral and Maxillofacial Surgery at the Benjamin Franklin Campus of Charité Universitätsmedizin Berlin, the researchers explored whether the sex of an individual could be identified if only the front teeth were considered. This was tested by having participants evaluate 50 images of the anterior oral region of men and women aged between seven and 75. The lip area was not shown.

The participants included dentists, dental technicians, dental students and dental professionals, as well as 50 people who had no professional dental background.

The results overall demonstrated that sex could be detected in only about 50 per cent of the images. Although there are anthropological studies that claim to prove measurable morphometric differences, the study proved that those are not even visible to experts’ eyes.

While some tooth positions were correctly assigned by 70 per cent of the participants, others were wrongly assigned by the same number of participants. The assumption that women tend to have rounded teeth and men rather angular ones could not be confirmed by the study. Furthermore, contrary to what was expected by many of the participants, shape, size and colour of the canines were not meaningful indicators of sex.

“In everyday practice, it is relevant whether the restoration fits the patient’s face but not whether the patient is male or female,” Radlanski said. “Recognisable typical male teeth or female teeth do not exist.”

Teeth equally perceived by dentists

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“In everyday practice, it is relevant whether the restoration fits the patient’s face but not whether the patient is male or female,” Radlanski said. “Recognisable typical male teeth or female teeth do not exist.”
At this year’s IDEM, Dr Nigel Pitts from the UK presented a lecture focusing on dental caries as a public-health issue, as well as the epidemiology and importance of understanding the science behind primary and secondary caries prevention. Dental Tribune Asia Pacific spoke with him about evidence-based approaches to planning care that can be utilised in dental practice.

Dental Tribune Asia Pacific: Caries is increasingly considered a serious public-health issue. Has the perception of the disease changed during the last few years and if so, what are the indications of this development?

Dr Nigel Pitts: Yes, the perception has changed, but in what way, very much depends on which country one is considering. There is a growing awareness in many “developed” countries, where caries has been declining dramatically for decades, but there are still vulnerable groups, particularly young children, with a very high burden of preventable disease.

In other countries, caries in young children is thought to be increasing. In yet other traditionally low-caries “developing” countries, there are real concerns that changes in diet and lifestyle may be accompanied by an increasing caries problem for society and for individuals.

You are one of the developers of a caries classification and management system endorsed by dental organisations like the FDI World Dental Federation. What is the concept behind it and what is its potential for decreasing the burden of tooth decay in the world today?

ICDAS (International Caries Detection and Assessment System) is a simple, logical, evidence-based, detection and assessment system that classifies the stages of the caries process. It is designed for use in dental education, clinical practice, research and public health. It provides a common language for all stakeholders to communicate about caries, and facilitates valid, consistent comparisons of lesions at single and multiple time points.

ICDAS has evolved to comprise a number of approved, compatible formats for different needs and applications, including simplified forms for those wanting to work with fewer stages of caries. The potential for decreasing the burden of caries ranges from helping the transition to a more preventive approach to caries, helping in assessing health needs more realistically for populations and individuals, helping evaluate preventive programmes and helping to deliver more preventive caries control and better future products through research.

Apart from classification, what other advantages does such a system offer?

ICDAS leads to better quality information, derived from the assessment of caries severity and activity, to support decisions about diagnosis, prognosis and clinical management at both the individual and public-health levels. As we know more about...
the complexities of the caries process, informing sound clinical decisions is increasingly important for providing appropriate and high-quality caries care.

How can these concepts be applied to dental practice?

ICCHAR has created the International Caries Classification and Management System (ICCMS), an open system developed specifically to meet the needs of those seeking a preventive-oriented framework to support and enable comprehensive clinical caries management in the dental practice situation. This framework will help the dental team secure improved long-term outcomes for their patients.

There are improved means of detecting and assessing risks for early carious lesions. Has technology changed how we look at them?

The clinical visual detection and assessment of early lesions using ICDAS-style approaches is the foundation for planning care, but there is a continuing need for detection aids to help identify lesions that are difficult to detect visually and for effective risk assessment tools.

Examples of some of the newer approaches on the market for detection are enhanced electrical, optical and radiographic detection aids. These should be considered prudently as aids to prevent caries, not just finding more cavities to fill.

There are also developments in risk assessment systems, such as CAMBRA, to accompany older established systems, such as cariograms. All of the information derived from these useful detection and risk assessment tools needs to be integrated into a holistic and personalised preventive treatment plan for each patient.

