Filipino dentists alarmed by sex attacks

HONG KONG: The Philippine Dental Association (PDA) has alerted its members to a series of sexual attacks on dental workers in the country. Over the last two months, female dentists and assistants in the capital Manila and neighbouring cities have been repeatedly molested and raped by what police have described as a single male suspect carrying a handgun.

At least 20 female dentists are estimated to have become victims of the attacker since August last year. The crimes were typically conducted during less busy times and in dental practices or clinics located in less populated areas. The suspect posed as a client requesting teeth cleaning or that one of his teeth was being filled, according to police reports.

Police representatives told the Philippines Star newspaper that the latest evidence has led them to believe that the man could be a former member of a gang that robbed dental clinics in the past. Further details however were not disclosed.

In a message on safety released on their website, the PDA advised dentists to avoid walk-in patients, especially during the time the attacker is most likely to strike, and to install alarm systems, including buzzers or CCTV cameras. They also announced that a number of safety seminars would be held at upcoming dental conventions nationwide.

“We are coordinating with the police and other law enforcement agencies in the pursuit of the early resolution of these cases,” Dr Roberto M. Tajonera, President of the PDA, said.

“We call on all our members to remain vigilant and to secure your respective clinics for your own security and safety,” he added.

Malay kids lack ortho treatment

The Malaysian Association of Orthodontists has warned that there are not enough specialists enrolled in public service to sustain the government-subsidised orthodontic treatment scheme for schoolchildren. Waiting lists are so long that some schoolchildren may only be able to get treatment when it is too late.

Oral disease to be classified as NCD

The FDI World Dental Federation has called for oral disease to be included in the list of non-communicable diseases (NCDs) for priority action within the United Nations and World Health Organisation. The current list comprises cancer, diabetes, and respiratory and cardiovascular diseases.

Dental diseases plague Indonesia

Despite efforts to improve oral health, levels of tooth decay and gum disease have remained high in Indonesia. Almost 70 per cent of adults in the country suffer from caries and other oral lesions, said Chairperson of the Association of Indonesian Dental Schools, Dr Eky S. Soeoemanti, in view of National Oral Health Month in September.

The alarming figures confirm the results of a report this year that found a high prevalence of caries, periodontal disease and other dental problems in elderly persons in the capital Jakarta. Soeoemanti said that dental diseases however are widespread amongst all age groups, especially children.

According to the WHO Oral Health Country/Area Profile Programme, Indonesia had over 7,000 dentists in 2004, a ratio that ranks them lowest amongst countries in South-East Asia. While per capita consumption of sugar has increased significantly in recent years, many people still do not practise good oral hygiene like toothbrushing or flossing regularly.
NEW DEHLI, India: A new report released by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) proposes the establishment of interdisciplinary health centres in major cities to meet the increasing influx of medical tourists. According to the paper, the total number of foreigners seeking medical or dental treatment in the country is expected to reach 5.2 million by 2015.

The estimates are a sharp increase from the current 850,000 tourists that contribute approximately US$900 million in revenues to India’s booming booming health-care industry, which competes with Thailand, Malaysia and Singapore for the lucrative medical tourism market in South-East Asia. Competition has also recently emerged from countries like the Philippines which have launched campaigns to attract more patients from regions like the Middle East, North America and Europe.

“High quality medical care at a fraction of the price the people would traditionally pay in developed countries is the basic reason behind this surge of patients flocking to India for treatment purposes,” said D.S. Rawat, Secretary General of the ASSOCHAM. “High costs of medical treatments in these countries have compelled patients to seek alternative, cost-effective and lucrative destinations.”

In order to meet demand, the country needs to set up multi-speciality hospitals in public-private partnerships that offer quality medical and dental treatment by highly trained English-speaking professionals, Rawat stated. He called on government to offer financial concessions for the health-care industry that could help to create more jobs in the industry and lure back Indian doctors who currently work abroad.

According to the Ministry of Overseas Indian Affairs estimates, there are over 1 million health professionals worldwide with Indian origins.

Healthcare business consultant Vivek Shukla, New Dehli, said that the government would have to revise visa norms and offer better legal support for international patients. Infrastructure in the recommended cities will also have to be reviewed as some do have very little or no international flights, he said.

Medical tourism in India could rise by almost 400 per cent by 2015, industry figures suggest. (DTI/Photo Galyna Andrushko, Ukraine)

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Australia renews oral health services in Indigenous Heartland

From news reports:

CANBERRA, Australia: A mobile service providing dental care for thousands of Aboriginal people in Australia’s remote South has received government funding of more than AU$400,000 (approx. US$440.000), the Labor Minister for Indigenous Health Warren Snowdon has announced. Indigenous representatives have welcomed the new cash injection which will help to bring needed help to almost 5,000 residents in the Anangu-Pitjantjatjara Yankuntjatjara (APY) area in the province of South Australia.

Snowdon said that the government will provide funds from the National Rural and Remote Health Infrastructure Program, amongst other sources, for a new dental van and equipment that can be transported in and operated from within the vehicle. The service, which is operated by the Nganampa Health Council, an Aboriginal-controlled health organisation that has nine health centres in the area, has been running since 1993.

According to the latest statistics, the oral health of Australia’s indigenous population is significantly worse than that of the general population, owing to poor oral hygiene habits and a lack of access to dental care. A recent study by the Australian Research Centre for Population Oral Health at the University of Adelaide found that the prevalence of caries in young Aboriginal people in North Australia was eight times higher than that of their non-indigenous contemporaries, a result that is in line with the national pattern.

Primate with a ‘toxic bite’

Daniel Zimmermann

HONG KONG: For the first time, researchers in Sabah on the island of Borneo have begun studying the life habits of the Bornean slow loris, a rare primate known for its ability to release toxins through its teeth. It is hoped that the long-term study will reveal new insights into the animal, which is being threatened by illegal pet and ornamental trade in South-East Asia.

Discovered and classified first in 1785, the Bornean slow loris has recently become a rare sight in the jungles of Borneo. Figures of the total population do not exist but wildlife experts expect the density today to be around five animals per square kilometre, a dramatic decline from up to 80 per square kilometre in the 1980s.

The study, which receives funding from the Cleveland Metroparks and Columbus Zoo in the US, aims to find out where the animal sleeps or regularly hunts for prey like insects or lizards. To date, the scientists have only been able to tag one specimen with a collar that has to be replaced every two to three months, Director of the Danau Girang Field Centre in Sabah, Benoit Goossens, said.

