Watching tide for the coming new year. Let’s pray for a brighter, successful and prosperous year. HAPPY NEW YEAR 2010 to all MDA members and friends! Sincere thanks for the continuous support and contribution.

From the Editorial team & MDA Council
Encourage your patients to maintain their dental cleaning between visits
You spend time encouraging your patients to take better care of their oral health. When attending to their dental needs, you might also spend time improving the look and condition of their teeth, only to be faced with stained teeth and considerable plaque build-up six-months later. The cycle is repeated again and again.

Well, we want to break that cycle. By encouraging your patients to brush every day with Colgate Total Professional Clean, their teeth will look and feel better.

Colgate Total Professional Clean contains cleaning micro-particles:
- 34% silica versus most standard toothpaste, which contains 20% regular silica
- 17% high performance cleaning silica

Colgate Total Professional Clean safely removes surface stain and prevents 60% more stain build-up than regular toothpaste

The Benefits:
- Teeth feel smoother and polished
- Maintains a “professional clean” feeling between dental visits

With 12 hours of complete protection
Colgate Total Professional Clean
- Unique Triclosan + Copolymer formula provides 12-hour antibacterial plus anti-inflammatory protection

The Result:
Colgate Total Professional Clean works like a protective shield, helping your patients fight bacteria for up to 12 hours
It helps to prevent:
- Up to 98% of Plaque build-up
- Up to 88% of Gingivitis
- 55% of Calculus build-up
- Up to 53% of Malodor
- Cavities

* vs. ordinary fluoride toothpaste with conventional silica.
Dear Members,

Warmest greetings to you while my second message conveys.

As the year 2009 is coming to the end, the MDA Council activities remain hectic. Many member-centric ideas and programs have been put into action to deliver the best to MDA members.

**MDA electronic dental journals**

On the electronic journal front, the e-journal committee spearheaded by myself has garnered sufficient fund to most likely continue with the free offering to MDA members with 25 international renowned dental journals for another year of 2010. On top of this, we are working hard trying to secure more dental journals under the patronage of established and reputable publishers such as EBSCO and Elsevier.

**Dental Protection Limited / Medical Protection Society**

We had a fruitful meeting with DPL Dental Director, Dr Kevin Lewis during the FDI World Dental Congress in Singapore recently. Successful negotiation and discussion were achieved to maintain the current year 2009 DPL/ MPS subscription fee into year 2010 without any increment. More meaningful for MDA members was the landmark agreement between MDA Council and DPL/MPS to offer subscription fee rebate of RM 50 for year 2010 subscription if a MDA member register and attend Dr Kevin Lewis interesting lecture on risk management at the 17th FDI/MDA Scientific Convention on Sunday, 17th January 2010. MDA members are urged to come forward early for this excellent presentation and be rewarded with this limited rebate offering to be given based on first come first serve basis.

**17th FDI /MDA Scientific Convention & Trade Exhibition**

The MDA Council and the Organizing Committee are very grateful to the Director General Ministry of Health Malaysia, YB Tan Sri Dato Sri Dr Hj. Mohd Ismail Merican whom has accepted our invitation to be the guest of honor of this exciting meeting scheduled to be at Sunway Convention Center from 16-17th January 2010. Dr Mohamad Muzafar, the Organizing Chairman and his proactive committee have conscientiously put in place an array of enlightening presentations by 10 reputable experts. It is most heartening to note that as of to date, the exhibition booths are almost fully sold out with more than 150 trade booths taken up by local as well as international dental suppliers. This only promises bargain galore for all 17th FDI/MDA Convention’s delegates.

The 67th MDA AGM / FDI Scientific Convention, June 10-13th, 2010 at KLCC.

This is another blockbuster event that the organizing committee chaired by Dr How Kim Chuan has placed in the pipeline. As of to date nine international renowned speakers have accepted our invitation to grace the podium. Rest assured no stone is left unturned to bring the best in quality to you all.

**MDA Continuous Professional Development programs**

By continuously raising the bar in terms of speakers quality and standard of delivery, the MDA Council and CPD committee expect greater regional and international participation. This will certainly put us in good stead as an excellent provider of high quality dental education in this region. We believe our effort would eventually benefit MDA members while getting the respected recognition from local and foreign authorities.

In CPD programs, we witnessed a flurry of activities in the month of October and November 2009 with local CPDs in Alor Setar, Kedah on 9th of October, Kuantan on 25th Oct, Melaka on 25th Oct, Kuala Terengganu on 13th Nov and 8th Penang Dental Congress on 21-22nd November. It is most encouraging to report that all these CPD were well attended by MDA members as well as non-members. The 8th Penang Dental Congress on November 21st -22nd was a remarkable success with commendable participation of 170 delegates. Kudos to Dr Eddy Ong, the Organizing Chairman and Dr Teh Tat Beng, the MDA Northern Zone Chairman and his esteemed committee for the exemplary success.

