India to get stand-alone dental insurance

New oral health care scheme expected to be launched in June

Daniel Zimmermann

NEW DELHI, India/HONG KONG/LEIPZIG, Germany: The Insur ance Regulatory and Development Authority in India has ap proved a stand-alone insurance scheme that could help millions of patients throughout the country gain access to much-needed dental care, Indian newspapers have reported. The scheme, which is said to be implemented in June, will cover basic dental procedures, such as check-ups, fillings and extractions, as well as treatment for oral cancer.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

Proposed by the Indian Dental Association in 2005, the plan has been under review since then. It has been announced that the General Insurance Corporation, an insurance company owned by the government, and three other public insurance companies will form part of the scheme. Two insurance options will be offered for a premium of Rs 1,000 (US$22) and Rs 2,000 (US$44) per year.

Currently, most dental fees in India are paid out of pocket and in the public sector, average individuals in India drop to approximately Rs 6,000 last year, according to an Indian newspaper. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.

While the costs for basic dental procedures in India start from as low as US$10, complex treatments like bridge work or implants can add up to US$500. The average annual income in India dropped to approximately US$1,200 last year, according to a recent study by the ET Intelligence Group consulting group.
Australia commits to dental health care reform, sets up taskforce

Daniel Zimmermann

HONG KONG/LEIPZIG, Germany: In a last minute effort to commit to dental health care reform, the Australian government has decided to provide additional funding of AU$555 (US$56 million) to public dental services over the next four years. The funding will be used to establish more dental internship programmes in order to reduce waiting times for dental treatment, government officials said in May. They also announced to set up a National Advisory Council on Dental Health to plan further steps to reform the inadequate public dental system.

The Greens have welcomed the commitment, which they see as a first step in long-term dental care reform. They reminded Labor that dental care also has to remain top priority in next year’s budget. The coalition between both parties has struggled politically over the last two months regarding how much money should be spent to improve the country’s poor public dental health care system. The Greens’ promotion of a universal dental care scheme for all Australians was a key factor for forming a coalition with Labor in last year’s federal elections.

In March, Labor Minister of Health Nicole Roxon announced that dental care funding would be scrapped altogether from this year’s budget. Dentistry representatives said that although the funding will help patients nationwide to access delayed dental treatment, it will probably not be enough to cut down waiting times, particularly in rural areas. In addition, the government should be focusing on ways to entice dentists to work in underserved areas like the South.

“Things like scholarships for dental graduates so that they’re paid during dentistry and when they graduate they commit themselves to rural areas or relocation payments like the government has done for general practitioners,” Dr Angela Pierce, President of the South Australian Branch of the Australian Dental Association told the ABC News network.

Waiting times for public dental services in Australia have remained high over the last few years owing to the shortage of dental staff. According to a 2008 report by the Australian Institute of Health and Welfare, patients relying on public dental services are three times more likely to suffer from dental diseases such as caries or periodontal disease.
Nepalese teeth to uncover origins of birth defects

Daniel Zimmermann
DIT

HONG KONG/LEIPZIG, Germany: The remote village of Jiri in Nepal is just a regular stop-over for trekkers on their way to Mount Everest. For Prof. Richard J. Sherwood from Dayton in the US, however, the small group of natives living there could hold the key to understanding the origin of common birth defects such as cleft lip or palate. In a field study, the anthropologist and biomedical expert is currently examining the teeth of hundreds of villagers, which, according to him, could explain why the early development of facial features can go seriously wrong.

The reason Prof. Sherwood chose such a remote place for his study was pragmatic. The population of Jiri has been part of several biomedical studies since the 1980s and, therefore, much of the groundwork, including genotyping by blood sampling, has already been done. In addition, the local ethnic group in Jiri, the Jirels, have a homogeneous diet and have never received orthodontic care, which are two factors important for studying natural variations in the craniofacial apparatus, Prof. Sherwood says.

In order to obtain data quickly, he set up a small dental clinic in the village in January last year, where local staff takes traditional dental casts and sends them to the US regularly. At Wright State University in Dayton, they are digitally scanned and examined further. Prof. Sherwood visits the site himself two or three times a year. According to him, there are over 15 people working on the project including a dentist, dental assistant and physician in Nepal. “Before we established the dental clinic, there was no local dentist and most people had never seen a dentist in their life,” he says. “Participants are given a tooth cleaning and general oral exam as part of our study. We also provide some services, such as fillings, free of charge.”

A pilot study back in 2005 produced 200 impressions, however, Prof. Sherwood told Dental Tribune Asia Pacific he is aiming to take samples from at least one-fifth of Jiri's current population—about 1,500 people—until funding runs out in 2012. His study has received more than US$2 million from the National Institute of Dental and Craniofacial Research, a US federal agency based near Washington, DC, and part of the National Institutes of Health, which supports research with the potential to improve oral, dental or craniofacial health.

Prof. Sherwood intends to publish preliminary results next year. Through the study of normal variation, he hopes to determine the chromosomal regions that could explain why cleft palates develop differently, as well as gain new insights into other dental conditions, such as crowding.

According to the American Speech-Language-Hearing Association, one out of every 700 newborns (more than 6,000) in the US is affected by cleft lip and/or palate each year. In less developed countries like China, reports suggest that tens of thousands are affected, most of which are left untreated, leading to death or, in the majority of cases, lifelong impairments. Besides genetics, the condition has also been linked to the mother’s poor health habits, such as smoking, or environmental factors, including exposure of the foetus to drugs, pesticides or radioactivity.