“It is very difficult to catch a slow loris as they move high in the canopy,” he told Dental Tribune Asia Pacific. “But we hope to collar more animals as we need a larger sample size to publish our data. It is a poorly-studied species.”

Besides the shrewmouse and the Australian male platypus, the slow loris is one of the few mammal species known to be venomous. The toxin, which is used as a self-defence mechanism against predators, is produced by licking a gland on the animal’s arm and mixing it with saliva in its mouth, where it is activated.

Apart from allergic reactions, the secretion is not hazardous to humans.
Dear reader,

With stock markets jumping up and down at random and governments bailing out almost regularly, one might wonder if these are signs of another global crisis ahead. One thing that this situation clearly shows is that politicians and economists alike have become clueless about how to tackle the many problems that their economies are faced with.

What is often missing in this discussion is that the problems are not merely of economical but, and foremost, financial nature. Especially in the United States, the old politics of “hurry now, pay later” seems to have finally caught up with budgetary reality. Things are still looking better in Europe but the struggles of the South will pose a serious obstacle for the survival of the Union in the years to come.

The only way to straighten out the troubles of the West and the model of capitalism in the long-run is for governments to finally sort out their messy finances. Unfortunately, dental professionals could be one of the many losers as this could mean increased tax-ation and less governmental care.

Fortunately, dental professionals can sort out their messy finances. Un-used are the taxes to be finally caught up with budgetary reality. Things are still looking better in Europe but the struggles of the South will pose a serious obstacle for the survival of the Union in the years to come.

The only way to straighten out the troubles of the West and the model of capitalism in the long-run is for governments to finally sort out their messy finances. Unfortunately, dental professionals could be one of the many losers as this could mean increased tax-ation and less governmental care.

Yours sincerely,
Daniel Zimmermann
Group Editor
Dental Tribune International

Vivek Shukla
India

The latest report by the Associated Chambers of Commerce and Industry of India has made some good points regarding the prospects of health tourism in India. While the flow of foreign patients has indeed increased over recent years, some issues remain (such as distance) that could act as a deterrent and have to be addressed in order to maintain the growth curve.

For example, India seldom gets patients from the EU, as regulations there have made it easier for people to travel within their own region. People in the US prefer to go to Mexico and other nearby countries rather than take a 16-hour flight to India, especially when in a poor medical condition.

Clinical quality in private hospitals, though largely good, is mostly self-regulated and so there is no regulation in clinical outcome other than some laws on medical negligence. Here, too, compensation of the aggrieved party is not very high compared with many other countries. There are no specific laws that safeguard the interests of international patients, and legal processes are long and may require multiple visits.

Unless the government actively participates in promoting India as an adhesion, success will be elusive. Visa requirements, for example, are currently not very tourist-friendly. It can take several days for an American patient to secure a visa to India, while he could have travelled to and admired a country like Thailand without a visa in the same time.

Infrastructure like roads, trains, airports and even the Internet has improved a lot, but more needs to be done on this front by the government. For example, some of the cities suggested for health campuses offer very few or no international flights. Currently, it is not easy for an international traveller to fly to New Delhi and then take a connecting flight or a train to Jaipur. This could be a major hurdle for the growth of international health tourism in these places.

Vivek Shukla is CEO of Vivek Shukla & Associates, a healthcare business consulting firm based in New Delhi in India. He can be contacted at vivek@vivekshukla.com.

Contact Info

Anita Thau, 22 Jun. 2011

How long do we have to delay the inevitable for the sake of a few vested interests? Mercury is the third most toxic substance known after arsenic and lead. It does not break down in the environment. The no-observed-effect level (NOEL) for mercury is zero. Better alternatives have been available for years. Mercury amalgam is the most tooth-destructive material used in dentistry. There is no reason to continue its use and it should be banned immediately.


To the Editor

Re: “European Commission reviews environmental aspects of mercury in dental fillings”
(Dental Tribune Asia Pacific Vol. 9, No. 6, page 1)

The thing we must remember when thinking about why we should ban mercury in dentistry is the eternal environmental impact once it is released. Unfortunately, so much of the dental mercury is being illegally diverted to small-scale gold miners throughout the developing countries and those places will be lost forever owing to the massive contamination. After watching and listening to a survivor of Minamata disease (the first internationally recognised mercury-contaminated site in Minamata, Japan), I say shame on us for allowing mercury to be used ever again in any application. How much longer do we have to wait before we act on this thing? The time is now! I am hoping that some of my colleagues who have been fighting this fight for 50 years or more will see the end in their lifetime.
Scientists unlock secrets of enamel formation

From news reports

PITTSBURGH/ANN HARBOR/CAMBRIDGE, USA: Enamel is known to be one of the hardest tissues in the human body. Researchers from the Forsyth Institute, as well as the universities of Pittsburgh and Michigan in the US have reported that they have documented the process through which the highly resistant dental tissue is created. According to the scientists, their observations could help in the development of new materials for medical and dental applications.

Using a cryoelectron microscope, they found that amelogenin, a regulatory extracellular matrix protein that makes up between 20 and 30 per cent of early enamel, is able to arrange itself stepwise in higher clusters. These clusters then stabilise and organise calcium phosphate crystals in parallel arrays and fuse them together. The result is an arrangement of needle-shaped mineral particles that resembles a complex ceramic microfabric, the researchers said.

They added that more research is needed to fully understand how the process works but the findings could make it possible to arrange molecules in a similar fashion in laboratories to build novel biomedical materials for restorative dentistry, amongst other applications.

The special properties of macromolecules like biopolymers are already used by other industries for producing biodegradable packaging and new kinds of building materials.

US debt deal spares Medicaid

Daniel Zimmermann

NEW YORK, USA: Health and dental care benefits for the poor will not see a reduction, as US President Obama and members of Congress agreed to keep their hands off Medicaid in a deal agreed to by both parties to raise the country’s increasing debt limit. The agreement, which also includes the formation of a bipartisan congressional committee to recommend further cuts in federal spending, however, could target social benefit programmes later this year.

The last minute deal, ending six months of negotiations, aims to cut more than US$2 trillion from federal spending to raise the current US debt limit from US$14.3 trillion. While Democrats pushed for tax hikes and defense cuts, Republicans proposed rolling back spending on a number of social security programmes, including Medicaid.