The impending MDA Southern Zone- Singapore Dental Association Convention in Johor Bahru on Dec 5th -6th, under the Chairmanship of Dr Hong Yong Huat also promises to be another runaway success judging from latest information. These positive developments are testimonies of the hard work by the CPD Chairman Dr Mohamad Muzafar and his able committee as well as the invaluable contributions from all participating speakers in these circuits.
Inaugural MDA Eastern Zone AGM in Kuching on 31st Jan 2010
Despite the proposal to establish MDA Eastern Zone was passed in the 64th MDA AGM in 2007, the actualization was in doldrums for the last 2 years until we pursued it persistently in the last couple of months. We are most delighted that our hard work paid off with the inaugural MDA Eastern Zone AGM scheduled on the 31st Jan 2010. MDA Eastern Zone pro tem committee chairman Dr John Ting and his team has great plan to serve MDA membership in Sarawak and Sabah state in the near future.

MDA-Chinese Stomatological Association (CSA) working relationship
It is very pleasing to report that from our maiden meeting in Singapore, MDA and CSA have proactively worked on strengthening our bilateral working relationship. CSA President Prof Wang Xin and Dean of the School of Stomatology and President, Shanghai Ninth People's Hospital Shanghai Jiao Tong University, Prof Professor Zhang Zhiyuan has extended an invitation to MDA for their Dentech Convention in Shanghai from 27 to 31st Oct, 2009. The MDA's small delegation led by the President attended the convention with fruitful meetings with CSA and Dentech China committee members. We were also invited to visit the dental hospital of the Shanghai Ninth People's Hospital. At the same time, we took the opportunity to promote our 17th FDI/MDA Convention and 67th MDA AGM Convention to the Dentech delegates and Chinese dental traders. I am glad to inform that a 17th FDI/MDA Convention's promotional banner is currently in place at the Chinese Stomalogical Association official website to attract participation from China.

We are also very pleased that CSA President, Prof Wang Xin and his entourage are expected to participate in our up coming 17th FDI/MDA Scientific Convention at Sunway Convention Center. We are confident our collaborations with CSA will bring immense benefit to MDA in the years to come.

Until the next opportunity to report, I shall leave you with sincere wishes of Merry Christmas to our Christian members and a Happy, Healthy & Prosperous New Year 2010 to all.

Best regards,

Dr Lee Soon Boon
President
Malaysian Dental Association
2009/2010
Message From President - Elect

**Introduction**
The year 2009 was a very challenging year. MDA, along with the entire dental industry, operated in an environment that faced a triple threat from a global financial crisis, H1N1 influenza virus and global climate change which have direct as well as indirect impact on us. Our government acted quickly to help stabilize the environment, and stimulus programs are being implemented around the world. Even so, recovery is expected to take time. The year 2010 may be just as difficult as the year it follows.

Over in MDA, we continue to grow despite the difficult prevailing global condition, more CPD talks are being organized; tremendous efforts have been put to improve the quality of 17th MDA/FDI Conference as well as the 67th AGM/ FDI Convention. Realizing the responsibility on the shoulders, we endeavour to be one of the most competitive Associations with emphasis on efficiency in operation, reliability and trustworthy for members and explore development of New frontier to propel the Association forward.

**17th FDI / MDA Conference on 15-17 Jan 2010**
Under the able Chairmanship of Dr Muzafar, the 17th FDI promises to be another breakthrough for the MDA. Our quality scientific programme has won recognition in CPD points from our neighbor Singapore. This means potentially more dentists from Singapore would attend our MDA Conferences. We also for the first time, invited the President of Chinese Stomatological Association (CSA) Professor Wang Xing and his delegations to attend our 17th FDI Conference. The CSA delegations would meet up with our Honorable Minister of Health – YB Dato' Seri Liao Tiong Lai as well as top government officers. The CSA has also encouraged some Traders/Manufacturers from China to take part in our Trade Exhibition. There are also numerous enquiries from Korea and other overseas nations showing keen interest in our MDA Trade Exhibition. Thanks to our able Trade Exhibition Chairman Dr Teh Tat Beng for his excellent efforts.

**67th MDA AGM/ FDI Scientific Convention and Trade Exhibition to go international**
To embark on a journey of success one needs the mental preparedness, foresight and strategy. It is imperative to combine these three virtues to accomplish our dreams and goals to bring greater effulgence for our beloved dental profession. Following the success of the 66th MDA AGM / FDI Scientific Convention, we respond to the call by the Minister of Health – YB Liow Tiong Lai, to go international. In the 67th AGM/ FDI Convention, we would be integrating Scientific programme, Oral and Poster competition, Hands on Workshop, Formal and Informal Dinners social programme, Dental auxillliary/Dental Technical programme, Dental Student Programme, Dental Military Programme as well as Trade Exhibition all under one single Convention to make it the largest Dental Convention in Malaysia and arguably, in the region. This would be held in the prestigious KLCC Convention Centre. We now already have 11 confirmed International renowned Speakers from USA, UK, Australia, Switzerland, Germany, Sweden, Taiwan covering almost every specialty as well as the latest development and technology in Dentistry. There would be many Hands-on Workshop, Limited Attendance Talks to further enrich your clinical skills and knowledge. There would also be many exciting social programmes. The MDA Banquet is now be renamed as MDA Gala Banquet to reflect the diverse and unique characteristic of our dental profession. We are therefore on the headway to secure some governmental support for our maiden venture into the international arena and we believe more support would come from other major sponsors and corporate for our sincere efforts to bring Malaysia to the World Stage. Your support and participation in this Convention is pivotal to our success. We hope this would be a scientific, social, networking, fellowship, family as well as shopping for bargained dental stocks for all the dentists in Malaysia as well as in the region.