Concerning the management of early carious lesions, you promoted a study in 2010 on the best way to manage decay in children’s teeth called FICTION (Filling Children’s Teeth, Indicated or Not?). The study to be finished in 2018 is examining the different approaches (conventional restorative, preventive method and the Hall technique) to children of ages three to seven. Is there a tendency towards any of these approaches so far?

As you indicated, this exciting study will not be completed for some years. The feasibility stage is finished and the much-needed back-to-back comparisons are getting underway—it is too soon to see results yet. The mounting evidence we do have (from multi-year randomised controlled trials in general practice) is that the approach of biological, preventive management with reduced surgical intervention (such as with the Hall technique) is showing results that are better than those achieved by the more conventional methods.

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SIDEX 2012
Seoul International Dental Exhibition & Scientific Congress

COEX SEOUL
JUNE 22-24, 2012
www.sidex.or.kr
Booming dental industry drives IDEM Singapore
Organiser Koelnmesse announces changes for 2014 edition of Asia dental show

Daniel Zimmermann
Dental Tribune Asia Pacific Edition

SINGAPORE: The International Dental Exhibition & Meeting in Singapore will be more integrated and even more comprehensive in future. According to figures of Koelnmesse, participation by dental professionals increased by 20 per cent compared to 2010, which was affected by air travel restrictions caused by a volcanic ash cloud in Europe.

Attendance by regional and overseas manufacturers and dealers also went up by 20 per cent this year.

Dreyer said that in order to facilitate this growth, his organisation is aiming at creating regional momentum to attract more buyers from key countries in South-East Asia to future meetings. For this year’s show, he said that Koelnmesse has been working closely with professional dental associations in countries like Thailand and Vietnam, who also brought more attendees to IDEM Singapore.

IDEM Singapore also collaborated with the Asia Pacific Students Dental Association this year. For the first time, fifteen students of dentistry from across the region were given the opportunity to come to Singapore and interact with exhibitors, speakers and attendees. Extra sessions moderated by Prof. Urs Belser, Switzerland, and Prof. Robert Boyd, USA, gave first-hand insights into the intricacies behind sophisticated patient treatment.

“Once again, we recorded an increased number of exhibitors and visitors, establishing IDEM Singapore as an important event in the region’s calendar of dental events. As markets across the region prepare to embrace the globalization of dentistry and its opportunities, IDEM Singapore will continue to play a strategic role to facilitate this growth,” Dreyer concluded.

“This year’s event provided an all-round experience for participants with a good mix of trade exhibitions, scientific sessions and hands-on workshops. The knowledge and insights gained by participants over these three days will help accelerate the progress of the industry, probably resulting in more sophisticated dental offerings and a more robust dentistry market.”

“We are looking for high-end clinics and the distributors selling high-quality products to them”
An interview with Sabine Nahme and Philip Y. K. Teng, Abrasive Technology

Global manufacturer Abrasive Technology has set up a new direct sales office in Singapore. Dental Tribune Asia Pacific spoke with Sabine Nahme, who was recently appointed to Abrasive Technology’s business development team, and Philip Y. K. Teng, the General Manager for Asia Pacific.

Dental Tribune Asia Pacific: Abrasive Technology is aiming at expanding into the dental sector, especially in Asia. How are you going to approach the market?
Sabine Nahme: Although we have covered many other areas like optical, medical and aerospace applications in the last decades, we actually started out in dentistry. Now we would like to focus more intensively on our dental business by expanding our own quality line, TwoStriper, which is manufactured through a unique P.B.S. diamond-particle bonding process, to the Asian market.

I was recently hired to support Abrasive Technology’s international growth, and I will assist Philip with sales in Asia.

Philip Y. K. Teng: We are also very confident that we will be able to achieve this goal in a short time. How will you approach sales in Asia?
Sabine Nahme: At the moment, we are looking for high-end clinics and the distributors selling high-quality products to them, in particular.

What are your expectations of the Asian market?
Sabine Nahme: The East Asian market is growing every year. There are a couple of large markets, with the biggest in China. We are also expecting a large increase in sales in this region.

Philip Y. K. Teng: To do effective networking, we are attending trade shows, conducting webinars and seminars, and collaborating with highly respected clinicians. At IDEM, we have already made good contacts in Korea, India and Singapore.