“We will need to review the details of the debt agreement, but are encouraged by initial reports that Medicaid is not one of the major targets of spending cuts,” a speaker of the American Academy of Pediatric Dentistry told Dental Tribune Asia Pacific.

Currently, over 50 million people or one sixth of the total US population is enrolled in some form of Medicaid, the latest figures from the Kaiser Family Foundation’s Commission suggest. Twenty-five million children are receiving healthcare through the Early Periodic Screening, Diagnosis, and Treatment Program that also includes preventative and restorative dental treatment. Demand for the scheme has increased significantly since 2007 owing to the recession and rise in unemployment.

Experts said that more cuts in the joint federal-state systems could mean another setback for the programme that has seen a lack of investment and interest from healthcare providers for years. Eligibility levels could also be strengthened, as less government funding over the next few years would place greater financial burden on the US states.
Bioengineers ‘floss’ bad gas from animal waste

COLLEGE STATION, USA: A material used in the production of dental floss has shown the potential to capture a large amount of hazardous gases before they are released into the environment. In an experiment conducted on liquid animal manure, engineers from Texas A&M University’s Department of Biological and Agricultural Engineering in the US were able to extract 50 per cent of ammonia emissions with the help of tubes based on expanded polytetrafluoroethylene (ePTFE), a highly versatile polymer used to manufacture fibers for cleaning teeth.

In recent years, ammonia emissions from the raising of cattle and other livestock have been recognized by scientists as contributing significantly to environmental problems such as the contamination of groundwater and acidification of soil and vegetation. The new technology, developed by Drs. Saqib Mukhtar and M.D. Burhan, uses diffusion, the process through which gases move from regions of higher to lower concentration, such as in the ePTFE tubes. There they can be concentrated to form ammonia sulfate, a chemical compound used as a soil fertilizer, among other things. Although still in testing stage, the scientists have announced that the technology will be applied on a larger scale soon.

Common methods to reduce ammonia emissions include the use of biofilters and chemicals, as well as acidic-solution spray scrubbers.

Bacteria attack children early

NEW YORK, USA: US researchers have found evidence of bacteria associated with early childhood caries in the saliva of infants with no teeth. These findings suggest that infection with bacteria like Streptococcus mutans in the oral cavity occurs earlier in the development of children than previously thought.

Dr Eduardo Mahn

DATE Sunday, 2 October 2011
TIME 1 pm Indian Standard Time
LINK www.DTStudyClub.com

SMILE UPGRADE WITH ALL-CERAMICS:
How to replace, improve and create esthetic restorations based on a minimal invasive concept

Dr Eduardo Mahn, DDS, DMD, graduated from the University of Chile School of Dentistry and pursued further studies in Germany and the US. He worked at Ivoclar Vivadent’s International Center for Dental Education for several years and is now a guest lecturer at the University Andres Bello, Santiago, Chile. Dr Mahn is currently working with the Samaya Group in Saudi Arabia, where he is specializing in implantology, restorative and aesthetic dentistry.

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www.ivoclarvivadent.com
Ultradent moves APAC operations to Malaysia

KUALA LUMPUR, Malaysia: The US dental manufacturer Ultradent has opened a new regional headquarters for the Asia Pacific region in Kuala Lumpur in Malaysia. The office will centralise distribution in over ten Asian countries, Australia, New Zealand as well as South Africa and host training and service facilities.

Markets in Asia Pacific, excluding Japan, currently contribute a significant amount to Ultradent’s international business. The company based in South Jordan, Utah, manufactures a wide range of dental materials and equipment including composites, dental cements and endodontic files. Their top brand is Opalescence, a line of tooth whitening systems that contains take-home and in-office options.

Nicolas Sondaz, General Manager of Ultradent Asia-Pacific, said that owing to the favourable market conditions in Malaysia, the Kuala Lumpur office will be able to offer the company’s complete product portfolio to dentists and laboratories in the region.

“The Malaysian government does not only strongly supports oral healthcare initiatives, but also universal healthcare related business,” he commented. “As a result we could import almost our entire product portfolio from the United States freely, a significant advantage to other countries in the region.”

Sondaz added that the company intends to expand the Kuala Lumpur office with administration, marketing and technical support divisions in the medium-term. There are no plans for production facilities for the time being.

New dental injection system launched

NEWCASTLE, UK: Researchers from Newcastle University have developed a dental injection system that could reduce patients’ pain when being injected. The system, a modification of a dental local anaesthetic cartridge that allows a buffer solution to be mixed with the anaesthetic, was recently recognised with a Medical Futures Innovation Award, a European showcase of early-stage innovation in health care.

One reason dental injections are painful is the acidic content of the anaesthetic, which is necessary to enable it to be made and stored. The new system allows a separate neutralising material to be mixed with the anaesthetic just before the injection. In this way, discomfort can be reduced and the time for the anaesthetic to take effect can be shortened.

The research team has developed a patent-protected, new double plunger for a syringe cartridge that separates the two substances within the syringe until use.

Millions of dental injections are given by dentists every year. The researchers would like to see their innovation become the standard method used in every dental surgery.

Also, with more than 16 billion injections administered annually around the world, the scope for this innovation in areas outside of dentistry is significant. “As with many of the best ideas, the simplicity of this innovation is what caught our attention,” judges of the Medical Futures Innovation Awards said. “This forms a platform innovation that could have many potential uses outside of the dental market and we would like to see this being taken into clinical trials.”

The team has produced a pre-production prototype of the injection system and is now looking for a manufacturer to produce it commercially and make it available to dentists.
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All Dental Tribune readers are cordially invited to submit their applications online without registration fees by October 21, 2011.

For preregistrations and your online application please go to:

awards.dental-tribune.com
WHO patient safety curriculum: The impact on dental education globally

The World Health Organization (WHO) Patient Safety Curriculum will be the subject of a presentation by A. Enrique Acosta Gio (Mexico) on 14 September, the first day of the FDI Annual World Dental Congress.

WHO published the Patient Safety Curriculum Guide for Medical Students in 2009 to encourage and facilitate the teaching of patient safety topics to medical students. It has just followed this up with the WHO Patient Safety Curriculum Guide: Multi-professional Edition. This was developed by an Expert Working Group comprising experts from the six WHO regions as well as WHO Health Professions Alliance members FDI, the International Confederation of Midwives (ICM), International Council of Nurses (ICN), International Pharmaceutical Federation (FIP), International Pharmaceutical Students Federation (IPSF) and the World Medical Association (WMA).