We are today where our thoughts have brought us; we will be tomorrow where our thought is taking us now. Let’s confront our fears and skepticism and allow our thoughts to land us on the platform we have always dreamed to be.

May I take this opportunity to wish all of you Merry Christmas and Happy New Year. May 2010 be a better year for all of us.

Dr. How Kim Chuan
President Elect
Malaysian Dental Association
Dear colleagues,

I would like to extend my heartfelt Christmas wishes to all our celebrating members and a prosperous Happy New Year to all.

**MDA Council Meetings**
The 3rd Council Meeting was held on the 4th of October at MDA Secretariat followed by 4th Council Meeting on the 4th of December at Grand Paragon Hotel, Johor Bahru in conjunction with MDA Southern Zone CPD programme. The next 5th Council Meeting is scheduled to be held on 16th January 2010.

**Continuous Professional Development (CPD) Points**
The mandatory minimum CPD points to be acquired before one renews his or her Annual Practising Certificate has gain so much momentum that it is expected to be announced to the dental professionals next year. At its recent meetings at Professional Group level, all stakeholders or the CPD providers have been invited to be members of the CPD Committee so that all views could be taken into account before fine tuning the loose ends. The minimum CPD points required is 30. The committee deliberated in manners of awarding the CPD points and the accrediting methods. Members are requested to log on to [www.moh.gov.my](http://www.moh.gov.my) and register at my CPD online to have their CPD points earned logged for that particular year.

**MDA Secretariat**
Currently the Secretariat is manned by four staff. The activities of MDA have increased tremendously over the years. Our nationwide CPD programmes coupled with two major events in January and June has kept the staff busy year long. The MDA Council just gave the go ahead to make available wireless broadband connection to all staff work stations with the rise in cyber communication demand.

The staff are diligently carrying out their work to deliver the best to the membership, however any complaints against any of our staff are most welcome. Your constructive feedback can be attentioned to the Honorary General Secretary.

**Asia Pacific Dental Congress**
The 32nd Asia Pacific Dental Congress would be held at the Bandaranayake Memorial International Conference Center, Colombo, Sri Lanka from 12th of May to 16th of May 2010. The Congress theme is “Clinical Excellence In Dentistry through Knowledge Evidence and Technology”.

Salam 1 MDA

Best Regards,

Dr. Haja Badrudeen Sirajudeen
Honorary General Secretary
MDA 2009/2010
Greetings to ALL MDA Friends and Colleagues!

Please find below the balance sheet as at 16/11/2009 (unaudited) for your reference:

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<th>FIXED ASSETS</th>
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How does MDA perform financially as of 16/11/2009?

MDA derives its revenues from the two major scientific conventions, new subscription and entrance of new membership, rental income, CPD talk income, MPS subscription fees, sponsorship, advertisement and other income. As at year to date, the MDA had reached total revenues of RM1,949,326.99. In this report I would like to extend my heartiest congratulations to both Dr. How Kim Chuan and Dr. V. Nedunchelian for their chairmanship in 66th MDA AGM and International Scientific Convention & Trade Exhibition, and 16th FDI/MDA Scientific Convention & Trade Exhibition respectively, that have contributed significantly in the increment of MDA revenue this year. Also not forgetting those not mentioned but had really worked hard to ensure MDA revenue at its peak even during the nationwide economy downturn. Thank you!

As 2010 is just around the corner, with the guidance of our President Dr. Lee Soon Boon and President-Elect Dr. How Kim Chuan, I can foresee that MDA revenue will continue to grow due to overwhelming support from the traders and also YOU as MDA member.

Last but not least, I would like to take this opportunity to wish Happy New Year to ALL.

Dr. Mohamad Muzafar Hamirudin  
Honorary Financial Secretary 2009/2010  
Malaysian Dental Association
Dear Esteemed MDA members,

Greetings from the desk of the Honorary Publication Secretary.

It’s another year passed by with supersonic speed. We have now come to the end of year 2009 and this is the fourth and last issue of MDA News for 2009. I would like to sincerely thank Dr. Shahida for accepting the task as the Editor of MDA News under the 2009/2010 MDA Council. She has been involved in the MDA News for several years and is an active member of the Editorial Board. The newsletter has acted as an important and useful tool to disseminate information amongst the Members.

It has been an eventful and fruitful year at MDA; a lot of exciting events have taken place throughout the whole year. The Eastern zone has been formally formed and both Northern and Southern zones under the able chairmanship of Dr Teh Tat Beng and Dr Hong Yong Huat, continue to put in great effort in bringing CPD programmes to various states to benefit members at large. Reports for these events are placed in MDA News. This issue of MDA News also include an interesting article on auxiliary separation and supporting devices to aid in clinical success of proximal restorations. I also wish to convey my sincere thanks to Dr. Wong Foot Meow who have contributed tirelessly to the Clinical Self-Assessment column. This clinical section has helped readers tremendously in their clinical judgment and treatment.