Thank you both for this interview.
SINGAPORE: Exports of medical and dental equipment from the US to the ASEAN region continue to increase. Imports of dental equipment to Singapore alone amounted to US$805 million in 2011, according to the latest figures from International Enterprise Singapore. Realising the potential that the city-state has to offer, more US companies than ever participated at the US pavilion this year, making them one of the largest groups of manufacturers from one single country at IDEM Singapore.

Vice-President of Sales and Marketing for Temrex Jackie Prather declared that the show was well staged and had good participation. “For Temrex specifically, IDEM was an excellent venue for meeting dealers and seeking expansion into new markets,” she commented. Prather said that, among others, Doc’s Best, Temrex etching gels and TNE cement garnered the most attention during the event.

Also at IDEM Singapore, Whip Mix, based in Louisville, Kentucky, introduced its Kesthetic CrossCut, which allows the vertical and horizontal bars to be aligned after the bite-registration material sets. According to the company, the apparatus enables laboratories to do a final check of the completed crowns or veneers by removing the upper bite material and placing the lower impression on the articulated models.

With Traxodent, a retraction and hemostatic system used prior to impression taking, cementation, bonding procedures or wherever hemostasis and retraction is required, was on display. Manufactured and distributed by Premier Dental, it provides predictable tissue management for accurately detailed impressions with less retakes.

In addition, the company introduced its new value pack for the device through their new Singapore office that according to industry estimates, more than 30 per cent of dental imports to Singapore currently come from the US.

Greater participation at IDEM to support export initiative

The US is one of the three leading suppliers of dental equipment to Singapore, alongside Japan and Germany. According to industry estimates, more than 50 per cent of dental imports to Singapore currently come from the US.

Hybrid CAD/CAM system launched at IDEM

SINGAPORE: A new high-end device for digital framework fabrication is now available to Asian dentists and dental laboratories with AmannGirrbach’s new Ceramill Motion 2 milling unit. The hybrid dental CNC machine was presented by the Austrian company to dental professionals from South-East Asia for the first time at IDEM 2012 in Singapore.

With Ceramill Motion 2, laboratories of every size will be able to digitally fabricate prostheses and frameworks almost entirely in-house, AmannGirrbach said. Launched in dental markets earlier this year, the unit has a fifth axis for greater flexibility and wider range of indications that includes full-denture prosthetics, splints or occlusally screw-retained bridges.

Owing to its hybrid technology, the machine is supposed not only to be used both for milling and grinding but also for wet and dry milling processes of zirconia, among others materials.

AmannGirrbach announced to offer full support and training for the device through their new Singapore office that according to the company was set up in July last year in order to serve customers in Asia and Middle East region better.

“The mere fact that we can offer training and react to regional customer needs makes it easier for us to realize the idea of being a full-service provider,” Regional Director for the Asia Pacific region Judith Zwenger told Dental Tribune Asia Pacific in Singapore.

Zwenger said that the Motion 2 is supposed to help increasing revenues by 50 per cent this year. She added that it will be on display at more upcoming trade shows including those in Dubai, Beijing, Taipei and Hong Kong.
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An interview with Ultradent’s General Manager for Asia Pacific Nicolas Sondaz

Last year, the dental company Ultradent set up a new regional office for the Asia Pacific region in Kuala Lumpur in Malaysia. During IDEM Singapore, Daniel Zimmermann, Managing Editor of Dental Tribune Asia Pacific, had the opportunity to speak with Nicolas Sondaz, General Manager for Asia Pacific, about the company and its future plans.

Daniel Zimmermann: IDEM Singapore seems to be continuously expanding. What is your impression of this year’s show in view of business, as well as quantity and quality of visitors?

Nicolas Sondaz: We have participated in a number of exhibitions across the Asia region in the past and IDEM has always stood out in terms of organisation, as well as quality of visitors. This year, for example, we recognised increasing interest by dentists from countries like Indonesia, Philippines and Malaysia.

In our opinion, it is definitely the best event in the region for the industry and, therefore, we have already booked for 2014.

Many Western companies are managing their operations in Asia from Singapore. What was behind the decision for setting up your regional office in Singapore?

While Malaysia does not offer all the safety aspects of Singapore, the country offers the perfect infrastructure for running a business. The cost of living in Malaysia is extremely competitive and network communication is up to Western standards.