The Multi-professional edition widens the scope of the 2009 Curriculum Guide to include all health professionals including dentistry. Dr Acosta Gio’s presentation takes place during the session Global trends in patient safety and infection control, co-organized with the Organisation for Safety and Asepsis Procedures Symposium—OSAP. He will address the fundamental skills for a culture of patient safety including team work, quality improvement and risk management, with a focus on the impact of the patient safety curriculum on dental education globally.

FDI President Roberto Vianna provided the foreword. In it, he stresses that the concept of patient safety as a ‘core’ attitude to be introduced early on in dental training is one that FDI has long championed. He notes that it also usefully integrates dentistry into the other health professions, highlighting the common principles that govern their approach to patient safety.

Dr Acosta Gio is the principal investigator of a grant to improve education, compliance, and monitoring of infection control at the dental clinics of the Universidad Nacional Autonoma de Mexico, a faculty member of IIDM, dentist, member of the International Editorial Board of the Journal of the American Dental Association and former board member and current member of the Organization for Safety, Asepsis and Prevention, (OSAP), in Mexico.

WHO 2011: FDI programmes a session on NCDS

A special two-hour session on noncommunicable diseases (NCDs) will take place on the final day of this year’s FDI Annual World Dental Congress in Mexico, chaired by Denis Bourgeois, Chairman of the World Dental Development & Health Promotion Committee.

The NCD session, from 11:30 to 13:30 on 17 September and cos-hosted by the Norwegian Dental Association, comprises three presentations. In the first, ‘The role of dental practitioners as advocates promoting health by integrating general and oral health promotion’, Harry-Sam Selikowitz (Norway) will provide an outline of strategies for dentists to play a significant role in promoting health by integrating oral and general health promotion using the common risk factor approach. Dr Selikowitz has consulted with United Nations agencies on oral health in several developing countries and was an advisor both to the WHO Executive Director of Non-Communicable Diseases and to the WHO Global Strategy on Diet, Physical Activity and Health.

In his presentation, ‘The role of oral health care professionals in overall health’, Dr Rodrigo Fernandez (Mexico), a medical doctor working at WHO who will highlight the important role dentists may play in screening patients for medical conditions that they may not be aware of.

In his presentation ‘Risk management in collaborative practice’, Dr Ward van Dijk will outline emerging challenges for dental practice and present techniques and new tools that will enable dentists to effectively manage both their practice business and improve health of patients. Dr van Dijk is a practicing dentist in Holland and a member of FDI’s Dental Practice Committee.

On 15 September, NCDs will also be covered during the session ‘Knowledge exchange and oral health’, organized by the Joint World Dental Development & Health Promotion Committee—Public Health Section Forum.

Saskia Estupinan-Day (Ecuador) will deliver a presentation entitled ‘Incorporating Oral Health within the current International Non-Communicable Disease Agenda’. Dr Estupinan-Day, a public health dentist with worldwide experience in the Americas, Africa, Asia, and Europe in the development of oral health strategies, implementation of national programmes, management of international technical cooperation and research projects and budgets, will highlight the need to integrate oral health within NCD strategies.

FDI, oral health and the fight against NCDs

The AWDC sessions reinforce the crucial role that oral health will be called upon to play in the fight against NCDs and underscores FDI efforts to have oral diseases specifically referred to in the outcomes document (Declaration) upcoming United Nations Summit on NCDs to be held in New York on 20 and 29 September of this year. In July, it encouraged its members to write to the Summit outcomes document (Declaration) including oral health.

How oral health, the most common NCD, will fit into post-summit strategies will also be a point of focus of the International Association of Periodontology Symposium, also on 15 September. During the symposium, ‘Fighting the non-communicable disease (NCD) epidemic: the link between diabetes and oral disease’, George Taylor and Pamela Alweiss (both USA) and Martin R. Gillis (Canada) will set the stage for meaningful discussion with the purpose of reframing future action based on the context of oral health’s role in the broader scope of NCDs.

Pamela Alweiss is an Endocrinologist who works with the Centers for Disease Control Division of Diabetes Translation, on projects for the National Diabetes Education Program (NDEP), a joint programme of CDC and the National.

Martin R. Gillis is an associate professor at the University of California San Francisco School of Dentistry. His research focuses on relationships between oral and systemic health, particularly periodontitis and diabetes. Martin R. Gillis is an associate professor at the University of California San Francisco School of Dentistry. His research focuses on relationships between oral and systemic health, particularly periodontitis and diabetes.
FDI: “Contact your Minister of Health and Chief Dental Officer”

FDI has made a direct request to its members asking them to contact their Minister of Health and Chief Dental Officer. In a 5 July communiqué, President Dr Roberto Vianna, President Dr Orlando Monteiro da Silva and Executive Dr Jean-Luc Eiselé jointly requested this expected move due to indications that oral health is unlikely to be specifically mentioned in the Declaration to the United Nations Summit on non-communicable diseases, due to be held in New York on 19 September.

FDI believes that oral health should be mentioned at various points in the Summit Declaration and we have carried out some advocacy activities within the UN and the World Health Organization (WHO) to support its view.

In its communiqué to members, FDI noted that: “The NCD Summit has the potential to secure commitment from Heads of Government for a coordinated global response to the NCD epidemic and substantially increase the allocation of financial resources to NCDs. It further has the potential to fix measurable targets and commitments for actions by governments, with regular reporting to monitor and hold them accountable.

We think the current focus on four NCDs—cancer, diabetes, cardiovascular and respiratory diseases—is too restrictive: oral diseases share common risk factors with the four NCS mentioned, in particular unhealthy diet (particularly high sugar consumption), tobacco, and harmful alcohol use. We therefore believe that oral health professionals should be an integral part of the solution for prevention, early diagnosis and treatment of NCDs.”

More at www.fdiworldental.org/content/write-your-minister.

FDI president: Young dentists share FDI ideals

Young dentists “come to dentistry very much with the same ideals embodied in the FDI vision of leading the world to optimal oral health,” FDI President Roberto Vianna told participants at the 58th Annual World Congress 2011 of the International Association of Dental Students (IADS) and Young Dentists Worldwide (YDWD).