Under the capable guidance of the President, Dr. Lee Soon Boon and the commitment of the e-journal committee, the “E-Journal” has provided another avenue to update Members pertaining the latest philosophy, techniques and materials in dentistry. Recently, EBSCO has gathered 160 titles of dentistry related e-journals and placed them under the umbrella of Dentistry & Oral Sciences Source in their electronic journals provision. EBSCO is one of the world’s premium research database service providers. As the co-chairperson of the “E-Journal” committee, I will negotiate with EBSCO and also other e-journals provider to secure optimum database to our secured “E-Journal” website. As in the near future, renewal of APC will be tied with CPD points, this is another route where CPD points can be accumulated.

MDA News is an avenue where Members can share various news with one another; the Classified Ads section is a complementary column for all members which wish to place advertisement. Any constructive suggestion to help improve the quality of the publications is most welcomed. My heartfelt thanks to all Members for all your support

Last but not least, I sincerely wish all Members:

Merry Christmas and Happy New Year
May 2010 Brings Joy, Great Health and Peace to You and Your loved ones!

Assoc. Prof. Dr. Seow Liang Lin
Honorary Publication Secretary 2009/2010
Malaysian Dental Association
MDA recognized as the first overseas accredited and certified Continuous Professional Education (CPE) for Singapore dentists and oral health therapists by Singapore Dental Council and Singapore Ministry of Health.

By Dr Lee Soon Boon, President of the Malaysian Dental Association (MDA)

The Malaysian Dental Association (MDA) is most honored to receive this rare and prestigious distinction of being recognized officially by Singapore Dental Council and Singapore Ministry of Health as their accredited and certified Continuous Professional Education (CPE) provider. This good news was announced by the Chief Dental Officer Ministry of Health Singapore, Associate Professor Dr Patrick Tseng recently at the 2nd Malaysian Dental Association-Singapore Dental Association Joint Scientific Meeting in Johor Bahru on 5-6 December 2009. They made MDA as the first overseas certified CPE provider accredited by Singapore Ministry of Health in recognition of MDA high quality continuous dental education programs.

From now onwards, Singapore dentists and dental therapists can participate in MDA organized events to obtain credit points for their mandatory CPE points requirement to renew their professional practicing licenses. This positive development will spur MDA to work harder to further uplift the quality of continuous professional development events as well as to gain similar recognition from other regional and international countries.
ASSDs or auxiliary separation and supporting devices are common wedges.\(^1\) Wedge is defined by Oxford English Dictionary as a piece of wood or metal with a thick end that tapers to a thin edge, and driven between two objects or parts of an object to secure or separate them.\(^2\) In dentistry, their use has long been advocated to produce a satisfactory proximal surface of restorative materials. ASSD adapts matrix bands closely to the cervical margin of cavities in interproximal surfaces of the tooth. This article reviews the history, types, selection and use of the ASSD, which is significant in both the quality and longevity of the final restoration.

Function
It is not possible to get a close adaptation of the matrix band to the tooth without the use of ASSD. There is a potential gap between the tooth at the cervical margin and the matrix band and when filling material is placed it will cause an overhang. Therefore, wedging is important to obtain some degree of tooth separation at the time of placement of the restoration material\(^3\) and the proximal contour of the restoration. A wedge applied to the embrasure attempts to seal the interface of the matrix band and gingival margin, creating minor tooth separation to compensate for the thickness of the band. In addition, interdental papilla and gingival col are depressed slightly lower from their usual position to improve visibility and provide protection to the tissue. To do this, slight tightness to firmly secure the wedge is necessary but it should not be over-tightened to prevent damage to the cervical margin of the restoration.

Dental wedges also serve to aid in protection of both the rubber dam and gingival tissues by securing the dam in place and protecting the gingival from being injured by the burs. Trauma to gingival especially interdentally will affect moisture-control, impaired visibility and finally making restoration difficult.

Requirements of an ideal ASSD
The good wedge should allow proper positioning of matrix bands leading to a good proximal restoration. It should be designed to be user-friendly with the rest of the matrix system, easily applied and withdrawn from the interdental area.

Availability of a wide selection of sizes and shapes is important because interdental space differs from posterior to anterior teeth and the shape of each tooth vary from other teeth, between arches and individuals. A good wedge should compress the matrix band to the remaining tooth surface through its entire bucco-lingual length and apically to the gingival cavo-surface line angle. There must be a certain concavity on its sidewalls that dictates the proximal contour of the restored tooth surface and the interdental space. Flat side walls of the wedge may lead to incorrect contouring of the restoration. Meanwhile, non-contoured or non-anatomical wedges are potentially more damaging to the soft tissue and also may distort the matrix bands during placement.