“Abnormalities can be thought of as the extreme ends of the normal distribution in a trait but even relatively minor conditions, for example malocclusions, may have a significant impact on the psychological well-being of individuals if they feel self-conscious about how they look,” Prof. Sherwood concludes. “If we are able to identify the genetic influences on normal variation it will, of course, have implications on the study of facial abnormalities.”

ROXOLID™
THE NEW “DNA” OF IMPLANT MATERIALS

ROXOLID™ — Exclusively designed to meet the needs of dental implantologists.

Roxolid™ offers
Confidence when placing small diameter implants
Flexibility of having more treatment options
Designed to increase patients’ acceptance of implant treatment

www.straumann.sg

VISIT STRAUMANN BOOTH AT A11 AND A13, HALL 3E AT HKIDEAS

9 a.m. “Surgical Site Assessment for Optimal Outcomes with Implant Therapy”
2 p.m. “Bone Augmentation in Implant Therapy - Staged vs. Simultaneous Approaches”
By Dr. Stephen Chen • 4 June 2011

COMMITTED TO SIMPLY DOING MORE FOR DENTAL PROFESSIONALS
Dear reader,

In contrast to their medical colleagues, dental stem cell researchers have been working ‘under the radar’ for quite some time. The recent conference on dental and craniofacial stem cells in New York could be the first sign that experts in this field have become fully aware of the potential regenerative technologies that can hold for the future of dentistry and oral health.

With the current state of research, however, it will still take years, probably decades, before even first human trials will receive approval by regulatory agencies but help could come from the fact that dental stem cells hardly raise any ethical outrage, a discussion that commonly restricts research with stem cells derived from other sources like human embryos. So ironically, we might be able to see clinical applications in dentistry before they are even introduced to general medicine.

Much will depend on the cooperation between the medical and dental field, as non-dental cells have been proven to be able to re-build tooth cells and vice versa. With the recent conference and another already on the horizon, dentists have definitely taken a giant leap.

Yours sincerely,

Daniel Zimmermann
Group Editor
Dental Tribune International

A dental insurance for India

Considering the growth of the Indian economy, prospects for dental insurance remain unexplored. Unlike most Western countries, specific dental insurance plans are not common and oral health insurance is usually integrated within general health insurance schemes. This type is provided by insurance companies as part of their own general health insurance schemes, such as a health advantage policy or student medical policy.

In a comprehensive survey of 5,120 people from all parts of Indian society, our department found that none of those surveyed had any kind of dental insurance. This indicates the urgent need for such a scheme. Over three-quarters (78%) said that they would make use of dental insurance if offered, if the plan was suited to their needs. None of the respondents knew of a dental insurance company.

The Indian Dental Association has been trying to establish an all-inclusive dental health-care insurance scheme since 2003. Until now, however, the organisation had been unable to achieve anything substantial in this regard. Once introduced in June, the policy may not be well received, as there has been no advertisement campaign or press coverage of the scheme and no public announcements have been made.

If well received, the scheme may offer many benefits, such as oral health-care workers being able to reach every class and village across the country. In addition, the scheme would serve as a good motivation to visit a dentist regularly and to complete their treatment, as they will not need to pay for further treatment.

If the government creates awareness of the benefits of dentistry for longevity of teeth across society, insurance policymakers should support it by offering beneficial dental insurance schemes for the masses.

Contact Info
De Ravi Sher Singh Tour
India

“Please choose a stem cell of your liking.”

Mercury is toxic to poor and rich alike. The mercury in “silver” fillings is the largest contributor to the human body burden of this highly toxic heavy metal.

Dr Harold Loe, then Director of the National Institute of Dental Research in the US, stated in the 2003 September edition of the Dental Products Report that “first filling is a critical step in the life of a tooth. Using amalgam for the first filling requires removing a lot of the tooth substance, not only diseased tooth substance but healthy tooth substance as well.

So, in making the undercut you sacrifice a bit, and this results in a weakened tooth. The next thing you know the tooth breaks off, and you need a crown. Then you need to repair the crown … and so it continues to the stage where there is no more to repair and you pull the tooth.

With the first filling you should do something that can either restore the tooth or retain more healthy tooth substance. Use new materials-composites or materials you can bond to the surface without undercuts. You can do this with little removal of the tooth substance so that the core of the tooth is still there.”

ART has been tested for years with excellent results. It is the answer to getting rid of amalgam even for the poor, despite the FDA and ADA claim that poor children will not have their cavities filled if mercury fillings are banned.

Bob Reeves, USA

To the Editor

Re: “No-drill restorations and amalgam equally successful” (Dental Tribune Asia Pacific, Vol. 9, No. 1+2, page 5)

PROMEDICA Dental Material GmbH

Tel. +49 4321/541773 Fax +49 4321/51909
Internet: http://www.promedica.de · eMail: info@promedica.de

PROMEDICA
Highest quality made in Germany

- high quality glass ionomer cements
- first class composites
- innovative composites
- modern bonding systems
- materials for long-term prophylaxis
- temporary solutions
- bleaching products...

All our products convince by
- excellent physical properties
- perfect aesthetic results

New Shade for ART

Glass ionomer filling cement
• perfect packable consistency
• excellent durable aesthetics
• also available as application capsules
• now available in shade A2

Dental desensitizing varnish
• treatment of hypersensitive dentine
• fast desensitization
• fluoride release
• easy and fast application

Innovative luting system
• suitable for all material classes
• no etching and no bonding
• fast and easy cementation
• dual-curing for flexibility and safety

Visit us at
SINO DENTAL 2011
Beijing
Booth G25
German Pavillon

Fluoraphat pro
- effective desensitization
- fluoride release

Now Available in Shade!