Delivering a Congress keynote address in New Delhi on 28 July, Dr Vianna continued: “This vision acknowledges that oral health is a fundamental part of general health and well-being. It is enacted through worldwide activism to promote policies in favour of oral health and access to oral health; practical delivery of excellence in oral care; and continuing education for dentists to stay abreast of the latest thinking and developments.”

He thanked Dr. Chandresh Shukla, President of the Dental Student Association of India, for hosting the Congress for the first time in India, and congratulated the IADS “for its 60 years of activities and achievements” as well as YDWD, now in its 20th year of existence.

FDI president praises growing reputation of SLDA

At a late July event in Sri Lanka, FDI President Dr Roberto Vianna highlighted the growing reputation of the Sri Lanka Dental Association (SLDA), mirroring, he said, “the growth of dentistry in the country. It is now one of the most important professional societies in Sri Lanka and highly esteemed at both national and international level for its immense contribution to the development of national dentistry and oral national health.”

Dr Vianna was speaking at the induction ceremony of Dr Eshani Fernando as new President of the SLDA. He also thanked Immediate Past President Dr J. M. W. Jayasundara Bandara “for his exceptional contribution to the national body and to the FDI”.

In his address, he highlighted the international role of FDI, notably the World Health Organization, and the just-published WHO Patient Safety Curriculum Guide, in which FDI had been a major contributing partner and for which he had written a foreword.

“The concept of patient safety as a ‘core’ attitude to be introduced early on in dental training is one that FDI has long championed,” said Dr Vianna.

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“Paradigms in implant treatment planning are beginning to shift”

An interview with Prof. Friedrich Wilhelm Neukam, Scientific Chairman for the annual congress of the European Association of Osseointegration

Prof. Friedrich Wilhelm Neukam

In a few weeks, thousands of dental professionals will be gathering in the capital of Greece for the annual congress of the (EOA). Dental Tribune Group Editor Daniel Zimmermann spoke with Scientific Chairman Prof. Friedrich Wilhelm Neukam from the University of Erlangen, Germany, about the event and what is on the cards for the world of dental implantology.

Daniel Zimmermann: How are preparations for the EAO Congress in Athens coming on?

Prof. Friedrich Wilhelm Neukam: Preparations for the 28th Annual Scientific Congress of the European Association for Osseointegration (EOA) have been completed and, as has been the case in previous years, we can look forward to an outstanding scientific programme in Athens in October. The four-day conference will focus primarily on transferring the latest scientific findings into dental practice. The central theme of this year’s EAO event is “Treatment Planning in Implant Dentistry”, a topic that a number of renowned international experts will be presenting on.

According to the latest figures from the EAO, a record number of abstracts has been submitted for this year’s conference. How do you explain this huge interest?

In fact, our latest figures show that more than 500 abstracts on the surgical and prosthetic aspects of long-term results following implantations and augmentative procedures have been submitted for the congress. This continuous rise in submissions could be due to the fact that the EAO conference has become the scientific and clinical annual event for many of our colleagues in the dental and implant community in Europe. In addition, more participants from other parts of the world, notably Asia and the Middle East, have attended our congress in the last few years.

Based on these submissions, is it possible to predict where the specialty is heading?

Upcoming developments in the field will definitely be influenced by a significantly higher degree of precision in imaging technologies that are the basis for computer-simulated implantations and “flapless surgery”. Of course, these rather complex procedures will not be necessary for simple implantations, but with regard to augmentative procedures or complex individual solutions, dentists will be increasingly applying these techniques in the future.

Last year’s congress was all about clinical controversies in dental implantology. What topics will be the focus this time?

Besides treatment planning in implant dentistry, our main topic, the prevention and management of complications and risk factors will be discussed. Furthermore, speakers are expected to shed light on other important aspects such as loading, treatment protocols and the predictability of clinical results.

Do you think that dentists have much catching up to do with regard to treatment planning?

There are standard planning procedures prior to treatment such as implantation, augmentation, as well as prosthetic and surgical therapy. However, paradigms in implant treatment planning are beginning to shift, especially in cases with high requirements for aesthetics and for procedures, like for immediate-load implants. In these areas, we are noticing a technical leap forward in digital imaging and computer-assisted implantation. In my opinion, these things have proven worthy to be discussed extensively.

What are the most common mistakes in implant treatment planning nowdays?

Generally, we have to take some degree of error into account when transferring the results from the analysis of X-rays, CBCT or CT images to the final treatment protocol. Another important matter is the complexity of treatment planning with regard to the treatment protocol selected. Things are in flux here as well we actually start a treatment, so that we are able to achieve a more precise and safer implantation for our patients.

EAO congresses are considered to be exceptionally well-organised events. How has cooperation been with local organisers in Greece?

As usual, the EAO Congress is organised in cooperation with local scientific organisations. In my opinion, we have invested a great deal of attention to detail and effort into the preparations for the Congress, as well as in the scientific and auxiliary programmes and we are very confident that participants can look forward to a highly professionally organised event.

What are your personal and professional expectations of the congress?

For someone like me having been personally involved in the preparations, one hopes that the congress will be a success. It is my sincere belief that all involved in our field will be able to learn a lot from the scientific studies that are being conducted, as well as from colleagues around the world who will be presenting their latest scientific data.

Personally, I am also looking forward to the exhibition. The EAO Congress will present the largest showcase of implantology-related products and technologies in Europe, and I am eager to see which novelties the industry will pull out of the hat. Not forgetting the numerous talks and exchanges with friends and colleagues, whom, unfortunately, I only have the pleasure to meet during our congress.

Last but not least, I am looking forward to seeing Athens, which has been the cultural, economic and scientific centre of Greece for over 7,000 years.

Thank you very much for this interview.

(Translated provided by Annemarie Fischer, Germany)
The role of biology in the orthodontic practice (Part 2)

The goal of this article is to enhance the biological awareness of the orthodontic practitioner in order to minimise or avoid tissue damage during orthodontic treatment. In this second part, the aetiology of orthodontic root resorption is discussed.