The gingival base width of the wedge selected needs to be slightly wider than the interdental space width. This is essential to achieve the perfect wedging effect and stable positioning of the wedge as well as the band. Height of the wedge is another important requirement as it affects the position of the contact area between adjacent teeth. The greater the height, the higher the contact point will be, and vice versa. The position of contact point can also alter the shape of interdental tissue. For instance, a lower contact area may compress interdental tissue more gingivally from its optimal position.\(^3\)

Rigidity of dental wedges is another important criterion to ensure that the matrix band is held in a correct and stable position. Flexible materials may not allow the matrix band to be securely maintained in place.\(^4\)

Finally, dental wedges should be biocompatible with the oral environment. They must not irritate and cause toxic reaction with the oral tissue, especially periodontal tissue and stable dimensionally in oral fluids. Dimensionally, dental wedges should not expand easily as a result of the absorption of oral fluid.

Types of ASSD
Wood:
Wooden wedges had been used long before matrix bands were invented. Many type of woods have been used to make wedges such as boxwood, orangewood, balsam wood, birch wood and soft pine thus ranging from hard, close-grained varieties to medium and fine-grained types.\(^5\) A variety of wedges of different shapes and sizes can also be made from wooden tongue spatulas.

Figure 1: Wizard Wedges (Waterpik Technologies.Inc, USA)
Metal: The first metal wedges, the Ottolengui steel wedge, was introduced in dentistry in the late 1800s. This wedge was basically v-shaped and during placement, the arms are squeezed together in order to fit it into the embrasure area. The arms are then released and spring apart to retain the wedge in the embrasure.3

Nylon: A nylon wedge is an anatomical wedge with a concave side, a rounded tip and a square end. It is a cheaper alternative to the contoured wooden wedge.5 Celluloid: The celluloid wedge is lesser used because it has a rectangular cross-section, which means it has only one contact point with the matrix band. Thus leaving a gap between the wedge and the cervical surface of the tooth. In addition, the wedge does not press the matrix band firmly against the tooth, making amalgam condensation difficult. This matrix band tends to move slightly. With this, it risk having excess restorative material at the gingival margin increases.6

Gutta Percha. In 1931, Parfitt suggested the use of two thick gutta percha root canal points at the cervical areas from lingual to labial or buccal sides of the tooth in order to maintain the satisfactory position of the matrix band. A decade later, Parfitt introduced celluloid wedges or gutta percha made at the chairside and its softness fulfilled the function of ASSD.7

Compound: In 1937, Hollenback was the first dentist to employ low-fusing modeling compound in the matrix system to improve matrix adaptation. A thin, rectangular stainless steel band of 0.0015 inches thickness called a Hollenback's matrix was placed in position and then wedged buccally and lingually. Hollenback then pressed a small amount of softened low-fusing modeling compound into the buccal and lingual embrasures to reinforce the matrix.5-8

Silver: Over many decades, researchers have discovered disadvantages of available pre-formed wedges and of those carved at the chairside when used with matrix bands. As an example, wedges held the matrix band well in place but they also produced a concentrated pressure only to the gingival margin area, thus distorting the matrix band.9 It may have been that these wedges were too rigid and non-anatomic making it impossible to distribute the pressure to a wider area. To overcome this problem, Messing designed sterilizable, anatomically contoured wedges made in two sizes that have curved surfaces in contact with the band. This anatomically contoured wedge in turn prevents buckling of the metal that may lead to the loss of contour. Another wedge manufactured by Produits Dentaires (PD) have a small hole through the handle such that a length of dental floss may be attached to them and to matrix retainers. Furthermore, the PD silver wedges are also available as ‘left’ and ‘right’ for application of mesial and distal spaces.9

Plastic: Plastic wedges, also called anatomic wedges, are used in conjunction with conventional wooden wedges for posterior tooth restoration. Weiss proposed this technique to restore mesial surfaces of upper first premolars when the proximal box is dropped apically and with more extensive cavity sizes.10 Alternatively, a plastic toothpick is heated over a flame and once softened, its end is shaped into a small ball before being trimmed with appropriate stone in a conventional handpiece until the desired shaped is achieved. This wedge is placed into the proximal surface facing the mesial grove depression. Then, the conventional wooden wedge is inserted from the opposite side in order to press the rounded edge of the plastic wedge firmly against the matrix band in the area of root depression. Finally, matrix adaptation is evaluated by using a sharp dental probe.10

Cotton pellet with liquid cyanoacrylate or bonding agent: Although most rigid wedges have been shown to perform well in ensuring proper matrix adaptation, they tend to compress and injure the interdental tissue. Gingival bleeding may occur, leaking through the rubber dam and jeopardizing moisture control. Thus, Suarez et al used a device, called a ‘passive wedge’ because it exerts neither compression nor traction on soft tissues. It can also be used for a Class IV restoration on a maxillary right canine with composite resin.11

Once the matrix band is in place, a cotton pellet is inserted in the embrasure area. A cotton pellet is soaked with liquid cyanoacrylate by means of a disposable brush and then soaked with water spray. This causes the cyanoacrylate to harden immediately and conform to the exact concavities of the tooth surface without exerting any compression or traction to the soft tissue. Khera also suggested using a similar method but a bonding agent was used instead of cyanoacrylate. After the wedges are placed tightly in the embrasure area, a clean cotton pellet is inserted in between the matrix band and the wedges. The cotton pellet should fill the space tightly. From inside the cavity, the adaptation of the matrix band is examined to ensure the band is adapted to the concavity of the proximal surface. When satisfied, a drop of light-cured bonding resin is placed on the cotton pellet. Then the cotton pellet is left in place for about 5 to 10 seconds to absorb the liquid cyanoacrylate or bonding agent before light-cured with visible light for 10 to 20 seconds. Finally, the matrix band is burnished to establish the desired proximal contours and contact points of the restoration.12