Perfect Fillings

SPE CF E R E C T E

S EXCELLENT

SN OW AVAILABLE IN SHADE!
Blood vessel cells aid tissue repair in teeth

Daniel Zimmermann  
DTT

NEW YORK, USA/LEIPZIG, Germany: New research presented at the recently held first International Conference on Dental and Craniofacial Stem Cells in New York in the US could mean a breakthrough in future tissue and organ repair. In an experiment involving incisors from rodents, a mammal species that includes mice and squirrels, researchers from the UK, Brazil and the US found that connective tissue cells can transform into specialised cells to repair damaged tissue in teeth.

Their results have been published in the latest issue of Proceedings of the National Academy of Sciences of the USA.

Previous research suggested that so-called pericytes, usually found in small blood vessels, have the potential to transform into different cells. This new study is the first claiming to have found genetic evidence that they can also act as stem cells to regenerate lost or damaged tissue. In the experiment, they were transplanted into the tooth, where they transformed into dental pulp cells.

“This is the first time vascular cells have been shown to differentiate into specialised cells during a natural repair process,” says Prof. Paul Sharpe from the Department of Craniofacial Development at the Dental Institute at King’s College London, who led the study. “In addition to the obvious significance for understanding the cellular mechanisms of tissue repair, it also has wider implications for areas of regenerative medicine/dentistry directed towards stimulat-

References:

Visual representation of dentine cross-section and dynamic reparative layer

Welcome to a new layer of expertise in dentine hypersensitivity

Today you can go further than treating the pain of dentine hypersensitivity. Today you have new Sensodyne® Repair & Protect containing NovaMin® calcium phosphate technology. NovaMin® builds a reparative hydroxyapatite-like layer over exposed dentine and within the tubules1-6

Starting to form from the first use, this reparative layer creates an effective and lasting barrier to the pain of dentine hypersensitivity1-6

Specialist in dentine hypersensitivity management

Reference:

Visual representation of dentine cross-section and dynamic reparative layer

Welcome to a new layer of expertise in dentine hypersensitivity

Today you can go further than treating the pain of dentine hypersensitivity. Today you have new Sensodyne® Repair & Protect containing NovaMin® calcium phosphate technology. NovaMin® builds a reparative hydroxyapatite-like layer over exposed dentine and within the tubules1-6

Starting to form from the first use, this reparative layer creates an effective and lasting barrier to the pain of dentine hypersensitivity1-6

Specialist in dentine hypersensitivity management

Reference:

Visual representation of dentine cross-section and dynamic reparative layer

Welcome to a new layer of expertise in dentine hypersensitivity

Today you can go further than treating the pain of dentine hypersensitivity. Today you have new Sensodyne® Repair & Protect containing NovaMin® calcium phosphate technology. NovaMin® builds a reparative hydroxyapatite-like layer over exposed dentine and within the tubules1-6

Starting to form from the first use, this reparative layer creates an effective and lasting barrier to the pain of dentine hypersensitivity1-6

Specialist in dentine hypersensitivity management

Reference:

Visual representation of dentine cross-section and dynamic reparative layer

Welcome to a new layer of expertise in dentine hypersensitivity

Today you can go further than treating the pain of dentine hypersensitivity. Today you have new Sensodyne® Repair & Protect containing NovaMin® calcium phosphate technology. NovaMin® builds a reparative hydroxyapatite-like layer over exposed dentine and within the tubules1-6

Starting to form from the first use, this reparative layer creates an effective and lasting barrier to the pain of dentine hypersensitivity1-6

Specialist in dentine hypersensitivity management

Reference:

Visual representation of dentine cross-section and dynamic reparative layer

Welcome to a new layer of expertise in dentine hypersensitivity

Today you can go further than treating the pain of dentine hypersensitivity. Today you have new Sensodyne® Repair & Protect containing NovaMin® calcium phosphate technology. NovaMin® builds a reparative hydroxyapatite-like layer over exposed dentine and within the tubules1-6

Starting to form from the first use, this reparative layer creates an effective and lasting barrier to the pain of dentine hypersensitivity1-6

Specialist in dentine hypersensitivity management

Reference:
Ortho-specialist appoints former J&J exec as CEO

HONGKONG/LEIPZIG, Germany: Former Johnson & Johnson executive David N. Edwards will replace Dr Mervyn Fathianathan as CEO of BioMers, a Singapore-based company specializing in orthodontic appliances. Edwards, who has also worked for Bausch & Lomb and Nestlé, will take over the responsibilities for the company’s global business, starting immediately. Dr Fathianathan will remain Chief Technical Officer and oversee future development and research activities, the company said.

Founded in 2005, BioMers is a National Medical Devices Company said. BioMers currently distributes its products in Singapore and the US only. The company is partially owned by Nanostart, a German-based venture fund with representation in Singapore.

New standard launched by ISO

GENEVA, Switzerland: Around 1.5 million different medical devices are available worldwide. Every year, thousands of new products are launched. The International Organization for Standardization (ISO) has introduced a new International Standard that aims to assess the safety and performance of such devices and improve patient safety.

ISO is a global network that identifies international standards that are required by businesses, governments and society. The non-governmental organization develops these standards in partnership with the sectors that will put them to use, adopts them by transparent procedures based on national input and delivers them to be implemented worldwide.

According to ISO, the new standard ISO 14155:2011 will provide a technical basis for regulation and minimize technical barriers to trade. It was developed to encourage medical manufacturers to guarantee that their products do not compromise patient safety.

In 2007, the World Health Organization reported that more than one million accidents attributable to medical devices occur annually in the US. Furthermore, in some developing countries, half of the medical equipment was found to be unusable or only partly usable.