Root resorption occurs on any surface of the root, and when periodontal health is jeopardised, provided the restorative treatment is unwarranted. In many cases, about 90% of the root surface moves labially, into contact with the periodontal ligament (PDL), and even through the labial plate and dentine are removed irreversibly. As discussed in more detail below, the PDL cells themselves contribute to the formation of odontoclasts, a conclusion reached by Shiraiishi et al. (2001). They transplanted rat molar roots into the dorsal skin, with or without the PDL, for one to 28 days. After a period of seven to ten days, TRP-positive odontoclasts were found around roots with intact PDL but not around roots transplanted without the PDL. Cyclo-oxygenase-2 was found in the PDL in the early days following transplantation. Root resorbing cells are derived from a macrophage lineage, like osteoclasts. In an attempt to determine whether these progenitors are derived from resident macrophages or from cells exiting PDL capillaries, Nakamura et al. (2001) applied antibodies against specific markers to each cell type in rat jaw sections after one to seven days of tooth movement. This experiment revealed that most of the cells that contribute to the formation of odontoclasts are derived from exudative macrophages.

The finding that inflammation is an integral part of the tissue response to orthodontic forces may explain, at least in part, the reasons for orthodontic root resorption. In inflammation, para-dental capillaries become hyper-permeable, facilitating the mobilization of circulating leukocytes into the extravascular space. These migratory cells are derived from the immune system, and some are osteoclast and odontoclast progenitors. Therefore, the authors hypothesized that individuals who have medical conditions that affect the immune system, common as they might be, may be at a high level of risk of developing excessive root resorption during the course of orthodontic treatment.

The records of 102 orthodontic patients who had presented excessive root resorption of one or more teeth at the completion of orthodontic treatment were reviewed, and of 102 pair-matched controls who had received orthodontic treatment, but showed no signs of root resorption. The review revealed that the incidence of asthma, allergies and signs indicative of psychological stress was significantly higher in the root resorption cohort (Davidovitch 2000). In all these conditions, the immune system is either altered or adversely affected. Therefore, we conclude that excessive root resorption may occur in patients who are psychologically stressed, or who have asthma and allergy, or any other local or systemic condition that may adversely affect and modify the immune system.

Since incisors, particularly maxillary, are the teeth most susceptible to root resorption, obtaining peri-apical radiographs of these teeth every six months is recommended. This routine may assist the clinician in identifying individuals who display early signs of resorption, and in modifying their treatment plan to minimize the risk of severe resorption. On rare occasions, treatment must be stopped altogether, at least for a few months, to give the tissues time to rest.

A comparison between patients with a Class II Division I malocclusion, with an overjet smaller than 7 mm, who had been subjected to either a one-year, or a two-phase orthodontic treatment with fixed appliances revealed that the proportion of maxillary incisors with moderate to severe resorption was slightly higher in the one-phase treatment group (Birn et al. 2005). There was only a slight increase in frequency of root resorption in teeth with irregular root morphology. However, significant associations were found to exist between root resorption, the magnitude of overjet reduction, and the duration of treatment.

The question arises of whether all orthodontic techniques are responsible for causing equal frequencies and extents of root resorption. The comparison of peri-apical radiographs by a number of research teams has revealed differences in this regard between certain methods of tooth movement. In one study, patients treated...
of the prerequisites for avoiding orthodontic root resorption is the use of rectangular wires with a diameter smaller than that of the bracket, thereby applying light torque forces to the teeth.

With regard to the incidence of orthodontic root resorption, it might be interesting to know which teeth are more susceptible, those with fully formed roots or those with immature, short roots. Measurements of maxillary incisors’ root length before and after treatment for correction of a Class II/1 malocclusion (Mavragani et al. 2002) revealed that the immature teeth continued to grow and elongate during treatment, while the mature teeth were shortened by resorption.

A similar question to the one whether there is a specific gene or combination of genes whose activation will precipitate orthodontic root resorption has been asked regarding the identity of genes responsible for the development of orofacial clefts (Perucchini 2002). Here, there is a complex mode of inheritance with the possible involvement of two to 20 genes. Transgenic mice lacking transforming growth factor (TGF) β3 are born with a cleft palate phenotype. An association between TGFβ3 and cleft lip was detected in an Iowa population, leading to a search for mutations in this gene in this population, as well as in families with cleft lip from the city of Columbia. No mutations were identified in the coding region of TGFβ3. However, a polymorphic variant was found in the upstream regulatory that may alter the gene’s function.

A similar search was performed in families whose members had orthodontic root resorption, with 15 % of maxillary incisors showing root resorption apparently dependent on this association. Furthermore, individuals homozygous for the IL-1β allele A were found to have a 5.6-fold increased risk of resorption of less than 2 mm compared with those not homozygous for this gene.

It is concluded that orthodontic root resorption may be caused by a number of contributing elements acting separately or in combination. Most prominent factors are faulty mechanics, systemic diseases and modifications in specific genes. The main tool at the disposal of the orthodontist to avoid causing root resorption is the exclusion of unwarranted tooth movements during the entire course of orthodontic treatment. Patients treated in this way require relatively short treatment completions times. The use of appliances that generate forces that do not injure the PDL also reduces the risk of root resorption. Hence, these conclusions imply that avoidance of root resorption is primarily in the hands of the orthodontist.

The biological nature of an optimal orthodontic force

The discussions earlier in this article have revealed that tissue remodelling that facilitates orthodontic tooth movement is performed by various cell types. Some of these cells are local, such as fibroblasts and bone surface lining cells; other cells are migratory, like macrophages and lymphocytes, but evidently play a crucial role in modulating the effect of mechanical forces on para-dental cells. Thus, an optimal orthodontic force is capable of evoking an inflammatory response in para-dental tissues, leading to remodelling of these tissues and tooth movement in a desirable direction.

In an attempt to provide a rationale for the use of magnets in orthodontics, in 1998 Blechman proposed that static magnets generate electromagnetic fields that stimulate bone formation in PDL tension sites, thereby reducing tooth mobility, pain and discomfort. He stated that in routine orthodontic treatment, bone formation lags behind resorption, causing widening of the periodontal space and increased tooth mobility. Re-examination of histological sections of cat jaws after seven and 14 days of combined orthodontic force/electric stimulation (Davido vitch et al. 1980) supported Blechman’s proposition that exogenous electric signals increase the amount of new bone formation in PDL tension sites. These observations suggest that an optimal orthodontic force is one accompanied by an additional signal, such as an electric current, which accelerates the rate of alveolar bone formation.