Composite resin: Woodmansey, in 1998, proposed a technique using composite resin to replace impression compound.13 Woodmansey stated that using compound is generally inconvenient as it needs to be softened during placement.
and often produces a sticky mess. Most of the time, compound when applied to the embrasure areas, flakes and cracks upon any movement of the matrix or matrix retainer. To overcome this, light-cured composite resin can be used to secure matrix bands in lesser time. It is cleaner and easier to manipulate.

**Elastic cord:**
Use of elastic cord was suggested by Chan (2001) to replace the existing preformed triangular-shaped wooden wedges, which are not adjustable and adaptable efficiently to the tooth concavities. Elastic cord or Wedgets consist of a stretchable cord made from natural rubber that may cause allergic reactions. A thorough medical and dental history is recommended here. Rubber material is not strong enough to withstand the condensation forces. These elastic cords are capable of adapting sufficiently to conform to any concave aspects of adjacent tooth surfaces and now are available to be used in rubber dam procedures (Wedgets, Coltene/Whaledent Inc). After a matrix band is already in place, a Wedget is placed interproximally. To ensure the Wedgets is fitted tightly between the tooth and matrix band, the correct diameter of Wedgets should be chosen.

**Silicone putty:**
Silicone putty is easily mixed, rolled into pencil shape and then place into the embrasure opening. Because the working time of silicone putty (Kerr Extrude®, Kerr Italia) is 2 minutes and its setting time is 4 minute, the operator is given sufficient time to manipulate the material before placing it into the embrasure opening. Once mixed, this material will achieve its working consistency and allow time for insertion. Moreover, no heat is produced during this procedure 1, which is good for the soft tissues.

**Figure 2: Wedgets (Coltene/Whaledent Inc)**

**Figure 3: Silicone Putty (Kerr Extrude®) as ASSD**

**Conclusion**
With increasing emphasis being placed on precision of interproximal restoration, the importance of the marginal adaptation must also be stressed. ASSD and matrix band have a major role in creating margin of the restoration especially at gingival margin area. Improper placement of matrix and wedges can result in poor contours or contacts, overhangs or weakness resulting from poorly condensed restorative material. Therefore, choice of ASSD, their use and suitability as well as technique can determine the quality and success of treatment.

**References**
The 8th Penang Dental Congress

By Dr Eddy Ong

The 8th Penang Dental Congress was held at the Bayview Beach Hotel, Batu Ferringhi, Penang on the 21st and 22nd November 2009. The meeting attracted 172 participants as well as numerous dental trade exhibitors.

The speakers for the meeting were the husband-and-wife team from Singapore, Dr Go Wee Ser and Dr Koh Chay Hui who shared with us their experiences in the Applications of Cone Beam CT, Implant Dentistry and Orthognathic Surgery in Asian Patients. Their presentation gave the younger audiences in the crowd a different perspective to dentistry and encouraged them to aspire towards greater heights in their career as dentists. Another well-received speaker from Singapore was Endodontist, Dr Leslie Ang. Dr Ang went an extra mile to organize for an endodontic microscope to be flown in from Germany to enhance his presentation. His interactive presentation without doubt roused great interest among the participants and even had requests for hands-on courses in the future. The meeting continued with our own country’s eminent speakers. Dr How Kim Chuan gave a lecture title. The Role of Orthodontic in Enhancing the Smile and Optimizing the Aesthetic Results of Fixed Prosthodontics and Professor Ong Siew Tin lectured about Management of High Risk Patients in Dental Practice and Antibiotics & Odontogenic Infections.

MDA Northern Zone would like to thank MDA President, Dr Lee Soon Boon, President-Elect Dr How Kim Chuan, representatives from the Singapore Dental Association, the distinguished speakers, representatives from various dental schools, dental trade exhibitors and sponsors for their support in making this a successful CPD event. We would also like to thank the participants for their support and fellowship over the weekend.

MDASZ Community Project

Date: 14th - 16th August 2009

By Dr Angie Wong

On the 14th August 2009 we left Johor Bahru at 8.00 am. After briefing and a short breakfast we set off to the Orang asli settlement in Temerloh, Pahang. We reached Temerloh about 6 p.m.

after hours of exhausting ride on our van. Upon arrival we were welcomed by the head of the Orang Asli Settlement. We were served with a simple meal. On the 15th August we started some community work. We put up some new fencing for them and also brought along some containers to store water. They are currently going through some dry spells and the containers came in handy. We also gathered the children and had some fun programmes with them which included singing, games, craft work and oral care instructions. We also had some fun making and playing balloons with them. In the evening we distributed the toothpastes and toothbrushes to both the adults and children. The total amount distributed was 62 pieces of 360° toothbrushes 62 pieces of Colgate Total toothpastes, 60 pieces of Doraemon Children's toothbrush and 60 pieces of Doraemon children's toothpaste. They were overjoyed with the generosity of the Malaysian Dental Association (Southern Zone). On the 16th August 2009 we left Temerloh and headed back to Johor Bahru. The smiling faces of the orang asli was enough to melt the hearts of all who were there.