The new standard addresses good clinical practice for the design, conduct, recording and reporting of clinical investigations carried out on humans to assess the safety or performance of medical devices for regulatory and other purposes. This International Standard specifies general requirements intended to protect the rights, safety and well-being of humans and to ensure the scientific conduct of the clinical investigation and the credibility of the clinical investigation results.

The requirements are also intended to define the responsibilities of the sponsor and principal investigator, as well as assist sponsors, investigators, ethics committees, regulatory authorities and other bodies involved in the conformity assessment of medical devices.
More flexibility and treatment options with Roxolid®

Straumann’s small-diameter implants in clinical use

Narrow implants are very beneficial in reduced width crests, as they may avoid systematic horizontal bone augmentation if the remaining bone is in the correct prosthetic axis. Roxolid® small-diameter implants from Straumann also offer more flexibility and can provide dentists with new treatment options. Depending on the specific case, they can be placed more lingually or buccally than a regular implant which helps to adjust possible eccentricity of the prosthetic axis. Roxolid® implants in the remaining bone (see Case 2).

Originally, I did not use small-diameter implants frequently because I did not feel confident doing so, owing to the higher risk of fracture reported for narrow implants in the literature. Another concern was the reduced surface for osseointegration compared with regular-diameter implants.

The combination of higher strength and excellent osseointegration properties of Roxolid compared with the features of commercially available pure titanium implants gave me new confidence. Roxolid implants allow me to benefit from all the specific advantages of small-diameter implants but with the necessary degree of predictability. In non-aesthetic regions, it may allow avoidance of GBR procedures and less time-consuming treatment.

Another reason was Straumann’s approach in launching the product. I saw a slow and safe product introduction, based on extensive testing and clinical data. The strength of the material was proven by laboratory tests. Various clinical and preclinical studies ultimately convinced me. It will be interesting to observe the long-term behaviour of this new material and the clinical data it generates. We have to remain cautious, however, even if the results of the mechanical testing are very promising.

Case 1: Partially edentulous patient with a narrow bone ridge in a non-aesthetic zone (premolar)

Two implants had to be placed in positions #44 and #45. In the region of #45 there was sufficient bone height over the VIII canal. By contrast, the ridge width was very narrow (Fig. 1). An augmentation procedure was needed as a prerequisite for the placement of a regular-diameter implant (e.g. Ø 4.1 mm). In this case, the Ø 3.3 mm Roxolid® implants were a valuable alternative in order to use the existing bone substance better—particularly as the remaining bone was in the right prosthetic axis. As there was not much space, the drilling had to be precise. The bone walls were very thin and the implant shimmared through slightly. A small delisence of 1 mm was visible at the buccal plate of #45 and #44, but it did not need any augmentation (Figs. 2a, b). As there was no aesthetic issue (Fig. 4), the polished implant neck was intentionally placed above the crest in order to avoid bone loss around the neck. A two-element bridge was placed on the implants (Figs. 3a, b). The implant neck was slightly visible clinically on the vestibular side. The inter-implant papilla was absent. Even when the patient smiled broadly (Fig. 4), the border of the implant neck was not visible, as this region was hidden. It is very important to analyse the smile line of the patient before placing implants in this way.

In this case, Roxolid® allowed less complicated surgery to be performed by avoiding a larger augmentation in a non-aesthetic zone. The patient benefited from a shorter treatment time.

Case 2: Partially edentulous patient with eccentric bone

The X-ray measurement in region #44 showed a crestal width of over 7 mm. Therefore, there was sufficient bone to place a Ø 4.1 mm implant. However, the bony substance was eccentric in relation to the prosthetic axis and the emergence profile. The gutta-percha spot on the DentaScan was in a more buccal position than the available bone (Figs. 3a–19). The root of the adjacent #45 was also placed very buccally (Figs. 3a–21). A vestibular bone concavity was clinically visible on #44 (Fig. 3b). After preparing the implant bed for a Ø 5.5 mm implant, the buccal bone wall thickness was up to 1 mm and the lingual wall thickness was over 2 mm.

The choice of a Straumann Standard Plus Ø 5.5 mm Roxolid® implant instead of a regular-diameter implant allowed place-
W&H sterilizers created for you!

Lisa and Lina, two type-B sterilizers with one single aim:

- to meet your needs and adapt to your practice requirements through Lisa’s automatic traceability system and made-to-measure cycles,
- and the essentials of sterilization with Lina.

wh.com
ment of the implant in an ideal position, particularly when anticipating the future prosthetic restoration and avoiding vestibular bone augmentation (Fig. 6).

The small dehiscence of 2 mm was not compensated for. Thanks to an initial lingually displaced incision, a large and thick band of keratinised gingiva was preserved buccally (Fig. 7) at the end of the surgery to prevent further buccal recession of the gingiva. Prior buccal gingival recession on #45 could be observed. The preoperative scan (Figs. 5a–21) offered an explanation in form of a large bony dehiscence of the buccal plate on this tooth. The patient did not want any mucogingival surgery for root coverage. Eight weeks after surgery, a three-unit premolar bridge was seated on implants at teeth #44 and #46.

A Roxolid® Ø 3.3 mm implant, in this case, made it possible to place an implant in an ideal position without performing an augmentation procedure, allowing for a less complicated surgical procedure. The patient received an aesthetic solution that would not have been recommended in the anterior aesthetic zone (teeth #13 to #23), where a bone augmentation procedure would have been a prerequisite.

Case 3: A bone-preserving solution for an elderly, fully edentulous patient

A fully edentulous 83-year-old patient was to be given an implant-retained removable denture. Two implants were to be placed inter-foraminally in the #43/42 and #33/32 regions. There was sufficient bone height, but the crest was very thin, which would have required a larger augmentation (bone block) or major grinding of the ridge (Figs. 9a & b).