Malaysians are also very friendly and easy to work with. The multicultural mix of the country is a breeding ground for talent. It is quite common for Malaysian people to speak six languages.

You mentioned the VALO curing light. Which products have been the best received so far, and what are the main differences in the markets you currently serve?

While our Opalescence Whitening and Tissue Management techniques continue to be our bestsellers, demand for VALO, the only true broadband curing light with a wand-type design, has increased significantly. Our endodontic and restorative product range has also continued to do very well in the market owing to the recent launch of a new line of cement material.

The success of a product usually depends on factors like the purchasing power of dentists and the regulatory framework of the country, but the most important factor is the level of involvement of our distributors in promoting their line locally. Fortunately, we are blessed with one of the best distributor networks in the region. All our partners perform to their best and demonstrate their dedication to our brand via their dedication to our brand via marketing, sales and education programmes.

Where do you see further potential in the future?

Last year, we opened subsidiaries in India and China and these are the countries in which we expect our biggest growth in Asia. Other markets with huge potential are Thailand, Indonesia and South Korea. Achieving market approval and penetration there will key to our future success.

Thank you very much for the interview.
Global Medical Implants takes on new markets

European implant manufacturer sets up in Singapore, Eyes markets in China and South-East Asia

Daniel Zimmermann

SINGAPORE: According to industry estimates, dental implants is going to be the largest growth sector for dental equipment in the years to come, particularly in emerging markets like China and India. With more and more companies entering promising markets in Asia, not only is competition increasing, but the range of products available to dental professionals desiring reliable tooth replacements is also increasing.

Global Medical Implants is the latest player to announce its upcoming market entry to the region. Operating from a new office in Singapore, the company intends to fill a gap with its moderately priced and scientifically supported range of dental implants.

“South-East Asia is a very price-sensitive region. While dentists in Western Europe commonly go for brand names, people here tend to look at every single dollar,” the Director of Global Medical Implants Asia, Javier Gamboa, told Dental Tribune Asia Pacific recently in Singapore. “Our advantage is that we can position ourselves as a quality European brand, while at the same time being able to offer prices that are competitive with those commonly charged by manufacturers from South Korea.”

As a spin-off of Spanish prosthetics manufacturer Ilerimplant group from Barcelona, Gamboa’s company has gained wide marketing and sales experience in Europe, Latin America and the Middle East during the last decade. Its implants are currently available in Germany, Poland, Argentina and Dubai, among other countries. GMI’s titanium-based product range, comprising three brands (Phoenix, Insider and Frontier), is claimed to offer high stability and good osseointegration through a self-developed surface called Advanced Double-Grip, which combines a white corundum microporous treatment with acid etching for maximum contact between implant and bone.

“Clinical studies on our implants found a success rate of over 98 per cent, which is quite remarkable,” Gamboa said. “As they are also compatible with most other brands available on the market, they offer professionals a lot of versatility in terms of clinical use.”

Gamboa commented that Singapore was considered a good testing ground for the company’s expansion into South-East Asia owing to its favourable market environment, which promotes medical research and innovation. GMI next intends to expand into Hong Kong, which, according to Gamboa, offers similar market conditions to Singapore, as well as the Philippines. During the latest IDEM in April, much interest was expressed by dentists from Vietnam, Malaysia and Indonesia, which the company intends to target after establishing itself in Singapore.

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New mectron device premiers in Asia Pacific

DTI

SINGAPORE: Mectron’s PIEZO-SURGERY® touch device, which was presented at IDEM to a professional audience of dental professionals from Asia for the first time, comes with new inserts for a wider range of indications including mini dental implants or new applications in prosthetics related to the finishing of the cervical margin in crown preparation.

The Italian dental manufacturer also said to have developed a customizedenzymatic solution called ENZYMEC® that efficiently removes organic residu-als from parts like the hand piece, tubings or inserts.

Launched at IDS 2011 in Germany, the PIEZOSURGERY® touch is supposed to offer intuitive controls through an improved hand piece and a black coloured glass touch screen resembling those of state-of-the-art electronic devices such as smartphones. With the recent market launch in Asia, the device will be widely available for dental surgeons throughout the region except in Japan and China, Regional Manager Norbert Emmerich said.

Mectron introduced the very first generation of its PIEZO-SURGERY® device to dental markets more than 10 years ago. During the last decade, the surgical technique has become a standard in many clinical indica-tions including dental extractions, endodontic and periodon-tal surgery, as well as implant site preparation.