Reported by: Dr Pang Chiang Sin

The 2nd SDA – MDASZ Joint Scientific Convention and Trade Exhibition was recently held at The Grand Paragon Hotel, Johor Bahru on the 5th - 6th of December 2009. This event was jointly organized by the Malaysian Dental Association (Southern Zone) and its counterpart from Singapore. There were about 200 dental practitioners participated in the event. Other than the Scientific Convention, a trade exhibition and friendly golf tournament between SDA and MDASZ were also held.

The whole event went on smoothly with the theme ‘Striving Towards Dental Excellence Together’. Among the distinguished speakers from both sides of the Causeway were Dr. Chung Kong Mun (Perio), Assoc. Prof. Dr Patrick Tseng (Endo) and Dr Ng Jing Jing (Paedo), Dr. Hong Yong Huat (Ortho), Dr. Lee Soon Boon (Implants) and Assoc. Prof. Dr Seow Liang Lin (Prosth). Chief Dental Officer, Ministry of Health Singapore, Assoc Prof Dr Patrick Tseng officiated the opening ceremony. He announced that the Singapore Ministry of Health and Singapore Dental Council would from now onwards recognize all MDA-organized Continuous Professional Development (CPD) programs for Singaporean practitioners. Good news to us, MDA is the first dental association/society outside of Singapore to be awarded such honor! This means that the Singaporeans are recognizing the quality of MDA-organized CPD programs and this should continue to spur up our work to increase...
the standard of our programs in the future. Interestingly, the News Straits Times and Sin Chew Daily also covered our event in their papers.

To add, all the 25 booths were taken up by the traders. Feedback from them was positive and they were happy with the good turn up. We would like to thank all the traders and particularly to Colgate as our main sponsor.

YB Dr. Robia Dato Hj. Kosai, Johor State Chairperson for Women and Family Development, Welfare and Health State Committee graced the occasion at the Banquet Dinner, representing the Menteri Besar of Johor, YAB Dato’ Abdul Ghani Othman. The dinner was fully subscribed by participants and guests, and prizes were given away by the Guest of Honour. We were very privileged to have Dr. Mahrusah Jamaludin, Deputy Director of Oral Health, Johor Health Department, representing Dato’ Dr. Norain (Senior Director of Oral Health Services, Ministry of Health Malaysia) and Dr. Loh Kim Hong, Senior Dental Officer of Johor Bahru District joining us for the event.

Overall, the event was an effort well worth the time and energy. The overwhelming response from the government and private dental practitioners and the traders had encouraged the MDASZ to start working towards organizing an even bigger convention for the year 2010. We would like to thank especially the Johor Oral Health Department for its role in encouraging and sponsoring their staff. Congratulations to MDASZ. Well done!

YB Dr. Robia Dato Hj. Kosai giving the opening speech at the Banquet Dinner.
Heartiest Congratulations to

Dato Dr. Dharshan Singh Jag Singh Talib

On the conferment of
Darjah Kebesaran Mahkota Pahang Yang Amat Mulia
Darjah Indera Mahkota Pahang (DIMP)
On the 79th Birthday of the Duli Yang Maha Mulia Sultan of Pahang on 24th October 2009

From:

Malaysian Dental Association
Preamble: Part XXIII section 2 continues where we left off in section 1 with the selection of a few rather common clinical cases to get to the root of the problem. In this segment we can see with the aid of vivid clinical illustrations the chronological behaviour and appearance of a failed apicectomy, a newly formed cyst, a ‘mature’ cyst and a chronically infected cyst. Again we place our trust on the well-trodden aphorism that ‘comparison is a very powerful tool’ to expedite understanding and comprehension in clinical Dentistry.

QUESTION 3: Basic Principles Of Routine Surgical Endodontics

Although the images presented in this question appears to be very basic, it subtly enables you to appreciate the clinical presentation of a common pathological process involving the non-vital tooth apex resulting in 4 different scenarios because of time and treatment variations.

(a) Fig 2a is a 30-year old female manager who noticed a ‘bubble’ 12 months after a root operation.
(b) Fig 2b is a 30-year old Moroccan male who noticed this yellow ‘dot’ apical to tooth 15 two years after fabricating three crowns in his native Morocco.
(c) Fig 2c is a 22-year old student who had root canal therapy done on teeth 31 and 41 four years ago and now wanted crowns for the discoloured teeth.
(d) Fig 2y and 2z are examples of uncommon lateral periodontal cysts.
(e) Fig 2t to 2v show the clinical progression of an untreated periodontal cyst after 4 years.