Experiments with avian long bones in vitro suggested that the features of an optimal force for evoking osteogenic reactions, Lamyn and Rubin (1984) observed that the most efficient force was dynamic (intermittent) rather than static (continuous). A short duration of between five and ten minutes a day was adequate to stimulate potent periosteal and endosteal osteogenic reactions. The force magnitude was found to be of importance, defined as optimal being in the range of 2,000 to 4,000 microstrain. However, this magnitude could be much lower, provided the frequency of force application was increased.

The target cells in these experiments were periosteal osteoblasts and osteocytes, and the molecules responsible for bone’s “strain memory” were glycosaminoglycans in the mineralised ECM.

An orthodontic equivalent of these experiments was performed in rats by Gibson et al. (1992). They report that only one hour of force application was sufficient to cause maxillary molars to move mesially for two weeks. However, in order to achieve this movement the extraction of the mandibular molars was required to prevent occlusal contact. This approach is not a viable option in human orthodontic practice.

How to move teeth without resorbing their roots

The discussion earlier in this article has highlighted how orthodontics is based, in the majority of cases, on transmission of mechanical forces to teeth through hard brackets (metallic, ceramic or composite), attached firmly to the dental crown. The list of popular orthodontic appliances in use includes the edgewise Straight Wire appliance by Andrews in 1976 in its numerous varieties, the Regg appliance in 1971 and its Tip-Edge version by Kesling in 1986, as well as the SPEED appliance by Hanson in 1980. In all these methods, emphasis is placed predominantly on the position of the crown, whereas minimal attention is devoted to the root ends and their surrounding tissues. Consequently, root resorption, dehiscences and bone lysis occur frequently in most orthodontic patients. Kaley and Phillips (1991) report that radiographs obtained post-treatment from 200 patients treated with an average of 0.4 Nm of mesial or distal force produced a straight wire appliance for an average of 54 months revealed that over 90 % of the maxillary central incisor roots had been resorbed to some extent, from blunting to over one quarter of their length. The percentage was nearly as high for the lateral incisors. Maxillary incisors were four to five times more likely to display severe root resorption if they had undergone torquing.
The most significant situation associated with root resorption in the maxillary arch was the approximation of incisor apices against the lingual or labial plates of bone. In such cases, the likelihood of severe root resorption increased by 20 times. Moreover, the degree of resorption correlated with the overall length of treatment time and the duration of full engagement of rectangular wires in the brackets. In a study of dental radiographs of 42 patients treated by the Begg technique (Goldson & Henrickson 1976), all subjects developed root resorption at the completion of treatment. Furthermore, a laminographic study of patients treated by this method revealed that the resorptive damage to the maxillary incisors is associated with uncontrolled tipping and subsequent round tripping of the teeth (Fen Horve & Mulie 1976).

A rare opportunity to examine histologically the maxilla of a patient in the midst of treatment with a Straight Wire appliance was granted to three orthodontists (Wherbein et al. 1976). The jaw was obtained from a 19-year-old patient who had been killed against the lingual or labial plate of alveolar bone. In such cases the malocclusion was discovered as contributing to this condition. These histological findings revealed that the resorptive process could not have been diagnosed as contributing to this condition. These histological findings revealed that the resorptive process could not have been diagnosed.

Radiographic cephalometry and computed tomography were utilized in studying the maxillary and mandibular alveolar bone labial and lingual plates following incisor retraction (by controlled tipping) in patients with hi-maxillary protrusion (Sari-kaya et al. 2002). A comparison of pre- and post-retraction records revealed that in both jaws there had been significant reductions in the width of the lingual bone as a result of treatment, with some patients demonstrating depressions that were not visible macroscopically or cephalometrically. It was concluded that forcing dental roots against cortical bone may cause adverse sequelae.

Concerned about the extent of tissue damage encountered by his patients who had been treated with the Edgewise and Begg appliances, De Angelis (2005) concluded that this damage, particularly root resorption, is associated with the overall length of treatment time and treatment with rectangular wires that fully engage the Edgewise bracket slot, amongst other factors. The jiggling of teeth in the sagittal, vertical and transversal planes, as well as the round tripping or uncontrolled tipping of teeth was also identified as contributing to this condition. In addition, root resorption can be caused by bringing dental roots into contact with the cortical plates of alveolar bone.

Conclusion

It may be concluded that an optimal orthodontic force is one that is supplied with full attention to the anatomical constraints and peculiarities of every individual patient. Therefore, orthodontic treatment plans must focus on the desired changes in dental root position, rather than on adherence to some “universal” system of mechanotherapy as a solve-all approach. Issues such as force magnitude, duration and direction must be considered individually for each patient, with the clear understanding that anatomical constraints should not be violated or ignored during the correction of a malocclusion. When potentially damaging movements of dental roots are avoided, orthodontic forces may be considered biologically and clinically optimal. From this point of view, the amalgamated technique appears presently as the closest to being defined as an optimal mechanotherapeutic system biologically, as well as clinically. A complete list of references is available from the publisher.
"Many errors are related to violation of the biological width"

An interview with Dr Eduardo Mahn, Chile, on all-ceramic restorations

Dr Eduardo Mahn

Restoration using dental ceramics is commonly associated with aggressive preparation and short survival rates, says dentist Eduardo Mahn from Chile. In a live webcast to be presented by the Dental Tribune Study Club in October (2 Oct. 2011, 1 p.m. Indian Standard Time), the implantology and aesthetic dentistry expert will discuss the aesthetic potential and indications for modern ceramics. Dental Tribune Asia Pacific spoke to him in advance about these concepts, biological aspects and the reason that all-ceramic restorations should be taught at dental schools.

Dental Tribune Asia Pacific: Your DT Study Club live webcast will be on dental ceramics. In what aspects have these materials improved in recent years?

Dr Eduardo Mahn: That’s a tricky question as dental ceramics have seen quite a development in recent years. Probably the most significant improvement is the strength of more than 1,000 MPa for example with zirconium oxide, which made the fabrication of multi-unit bridges possible. Equally significant and even more relevant is the improvement in aspects like aesthetics, versatility and simplicity. Lithium disilicate based ceramics have become available for CAD/CAM and press technology which means that we are now able to make monolithic crowns or veneers without any layering step. This is great news for dental technicians, as these materials help to make the fabrication process much easier and faster. In addition, dentists benefit from lower costs and more predictable clinical results.

Many clinicians however seem to ignore the potential that ceramics have to offer. What are the reasons for this?