The placement of Ø 3.5 mm implants allowed the vestibular dehiscence defect in region #55 to be limited to 5 mm (Fig. 10a) and to 1 mm in region #55 (Fig. 10b). Two small flaps were elevated in order to minimise the surgical trauma. Two Straumann Standard Plus Roxolid® implants (l. 12 mm) were placed.

The initial lingually displaced incision preserved a nice amount of keratinised gingiva that was repositioned buccally around the polished implant necks and the healing screws (Fig. 11). After a six-week healing period, two LOCATOR® abutments were placed. The clinical check at three months showed good healing of the soft tissues, with a thick and wide band of keratinised gingiva around the implants. The panoramic X-ray (Fig. 13a) demonstrated that there was enough bony substance around the implants to prevent the risk of a mandibular fracture.

Even though there was sufficient bone height, the ridge was very thin in this case. Therefore, Roxolid® small-diameter implants were a valuable solution in order to avoid a more traumatic and more invasive solution.
Improved longevity and aesthetics in Class IV restorations
A clinical case involving Tetric N-Ceram and FRC Postec Plus from Ivoclar Vivadent

Dr Anun Biswas
India

Traumas and injuries in anterior teeth are common in young people and those active in sports and other physical activities. Treating such injuries with predictable, conservative and natural looking restorations is of primary concern for aesthetically conscious dentists. A new generation of nano-composite restorative materials and adhesives is helping dentists to place composite restorations in Class IV fractures conservatively. These materials provide restorations that closely resemble the form, function and aesthetic properties of natural teeth.

Many factors contribute to the appropriate design and material choice for the restoration of an anterior tooth, such as the patient’s age, occlusion, habits and aesthetic preferences.1,2 Laboratory-fabricated restorations and chairside direct restorations offer unique advantages, which should be considered by both the patient and dentist.1,3

This article presents a clinical case in which Tetric N-Ceram (Ivoclar Vivadent), a modern nano-composite resin restorative, was used in conjunction with FRC Postec Plus (also Ivoclar Vivadent), a glass-fibre-reinforced composite post, to achieve enhanced longevity, composite retention and superb aesthetics in an extensive Class IV restoration in a 15-year-old male patient. The young man presented with a large fracture of the right and left maxillary central incisors after a sports injury (Fig. 1). Intra-oral, peri-apical radiographic findings revealed pulp exposure. Immediate endodontic treatment was planned and completed in the same visit to relieve the patient of pain. In addition, impressions of both arches were taken to restore the patient’s smile line.

As the patient was young, the practitioner considered the patient’s aesthetic appearance to be of particular concern. Consequently, different treatment options such as direct and indirect restorations were discussed.

After the models had been prepared, a diagnostic wax-up was created (Fig. 2) and a high viscosity, silicone putty matrix was prepared. The putty matrix, once placed in the patient’s mouth, was used for spatial reference as a volumetric, 3-D guide for the placement of the composite restoration and to preserve the facial/lingual line angles.1,3

Treatment procedure
The patient opted for a restoration involving a direct composite layering technique and glass-fibre post placement for better composite retention. The composite shade was selected and a shade map for the layering technique was designed. In addition, the length and size of the glass-fibre post FRC Postec Plus were determined using post-operative, intra-oral radiographs.

The putty matrix was tried in the patient’s mouth for lingual and incisal fit. A bevel was prepared along the fracture line in the dentine using high-speed diamond burs and extended as a chamfer preparation on the palatal surface. A short bevel was prepared along the fracture line in the enamel using high-speed diamond burs and extended as a chamfer preparation on the palatal surface.

In order to achieve an additional blending of margins and increase the micro-mechanical bonding, the bevel was extended further to roughen the enamel. Under local anaesthesia, a size 2 FRC Postec Plus post was placed after completing the drill protocol to remove the gutta-percha material and widen the root canal to allow proper fit of the post. An intra-oral radiograph was taken to ensure optimum fit of the determined post length. After using 58% phosphoric acid (N-Etch, Ivoclar Vivadent) for better retention of the post, silanising it with Monobond-S (Ivoclar Vivadent) and applying Multilink Primer A and B (Ivoclar Vivadent) to the root, the post was cemented in place using Multi-Link Automix resin cement (Ivoclar Vivadent; Fig. 4).

Following this procedure, N-Etch was applied to the enamel for 20 seconds and to the dentine for 5 to 10 seconds (Fig. 1). The acid etchant was then removed with copious amounts of water and the moisture with a slow stream of air. The adhesive Tetric N-Bond (Ivoclar Vivadent) was applied using the VivaPen (Ivoclar Vivadent) and brushed in for at least 10 seconds (Fig. 6). The solvent of the bonding agent was removed with a gentle stream of air and light-cured with a bluephase C8 curing light (Ivoclar Vivadent) using the low start programme.

The silicone putty matrix was placed on the teeth and a first increment of a flowable composite resin, Tetric N-Flow in shade A1, was placed on the palatal chamfer area in order to achieve a tight seal (Fig. 7). Then, the material was polymerised. A thin layer of Tetric N-Ceram composite resin in shade T was placed on the putty matrix and polymerised using the Soft Start Mode of the bluephase C8 light in order to reconstruct the missing palatal and incisal shelf. A further thick layer, 1 to 1.5 mm of the same shade T was placed on the entire incisal edge to create a halo effect in the incisal area of the final restoration.