The company says that many universities and experts have contributed in validating PIEZO-SURGERY®, making it the only evidence based technology for piezoelectric bone surgery to date.

Orthodontic offering extended by Leibinger

DTI

SINGAPORE: At IDEM 2012, Otto Leibinger from Germany was presenting a number of new products that were developed to complement its range of ortho-dontic pliers and accessories. According to the company, there are now three new patterns of the Universal Weingart Pliers available including one with ultralong jaws, one with short jaws for better transmission of force, as well as one with delicate jaws and tungsten carbide inserts. All pliers are being preferably used in the permanent technique, the manufacturer said.

The product offering was completed by special combination instruments as there are two different types of ligature instru-ments; a band pusher and scaler, as well as a combined explorer and ligature instrument.

“South-East Asia is one of our most important growth markets and, therefore, being at IDEM is essential for getting in con-tact with existing and potential new clients,” said Chief Execu-tive Officer Tina Leibinger-Toth. “For years, customers have been rushing to our booth in order to see and experience what new products we have to offer. We were able to establish plenty of new business contacts.”

“IDEM has been a successful show and therefore, we will most certainly come back again in two years,” Leibinger-Toth added.
Un-cosmetic dentistry
Are you ready to reduce your dependence on porcelain restorations?

Dr Michael Zul, London

While there are some occasional references to concern about the overuse of porcelain, many articles in dental trade publications show off before and after dental makeovers that from my perspective were quite satisfactory prior to expensive intervention. I will not argue that there are people who truly have displeasing smiles and they can benefit greatly from cosmetic dentistry, but all too often people with body-image issues related to a distorted perception of their teeth seem to be easy victims.

“Smiloxia” is the fanciful term I coined for this disorder, which appears to affect attractive young women more than others. If you open the pages of any journal published by the American Association of Cosmetic Dentistry, you will no doubt find at least one or two of these patients having extensive veneer treatment that could easily have been avoided with unbiased professional advice. The problem is that too many dentists have dedicated their lives to pure cosmetic dentistry, which is often based on using porcelain as a cure-all.

Sadly, many of the cosmetic dentists recognised as the top tier appear to use their standing as a licence to practice. It is time to adopt a significant change in philosophy if the dental profession wishes to maintain any level of integrity. Lip service to conservative cosmetic dentistry means nothing. To truly practice “un-cosmetic dentistry”, a dentist must back away from ceramics and make use of composite to restore worn edges in combination with orthodontics to correct alignment.

This style of treatment does not have to be unprofitable. It does not have to be only for the simplest of cases either; actually, very complex cases can be treated to a high standard when multiple disciplines are employed together. The collaboration of specialists can be one alternative, but for patients on a budget or in areas with lower access, a general dentist trained in advanced therapies can offer comparable results for a fraction of the fee.

Biggest bang for the buck—The STO combo
Let’s cut to the chase: if you are a general dentist and want to knock your practice out of the park with new opportunities, look at venturing into the realm of advanced shorter-term braces. Specifically, say “shorter” because your goal needs to be always trying to be faster because people hate being in braces, and aligners are often too slow or they do not give the dentist enough control of tooth movement.

There are a number of dentists who promote STO, but I developed my own system before since few of them agree on anything. The reality is that the schools of thought in orthodontics are as polarised as the holy war between the myo-centric doctors and the centric relation believers.

As hugely popular as these STO courses are, there is however some potential for abuse by dentists who simply have a weekend course and no other training in orthodontics. While I would rather see a dentist do more orthodontics than veneering, orthodontists are partially justified for their concerns about GP orthodontics.

Taking courses alongside orthodontists and reading their journals, it is apparent that there is negative sentiment directed towards general practitioners who dare to bracket teeth. I do feel that a united profession is a favourable concept but, having experienced extreme levels of sabotage in my local area, I now refer less than in the past. Some other general dentists have mentioned similar problems (on line forums) with turf protection that appears oddly focused on orthodontics.

An article recently used the term “soft science” to describe orthodontics, and I would certainly agree that it is difficult to claim that orthodontists know the “right way to straighten teeth”, grow after all, and patients may be holding their jaw forward in a Sunday bite simply to get their uncomfortable braces off.