I guess the problem starts already before education. In the past five years, I have had the opportunity to visit more than 100 dental schools and in most of them all-ceramic restorations are not part of their undergraduate programmes. For this reason, many young dentists are not familiar with working with modern ceramics when they start their practice, and thus keep using porcelain-fused-to-metal (PFM) crowns owing to lack of experience and information.

Where do all-ceramics fit in with regard to the minimally invasive concept?

All-ceramic restorations are a pillar of the minimally invasive concept. For example. Other commonly underestimated aspects are the effort and precision needed for oral rehabilitation. The clinical success of crowns or veneers depends largely on an accurate diagnosis, proper treatment selection, precise preparation and impression, lab work and clean cementation.

There are plenty of resin cements available on the market. What should clinicians consider when choosing and applying these materials?

There are many new ceramic crowns from companies which tell you the story of their chemistry and how they can improve existing solutions. This means that we are now able to make monolithic crowns withstanding more than 1,000 MPa. This is an important news as catastrophic failures can happen when the bonding is poor.

Many clinicians however seem to ignore the potential that ceramics have to offer. What are the reasons for this?

I guess the problem starts already before education. In the past five years, I have had the opportunity to visit more than 100 dental schools and in most of them all-ceramic restorations are not part of their undergraduate programmes. For this reason, many young dentists are not familiar with working with modern ceramics when they start their practice, and thus keep using porcelain-fused-to-metal (PFM) crowns owing to lack of experience and information.

New digital devices have the potential to improve diagnostic outcomes as well as treatment....
Inlays and onlays with a light-curing single-component material

A clinical case using Telio CS Inlay and Onlay from Ivoclar Vivadent

Dr Ronny Watzke
Liechtenstein

Treatment with ceramic inlays and onlays is becoming more popular in dentistry. Depending on whether the restorations are created chairside or labside, the prepared teeth may require temporisation. Telio CS Inlay and Onlay from Ivoclar Vivadent are two light-curing, single-component materials that allow the quick, straightforward and aesthetic temporisation of inlay and onlay preparations directly in the dental practice.

This report (Figs. 1-4) describes the fabrication method for a temporary Telio CS Inlay, including the desensitisation of the dentine surface with Telio CS Desensitizer and removal of the temporary before the try-in and insertion of the final restoration. Cervitec Liquid or Cervitec Gel (Ivoclar Vivadent) may be applied during the temporisation stage to ensure that the gingiva is inflammation free at the time of inserting the final restoration. This is particularly important if gingival tissue has been removed to expose the preparation margin prior to impression taking.

Generally, temporary restorations are fabricated either directly in the dental practice or indirectly in the laboratory. When direct temporary restorations are made, it is essential that the adhesive bond of the final ceramic restoration to the dentine is achieved, whilst offering excellent adhesion to the prepared tooth structure. The use of a direct temporary can be light-cured within 10 seconds. In the process, a high curing depth is achieved. An antimicrobial substance is added to the materials to prevent the risk of unpleasant colour formation.

Temporary restorations made of Telio CS Inlay and Onlay can be removed in a single piece. As an additional advantage, Telio CS Inlay and Onlay do not adversely affect the adhesive bond of the final restoration. Moreover, they allow the application of a desensitiser, Telio CS Desensitizer, to prevent hypersensitivities during the temporisation stage.

Telio CS Inlay and Onlay are available in two shades (transparent and universal) and two delivery forms: syringes and Cavifils for improved intra-oral application.
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Survival rates at 36 months and minimal crestal bone resorption

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Table 1: Mean and standard deviation values of the standard soft tissue parameters over a 3-year follow-up period. The displayed values for KM and PD are in mm.

Conclusions

- **Strict success and survival criteria** were fulfilled resulting in 100 % success and survival rates at 36 months.
- **Minimal crestal bone resorption** was demonstrated.
- **Good aesthetic and clinical results** were seen at 12 and 36 months.
“Horrible Bosses” — Good Guys Gone Bad

Annemarie Fischer

LEIPZIG, Germany: Director Seth Gordon (“Freakonomics”, “Four Christmases”) brings another example to Hollywood’s long line of freaky dentists, with Jennifer Aniston playing a sex maniac who harasses her male assistant and takes advantage of her unconscious patients. “Horrible Bosses” by New Line Cinema also challenges common film narratives.

“Greed, for lack of a better word, is good. Greed is right. Greed works”—epitomized Gordon Gekko, the “American Dream” of the 1980s in the legendary line of “Wall Street.” In postcrisis Hollywood cinema, this dream has been replaced by widespread economic instability, while the driving hunger for “more” has been reduced to the bare struggle for food and recognition.

Aniston’s character, who is barely on-screen, is not the only obnoxious boss in this movie. There is company owner Bob Pellit (Colin Farrell), for example, who is having cocaine-powdered sex parties, and Dave Harken (Kevin Spacey), all-mighty president of a brokerage firm, who controls his employees with the dangling carrot of promotion.

“Horrible Bosses” has a twisted plot of three white-collar workers—Nick Hendricks (Jason Bateman), Kurt Buckman (Jason Sudeikis) and Dale Arbus (Charlie Day)—who are hindered in their pursuit of happiness by this troika of sexist, sadist, and soulless superiors. In a system where they enjoy no protection, the only solution for these workers is to physically liberate themselves from their oppressors for the greater, righteous, and sustainable good. Their liberation struggle then turns to drastic measures. This is when a ‘murder consultant’ (played by the fabulous Jamie Foxx) appears on the scene.

The movie touches a nerve here, and tries to challenge boundaries there—most notably through its strong language—but it does not pursue this at its critical moments. While the beginning is somewhat predictable, it is the twists and turns that, in the later part of the film, dominate the events.

Attimes, the portrayal of the characters as black and white makes it difficult to identify with them. However, Gordon and writer Michael Markowitz have gathered a first-class cast, which makes the movie work for the audience most of the time.

Inspired by some employees’ real-life experiences, akin to “The Devil wears Prada” and “The nanny Diaries,” “Horrible Bosses” follows a recent Hollywood trend of portraying bosses as the enemy. It also seeks to challenge the system. Notably, its anti-Darwinist ending, mocking Gekko’s visionaries leaves one wanting more.

“Horrible Bosses” is out in the theaters throughout the Asia-Pacific region.

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