The silicon putty matrix was removed, as the scaffolding had been prepared on the palatal and incisal morphology (Fig. 8). Tetric N-Ceram in dentine shade A 5.5 was placed on the entire fracture line. This opaque dentine layer helped to hide the demarcation line between the tooth surface and artificial composite resin restoration. After light-curing this layer, another sub-structural layer of dentine shade A 5.5 was applied in the shape of the natural dentine mamelons using OptraSculpt instruments (Ivoclar Vivadent) to replace the lost dentine structure in this area and light-cured (Fig. 9). Tetric N-Ceram in shade T was placed in thin layers between the mamelons and spread evenly with the OptraSculpt tips and a single-use brush. After polymerising this layer, a subtle amount of Tetric Color in shade blue (Ivoclar Vivadent) was placed between the mamelons with a thin 0.8 mm endodontic file and spread evenly with a fine single-use brush.1,4


Page 2
Assurance

Invest in reliability. Focus on the patient. Express your style. From the people who build the most dependable dental equipment in the world, A-dec 200™ provides you with a complete system to secure a successful future.

Discover how you can gain assurance with A-dec 200. Contact your authorized A-dec dealer today.

For more information about A-dec, visit a-dec.com or contact your local dealer.
This material was polymerised for 20 seconds using the SOF mode of the bluephase to achieve incisal edge characterisation and natural translucency in the enamel area (Fig. 10). Tetric N-Ceram in enamel shade A1 was prepared in the shape of a ball and placed over the middle third area, spread evenly with Optirax and blended smoothly again using a single-use brush (Fig. 11). After light-curing the last layer, Tetric N-Ceram in shade T was prepared, placed in the centre of the labial surface, spread evenly and smoothed with a single-use brush (Fig. 12).

While contouring the last two layers, the mesial and distal line angles, as well as incisal margin were reconstructed. Furthermore, the practitioner took care of the contact points and embrasures. Final light-curing was performed on both the labial and palatal surfaces using the intensity programme of the bluephase C8 light for 20 seconds each time.

Excess composite was removed with a #12 scalpel blade. The labial and palatal surfaces were contoured with medium-grit discs, diamond finishing burs and interproximal finishing strips. At this stage, special care was taken to preserve the contours and surface characteristics. Proper occlusion was verified in centric occlusion and excursive movements. Final finishing and polishing were achieved with the Astro pol three-step finishing system (Ivoclar Vivadent). Astro pol grey cups were used at slow speed with water-cooling to ensure an improved natural texture (Fig. 11). In the next step, Astro pol green finishing points were used at slow speed with water-cooling for initial polishing (Fig. 14). Finally, the pink Astro pol finishing cup was used at slow speed without water-cooling to impart a shiny lustre to the final restoration (Fig. 15).

The final ultimate gloss on the restoration was achieved using Astrobrush (Ivoclar Vivadent) at slow speed (Fig. 16).

Conclusion

Traumatically damaged teeth can be restored effectively with beautiful and natural-looking restorations. In this case, good results were achieved by combining the excellent physical and aesthetic properties of the latest-generation nano-composite, Tetric N-Ceram, with an FRC Postec Plus glass-fibre post (Fig. 17).

Proper planning by the clinician in selecting compatible materials and meticulous execution of the treatment plan yielded highly aesthetic results. The patient was amazed to see his beautiful smile restored in just a few hours.
Dental caries is caused by a number of interrelated factors which includes acid producing plaque and acidic saliva.

**eXperience**

**Caries (the pH disease) management**

Plaque-Check + pH Indicator
- Using GC Plaque-Check + pH Indicator will assess whether the bacteria in the plaque produces acids strong enough to demineralise tooth structure.

Dental Saliva pH Indicator
- Using GC Dental Saliva pH Indicator will determine whether acid levels may be causing erosion or caries problems for the patients.

GC Tooth Mousse has been shown to reduce plaque acid production and increase plaque pH

GC Tooth Mousse helped improve saliva pH

An interview with Dr Jeremy Mao, Columbia University, New York, about dental stem cell research

Research has proven that dental stem cells hold potential for the successful regeneration of dental and other body tissues. In May, experts from around the globe gathered in New York for the first time to discuss the latest concepts and scientific breakthroughs at the International Conference on Dental and Craniofacial Stem Cells. Dental Tribune Asia Pacific Editor Daniel Zimmermann spoke with Columbia University professor and co-organiser Dr Jeremy Mao about the conference and when the first clinical applications might be available for dentists.

Daniel Zimmermann: Dr Mao, re-growing teeth or parts of it could mean an end to dentistry as we know it. When will this concept become reality?

Dr Jeremy Mao: Research in the area of dental tissue regeneration and engineering is developing rapidly. Different parts of the tooth like the dental pulp, dentine and cementum have been already successfully regenerated in animal models. These techniques are not ready for clinical use yet but they will be available in a few years from now, depending on approval by regulatory agencies like the Food and Drug Administration in the US. Science is only one part of this process.

In contrast with embryonic stem cell research, dental stem cells are harvested from what clinicians refer to as “dental waste” such as extracted teeth or teeth that have fallen out. These cells can be used to regenerate all kinds of tissues. Theoretically, there seems to be no limit to what tissue we can regenerate, so you can expect the whole range of dentistry fields to benefit from these techniques. It is only a matter of time until we have learned enough about article that demonstrated that clones of mummified stem cells of dental pulp can transform into myoblasts and help with the formation of muscle tissue. This, and other research, suggests that dental stem cells can be used to treat not only dental diseases, but also other medical conditions.

Daniel Zimmermann: What fields of dentistry will probably benefit most from this research?

Dr Jeremy Mao: In contrast with embryonic stem cell research, three cells to be able to use them to regenerate all kinds of tissues.

What fields of dentistry will probably benefit most from this research?

Can dental stem cells be used for medical applications as well?

V ery likely. Earlier this year, for example, we published an article that demonstrated that clones of mummified stem cells of dental pulp can transform into myoblasts and help with the formation of muscle tissue. This, and other research, suggests that dental stem cells can be used to treat not only dental diseases, but also other medical conditions.