Orthognathic surgery may be vastly underutilised in some cases and overused in others. The use of TADs appears to offer some promise, and while an oral surgeon may find it a nuisance to bother with placing them, a general dentist may be able to get them in place with little difficulty. Orthodontists often tremble at the thought of using a needle (like I did in dental school), so the price goes up as the patient heads to the oral surgeon.

BIAS: A particular tendency or inclination, especially one that prevents unprejudiced consideration of a question; prejudice

So this article is obviously biased towards expanded skills for the general dentist, but I do respect the need to pick your battles in treatment and refer when the case demands it. I essentially do not believe in putting up with any rubbish from specialists who want to dictate what a general dentist can and cannot do. If you do not like my ideas, tough luck because the ones you have may not stand up under close scrutiny. I do not want to waste my time justifying anything you choose to do, and if I am taking a course beside an orthodontist who is snivelling that he will start doing fillings and extractions, that is awesome. I may have an opening for an associate.

As excited as I am about STO, I think a two-day course is only a taste of what you need to know. It is like taking a two-day self defence class and then thinking you can enter mixed martial arts. The problem is not what you learn, but the cases that you attempt that are actually much more complex than you realise (you will be defeated!). You MUST take a full orthodontic course such as the one taught by Dr Richard Litt, and you are in sane not to take a series of oral rehabilitation courses from Dr Frank Spear or Dr John Kois.

Adult orthodontics is full-mouth reconstruction, and the treatment of worn dentition is too important to overlook. In fact, orthodontists have a very
difficult time trying to treat adults with worn dentition, so I consider this a very good niche for doctors ready to invest in cross-training.

I have seen an orthodontist try to treat an advanced wear situation with full orthodontics, and the result was all wrong. Instead of allowing for the restorative material, the practitioner moved the short teeth into place as if they were full size, so when we wanted to lengthen the worn incisors the result was a posterior open bite. The easier way to treat the case would have been to build up the teeth with composite prior to starting the orthodontics.

Cosmetic dentists have a tendency to veneer everything. They veneer teeth straight because they claim braces take three to four years. They veneer teeth to get rid of wrinkles and headaches. They veneer teeth to whiten and straighten them. They veneer teeth because the old veneers break. Exaggerated times in braces are often lies that need to be corrected as soon as possible to stop the abuse that is going on. Cosmetic dentists need to reprogramme to back off and get some air. And orthodontists need to give a little elbow room to their referring dentists who want to offer some orthodontics. The smart ones maintain a positive relationship and often see referrals from the primary care dentist increase. I know, NOT ALL cosmetic dentists are Veneer Nazis, and NOT ALL orthodontists tell patients that GP orthodontics causes root resorption.

My suggestion for breaking an aesthetic obsession is "cosmetic detox", which is very difficult if you have focused your training on aesthetic dentistry. The easiest way to do this is to take porcelain veneers off the table in the treatment planning stage. Composite resin can be used conservatively with orthodontics to provide a near-complete medium- to long-term solution.

Any time you stick to a single series of training programmes, you start to pick up biases that warp your thinking. You will find that the ideas within the dental profession are as extreme as the religions and political beliefs around the world. The proponents of the various philosophies can be very convincing, but I think each doctor needs to take a step back and make up an individual philosophy that puts the patient first.

If you take the average patient, this means that you will offer fast, affordable, reversible and conservative treatment. Millions has been spent to make people think veneers are better than real teeth; I challenge that idea. Porcelain is not as good as healthy enamel, not now and not ever. Of course, it is a material that serves a purpose but often it is used simply to line the dentist's pockets.

So to recap this approach to care, I suggest you take an STO course from one of the two 6-month braces programmes, add a full orthodontic programme (ideally taught by an orthodontist who has taught orthodontics grad students), take a full-mouth reconstruction programme (or at least a worn dentition component), then if you want you can take a composite technique course.

I personally do not get fancy with composite, since my patients do not have loupes or want to pay double for advanced microscopic cosmetics. What patients do hate is composites that chip/stain. This brings me to use Clearfil AP.X PLT (Kuraray — no endorsement money yet!). Free-hand composite bonding is the best way to be able follow the contours of the teeth, so recap the idea of using a wax-up as an instant makeover if orthodontics would be helpful.

The Clearfil shade XL appears to have a chameleon effect that works for most shades of teeth. If a lighter shade is desired, then a cut-back technique can be employed to modify the final appearance with another shade/material like 3M Supreme (3M ESPE).