Daniel Zimmermann: Is there collaboration between scientists that work with dental and medical stem cells?

Dr Jeremy Mao: There are quite a number of researchers in Europe and Asia working on dental and craniofacial stem cell research. In The First International Conference on Dental and Craniofacial Stem Cells in Barcelona in Spain, and there was not one single presentation on dental stem cells. Realising that this was an understudied area, the idea of an international conference on dental and craniofacial stem cell research was born. With it, we also hope to promote collaboration between scientists working in these areas.

Daniel Zimmermann: How did the congress in New York turn out, in general?

Looking back, it was quite an intense conference. We had over 200 attendees and 50 presentations over the course of three days. The feedback was extremely positive and there are already plans for a second conference. However, we have not decided on a location yet.

Daniel Zimmermann: Which other regions or countries are currently leading in dental stem cell research?

Dr Jeremy Mao: In contrast with embryonic stem cell research, there is little controversy regarding dental stem cells. Why is that? This is true. There is not much ethical discussion because unlike embryonic stem cells, which can only be obtained by destroying the fertilised embryo, dental stem cells are harvested from what clinicians refer to as “dental waste” such as extracted teeth or teeth that have fallen out. These cells to be able to use them to regenerate all kinds of tissues.

What fields of dentistry will probably benefit most from this research?

Can dental stem cells be used for medical applications as well?

Very likely. Earlier this year, for example, we published an article that demonstrated that clones of mummified stem cells of dental pulp can transform into myoblasts and help with the formation of muscle tissue. This, and other research, suggests that dental stem cells can be used to treat not only dental diseases, but also other medical conditions.

Daniel Zimmermann: Is there collaboration between scientists that work with dental and medical stem cells?

Dr Jeremy Mao: There are quite a number of researchers in Europe and Asia working on dental and craniofacial stem cell research. In The First International Conference on Dental and Craniofacial Stem Cells in Barcelona in Spain, and there was not one single presentation on dental stem cells. Realising that this was an understudied area, the idea of an international conference on dental and craniofacial stem cell research was born. With it, we also hope to promote collaboration between scientists working in these areas.

Daniel Zimmermann: How did the congress in New York turn out, in general?

Looking back, it was quite an intense conference. We had over 200 attendees and 50 presentations over the course of three days. The feedback was extremely positive and there are already plans for a second conference. However, we have not decided on a location yet.

Daniel Zimmermann: Which other regions or countries are currently leading in dental stem cell research?

Dr Jeremy Mao: In contrast with embryonic stem cell research, there is little controversy regarding dental stem cells. Why is that? This is true. There is not much ethical discussion because unlike embryonic stem cells, which can only be obtained by destroying the fertilised embryo, dental stem cells are harvested from what clinicians refer to as “dental waste” such as extracted teeth or teeth that have fallen out. These cells to be able to use them to regenerate all kinds of tissues.

What fields of dentistry will probably benefit most from this research?

Can dental stem cells be used for medical applications as well?

Very likely. Earlier this year, for example, we published an article that demonstrated that clones of mummified stem cells of dental pulp can transform into myoblasts and help with the formation of muscle tissue. This, and other research, suggests that dental stem cells can be used to treat not only dental diseases, but also other medical conditions.

Daniel Zimmermann: Is there collaboration between scientists that work with dental and medical stem cells?

Dr Jeremy Mao: There are quite a number of researchers in Europe and Asia working on dental and craniofacial stem cell research. In Barcelona in Spain, and there was not one single presentation on dental stem cells. Realising that this was an understudied area, the idea of an international conference on dental and craniofacial stem cell research was born.

Looking back, it was quite an intense conference. We had over 200 attendees and 50 presentations over the course of three days. The feedback was extremely positive and there are already plans for a second conference. However, we have not decided on a location yet.

Daniel Zimmermann: Which other regions or countries are currently leading in dental stem cell research?

Dr Jeremy Mao: In contrast with embryonic stem cell research, there is little controversy regarding dental stem cells. Why is that? This is true. There is not much ethical discussion because unlike embryonic stem cells, which can only be obtained by destroying the fertilised embryo, dental stem cells are harvested from what clinicians refer to as “dental waste” such as extracted teeth or teeth that have fallen out.
For the last 50 years Sensodyne has been at the forefront of scientific innovation into the aetiology, treatment and prevention of dentine hypersensitivity and erosive tooth wear. In January 2011, GlaxoSmithKline celebrated 50 years of Sensodyne innovation by hosting a 50th anniversary symposium in Madrid in Spain. Experts in the field of aetiology and dental research discussed the past, present and most importantly the future of oral health, each presenting a prospective from their own field of specialism.

The principal speakers at the symposium included Prof. Francis Hughes, Prof. J.M. (’bob’) ten Cate2, Prof. David Bartlett3 and Prof. Martin Addy4.

All speakers agreed that dentistry had come a long way in 50 years, however, good oral health for all is a challenge and can only be achieved by linking treatment to patient needs. “Research into genetic profiling holds many possibilities,” Prof. Francis Hughes explained.

Oral health prevention, a relatively neglected area of global health, is now key and committed to need by policy makers to prevent chronic diseases. “The effectiveness and contribution of fluoride toothpastes are undisputed, however in the future priorities should include ‘better’ or ‘smarter’ products that improve compliance, availability and affordability. Every one can learn to brush however a paradigm shift in prevention needs to occur, as caries prevention is very dependent on fluoride,” Prof. J.M. (’bob’) ten Cate.

“In the future, there will be reduced government funding for dental practice and research, therefore, there is a need for industry and university collaboration with research focused on clinical needs and realistic outcomes. By focusing on prevention needs changes to formulation of toothpastes which actively protect enamel and dentine from acids,” Prof. David Bartlett explained.

“Traditionally, there has been a lack of understanding of the aetiology of hypersensitivity and clinical regression. For dentists to offer advice they need to be educated and Industry has a role,” Prof. Martin Addy

is pleased called for further research that is fully scientifically founded. “Many clinical trials on treatments for dentine hypersensitivity are being within the realms of testimoni, Areas for improvement include Objective Evaluation Criteria, better controls and evidence of stimulus response and therapeutic action. There is a need to be able to really manage and visualise dentine either as a replica or in-situ. The speakers all agreed that industry has a key role to play in the continuing research and development of preventative dental care.

Through collaboration with the dental health care professional and by researching patient’s needs, truly significant advances have been made. Sensodyne was first made available in 1961 by Block Drug. Since GlaxoSmithKline’s acquisition of the brand, it has rapidly grown globally and become the dentists’ sensitivity toothpaste of choice in many markets.

GlaxoSmithKline’s significant investment in Sensodyne measure for pain using FMRI (functional Magnetic Resonance Imaging) to map brain activity was presented by Dr Ashley Barlow, GSK Principal Clinical Scienceist, in collaboration with the University of Zurich using a multi-discipline team including experts in medical, clinical, engineering, psychology, statistics and data management. Future GSK investment into pain measurement will bring advances into understanding dentine hypersensitivity and hence more targeted modes of treatment and prevention.

In early 2011, GlaxoSmithKline will be launching the world’s first daily fluoride toothpaste with Novamin, Sensodyne Repair & Protect, a development that clearly illustrates why Sensodyne has become synonymous with dentine hypersensitivity.

Novamin, advanced calcium phosphate technology, employs a patented bioactive material used in advanced bone regeneration techniques. It acts as a reservoir to build a new reparative layer over exposed dentine and within the tubules. This layer has a similar chemical composition to hydroxyapatite mimicking the tooth’s natural composition and strongly binding to the collagen in dentine.14–16

Dr Jonathan Earl, Principal Scientist Sensodyne, using his expertise in material science and engineering has applied microelectron microscopy techniques to the visualisation & characterisation of the tooth structure and how treatments work in vitro. This work was carried out in conjunction with UK universities Cambridge, Leeds and Manchester, and uses various methods including Scanning Transmission Electron Microscopy (STEM), Environmental Scanning Electron Microscopy (ESEM) and Focused Ion Beam Scanning Electron Microscopy (FIB-SEM).

The research shows the transformation of Novamin in saliva-changes are not only seen in structure but can also be measured in changes in chemical composition. This dynamic reparative layer is harder than natural dentin15,16, it is able to withstand daily oral challenges such as tooth brush abrasion, and last 50 years both internally and externally. “The next 50 years will be even more exciting for GSK Sensodyne with continued investment into leadership in oral care through science. We are living in exponential times,” Teresa Rayner. 5

References
1. Professor Francis Hughes, Periodontology, Kings College London Dental Institute—“Past, Present and Future: Towards periodontal Healthcare” 4
2. Professor J.M. (’bob’) ten Cate, Head of Preventive Dentistry at the academic Centre for Dentistry Amsterdam (ACDA) and Head of “Toothpaste in Practice” symposium—“Toothpaste in Practice: Toothpaste in practice: Treatment versus prevention.”
3. Professor David Bartlett, Head of Preventive Dentistry, King’s College London Dental Institute—“Past, Present and Future: Toothpaste in Practice’.
4. Professor Martin Addy, Division of Restorative Dentistry (Periodontology) University of Bristol—“Past, Present and Future: Dentine Hypersensitivity”
5. GSK data file. Sales Health care Professional Monthly Call Data 2010
Learn World Class

COMPREHENSIVE ORTHODONTICS
From a Leading American Dental Continuing Education Center

Live Series
12 Sessions
4 Days Each

LIVE SERIES SESSION 1
MALAYSIA
October 27–30, 2011

Sydney, Australia September 2–5, 2011
Melbourne, Australia September 6–12, 2011
Auckland, September 16–19, 2011

High Education Standard
IN TWO FORMATS

• Fully accredited, with 27 years of experience teaching Ortho and 12 yrs of experience in Internet Assisted Training (IAT) Program
• You will be able to do a wide variety of cases, including the most difficult, with our comprehensive training
• Lifetime Free Retake policy in either live or internet format for the rest of your career...the best support in the industry
• Study at your own pace, on your own time, from anywhere in the world = less time away from your practice
• Regional Locations allow students from all areas of the world access to live portion

Internet Assisted Training

300 Hours Self Study
+ 10 Days Live Seminars in 3 modules

IAT MODULE 1 LIVE SEMINAR
JAKARTA
SEPTEMBER 22–25, 2011

Chennai, India September 10–13, 2011

Come experience our education for yourself!

• Cases presented to show the basics of orthodontic diagnosis
• Treatment selection and alternatives
• Introduction to software, computer cephal tracings, model predictions with VTOs
• Appliances and wire types

High Tech Teaching
At Progressive, we use technology to give us every advantage in the classroom and the clinic

• IPSoft™ diagnostic software (included free with series): get the best diagnosis every time
• Online Case Diagnosis: get instructor help at any time
• Clinical Videos: help you visualize our concepts
• Online Forum: discuss ortho with thousands of colleagues

1 DAY FREE INTRO CLASSES

Kuala Lumpur
August 13, 2011

Jakarta
May 19, 2011

Melbourne
August 6, 2011

Sydney
August 13, 2011

Reserve your seat today!