From my review of the CRA/Clinicians Report literature, this brand of composite is particularly strong in clinical use, and...
I have heavily restored cases that are still holding up after five years of service. The composite does not polish very well, so I have started using G-Coat as a final glaze, especially for smokers. I simply tell the patient that if the breaks the fillings, there is a 50 per cent warranty for the first 12 months, regardless of how they were broken.

With orthodontic treatment, you should, as mentioned earlier, try to rebuild any worn teeth before starting braces. Since you will be able to move teeth in three dimensions, you simply build up the teeth to full size and then you move directly into orthodontic records to get started. The occlusion should be left “high” and finalised with the braces.

The change in vertical dimension (VDO) appears to be another handicap that paralyses some dentists. If the patient does not have muscular problems and headaches, there may be no need to move into splint therapy to test a bite change. Simply by looking at the effect enamel replacement would have on the bite and considering how orthodontics could manage the result may be sufficient without an articulator. A less deep overbite and a less trapped mandible appear to be desirable within most schools of training.

The cosmetic training really will begin to come into play with incisal displays, tooth proportions and fuller arches. The arch form after orthodontics usually is very pleasing and mimics the technique of overlaying ceramic on the facial surfaces of the upper bicuspids. The term for this has faded from my memory because I tend to avoid courses that push the use of porcelain.

As one of the first dentists to combine STO concepts with advanced treatment planning of the worn dentition, I can honestly say that if you can set aside the use of porcelain veneers and substitute some of the treatment modalities mentioned in this article, you will eventually find a way back to ceramic usage with a better empathy for patient care. The public is becoming wiser and the market is shifting towards dentists who are ready to mix up their training.

As my UK dentist colleague Dr Martin Keller, who lectures on “veneerial” disease, would say, use the daughter test before you do anything irreversible.

I would add that you owe it to your patients to learn from the best in the profession, and cross-training in continuing education may be the best investment you can make in dental practice.

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Contact Info
Dr Michael Zuk is the author of the book Confessions of a Former Cosmetic Dentist. As a consultant to several marketing programmes, including HighSpeed Braces.org and KillerToothache.com, the dentist has cultivated unique niches as alternatives to the veneer-based practice model. He can be contacted at drz@bowerdental.com.
Aesthetical guidelines for dentures that are natural-looking

Fig. 1: The triangular tooth shape.— Fig. 2: The rectangular tooth shape.— Fig. 3: The oval tooth shape.— Fig. 4: When looking at the marginal ridges or line angles, the square tooth shape is recognizable.— Fig. 5: When looking at the marginal ridges or line angles, the triangular tooth shape is recognizable.— Fig. 6: When looking at the marginal ridges or line angles, the oval tooth shape is recognizable.

Bijen Maier
Germany

Natural-looking dentures have always been a great challenge for the dental technician or prosthetist. With so many different brands of acrylic tooth systems on the market, it can be easy to overlook the basics of tooth shape and its relation to the physiology of the face.

In this article, I consider the morphology of the anterior teeth in particular. Tooth shapes vary enormously between individuals and to the untrained eye, a system of defining these shapes probably seems remote. However, if you look at the face as a whole, you will very quickly understand how nature constitutes the relationship between tooth shape and facial physiognomy through human genetic development (Figs. 1–3). This article will help you to identify the corresponding characteristics of tooth shape through a systematic approach suitable for each case.

First of all, it may help to peruse the illustrations in order to understand the system and the connections between the illustrations. Consider general anterior tooth morphology and you will recognise, in addition to the obvious characteristics, further specific individual features, like the difference between a central incisor and a canine. Although the variety of different shapes of the anterior teeth appears to be immense, this can be quiet deceiving. If one leaves aside the tooth positions and the colour of the tooth, the general morphology consists of two factors (Figs. 4–6):

1. the basic shape of the tooth, i.e. its definitive width; and
2. the marginal ridges or line angles of the tooth, which defines the optical width.

This correlation of optical width and definitive width leads to the different shapes of teeth. This morphological variety can be subdivided into three basic principles. These three fundamental archeological type shapes are square (athletic), tapering (reptiles) or ovoid (pyknic). All other tooth shapes are considered to be hybrid shapes.

In 1914, Leon Williams suggested a now famous classification system of tooth shape, theorising that these three fundamental shape types are reflected in the “Kretschmerian Construction Types” of the face (Fig. 7–11). This correlation of optical width and definitive width leads to the different shapes of teeth. This morphological variety can be subdivided into three basic principles. These three fundamental archeological type shapes are square (athletic), tapering (reptile) or ovoid (pyknic). All other tooth shapes are considered to be hybrid shapes.

The concept of the three basic shapes with regard to the labial appearance of a tooth can be demonstrated when viewed from the incisal perspective. A study by Yamamoto demonstrates this well (Figs. 11–13). From the incisal perspective, the relative flatness of the square shape, the convexity of the triangular shape and the convexity of the ovoid shape is apparent.

Another decisive aspect of a successful natural reproduction is the design of the marginal ridges or line angles, which has an effect on the 3-D appearance of the tooth.

Today, this classification of the tooth shapes based on the shape of the face is considered to be antiquated. Hence, it only serves as a very rough general guide when selecting a set of anterior acrylic teeth for a patient case. In the filigree, the “dentogenic concept” by Frush and Fisher spread across the US and then to other parts of the world. According to this concept, a per-sonality spectrum can also be added to the individual shape of the tooth. Next to clinical, intra-oral and facial relation considerations, the age, sex, and other characteristics of the patient are also considered.

Today, taking all of these factors into account, one will most likely derive some sort of hybrid shape based on one of the three original basic shapes.

Besides the shape and the width of the tooth crown, the width of the root is also a decisive factor. Up to now, I have restricted the consideration of the tooth to the labial and incisal view. In order to be able to replicate the 5-D appearance of the tooth, we must also consider the labial curvature of the tooth (Figs. 16–18). From this point of view, the incisal triangle features can also be divided into the three basic components. For each individual case, it is then necessary to derive the respective hybrid shape.

Fig. 18–21: These images show just a few of the many dento-facial varieties that can be found in nature.
The square anatomy type

- The two well-developed labial marginal ridges are the key characteristic feature of this anatomy type.
- A strong labial depression and a wide labial transitional surface are present. The difference between the mesial- and the disto-approximal surface is noticeable. The distal face is wider than the mesial.
- The growth lobes are generally not very prominent with this tooth shape type.

The three-angled anatomy type

- The mesial and distal marginal ridges are again distinct but not as strong as with the oval anatomy type.
- The labial surfaces are relatively wide, without a noticeable difference in width between the mesial and the distal.
- The labial and proximal growth lobes are prominent.

The oval anatomy type

- The characteristic feature of this anatomy type is the indistinct marginal ridges, which can sometimes cause a rather plain look.
- A well-developed central marginal ridge is present, which appears quite prominent when viewed from the incisal edge.
- The labial and approximal depressions are somewhat strongly developed, although not as strongly as with the triangular type.

The marginal ridges or line arms develop in the sulcus and run parallel to the basic outer shape of the tooth towards the incisal edge. The incisal aspect, the progression of the marginal ridges differs between unabraded juvenile teeth and worn aged teeth (Figs. 19–24). These different morphological characteristics are evident in the case of adjacent teeth, which makes the reconstruction of a single tooth quite easy. A great deal of information is needed in order to rebuild the shape of a tooth and to recreate a natural, harmonious look. It becomes more complicated when it is necessary to replace the whole anterior segment or the dentition in an entire jaw. For this reason, the knowledge of the anatomical features of the single tooth is very important.

A further aid for determining the definitive width of the teeth is the width of the nose base, which agrees in most cases with the width of the front teeth (Figs. 21–27). In his theory, Gerber suggests, amongst other things, that from an embryogenetic point of view the proportion of the nose base and the width of the nose root can be determined (Figs. 22–31).

When it comes to determining the length of the anterior, some clues can be derived from the shape of the patient. The lip type is of great importance here. In vertical perspective, we distinguish between a full and thin lip and/or between a long and short upper lip (Figs. 12–14). Patients with short upper lips expose more of their teeth than patients with longer upper lips. The main reason for this is that the upper anteriors are aesthetically much more significant than the lower anteriors. The different shapes of teeth can be observed on both the upper and lower anteriors from the facial, mesial and distal aspects.

This method for achieving aesthetic harmony can be summarised as:
1. analysis of the facial parts, i.e. face-shape type;
2. analysis of the dento-facial type, i.e. lip–nose type; and
3. analysis of the intra-oral area, i.e. bite situation and remaining dentition.
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