All three patients in Questions 3(a), 3(b) and 3(c) were subjected to surgical endodontics. What are the indications for apicectomy?

i. What do you understand by apicoectomy, apicectomy, apieectomy, root resection and partial root amputation? Can you explain the rationale for the different incisions used in Fig 2g, 2m and 2r? What factors must you consider when designing a flap for endodontic surgery?

ii. Scar tissue was curetted in Fig 2m whilst cysts were removed as in Fig 2j and Fig 2q. Does the consistency of the specimens removed correlate with the intra-oral appearance in Figs 2a, 2b and 2c respectively? What is the respective pathogenesis process?

iii. In Figs 2i, 2m and 2q, part of the apical root was resected. What are the four stages of hard tissue management in endodontic surgery? What do you notice at the root apex in Fig 2m?
iv. The importance of post-surgical care should not be underestimated. Disaster has struck in Fig 2l-2 secondary to the extensive flap raised in Fig 2h. What do you think has happened? What are the important components of post-operative care and instructions should be given in this case?

v. What surgical endodontic principles are involved to obtain consistent results? What retrograde root fillings would you choose and why?

vi. Fig 2s is the pre-operative and post-operative radiographs of the patient in question 3(a) above. What do you know about the trapezoidal flap (Fig 2r-l) as illustrated in Fig 2r? Correlate this with Fig 2p and 2q and hazard a guess as what was done. How do you think the histo-pathological report will read?

vii. Describe what you see in Fig 2w (radiographs taken in 2005 and 2009)? Fig 2t is the current intra-oral presentation. What changes has transpired over the 4-year period to the cyst (compare Fig 2u and 2v)? Do you need endodontic intervention? If so, what possible complication may afflict on this patient if an endodontic surgery is performed?

viii. In your assessment of Fig 2z, what do you know about the dental anatomy of the anterior tooth? How does it contribute to your understanding of endodontic surgery and the pathogenesis of lateral periodontal cysts? Are they two distinct types of lateral periodontal cyst (Figs 2x, 2y and 2z)? Do you manage them differently? What are the clinical features, radiographic appearance and possible mechanisms of formation?

ix. Having had a large dose of surgical endodontics for the main course, here are some miscellaneous questions for dessert:
   a. What is the purpose of the apicectomy procedure in surgical endodontics?
   b. If the patient in Fig 2a had not had a previous apicectomy, what flap design would be more appropriate?
   c. What is the material of choice for root end fillings in surgical endodontics?
   d. What are the accepted success rates in endodontic surgery? Fig 2c to 2l illustrates the pre- and post-op results of an apicectomy done on lower incisors.
   e. Is there an ideal retro-surgical root filling material?
   f. What is the current thinking about the angle of the apical bevel and its relationship to the depth of the retrograde fillings?
   g. Can guided tissue regeneration save a severe perio-endo lesion?
   h. What is the ultimate goal of apical surgery?
QUESTION 3: Basic Principles Of Routine Surgical Endodontics

Indications for endodontic surgery/apicectomy:

All 3 patients in Question 3(a), 3(b) and 3(c) were subjected to surgical endodontics. The scope of endodontic surgery includes incision and drainage, periapical curettage, apicectomy, radicectomy, hemisection, endosseous endodontic implant and reimplantation. Endodontic surgery becomes necessary when the normal (orthograde) approach to root canal treatment fails or is expected to fail for various reasons as follows:

- Infection of the periapical tissues may be associated with accumulation of pus and tissue fluid. This may build up
The mechanics of managing this problem is to first consider the clinical findings and make the relevant deductions.

- The rationale for the different incisions used in Figs 2g, 2m and 2r and the factors to be considered when designing a flap for endodontic surgery are as follows:
  
  i. Scar tissue was curetted in Fig 2m whilst cysts were removed as in Figs 2j and 2q. Consistency of the 2 specimens shows the final retrograde filling with IRM.

  ii. Scar tissue was curetted in Fig 2m whilst cysts were removed as in Figs 2j and 2q. Consistency of the 2 specimens shows the final retrograde filling with IRM.

The slight erythema of the entire non-attached gingiva overlying the affected tooth root could be caused by a deep periodontal pocket, a perio-endo lesion or a fractured root. Three upper incisor teeth are crowned (teeth 11, 21 and 12) but the crowns appear rather bulbous with poor marginal adaptation and contour. There is marginal gingival inflammation around the crowns with a broad rounded gingival margin and little stippling. This is most probably caused by a combination of poor oral hygiene and plaque accumulation at the possibly defective, margins of the crowns. The most relevant is a faint scar line above the mucogingival junction of the upper incisors consistent with a healed submarginalsemilunar flap, presumable made from a previous periradicular surgery.

The slight erythema of the entire non-attached gingiva overlying the affected tooth root could be caused by a deep periodontal pocket, a perio-endo lesion or a fractured root. Three upper incisor teeth are crowned (teeth 11, 21 and 22) but the crowns appear rather bulbous with poor marginal adaptation and contour. There is marginal gingival inflammation around the crowns with a broad rounded gingival margin and little stippling. This is most probably caused by a combination of poor oral hygiene and plaque accumulation at the possibly defective, margins of the crowns. The most relevant is a faint scar line above the mucogingival junction of the upper incisors consistent with a healed submarginalsemilunar flap, presumable made from a previous periradicular surgery.

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There are 8 principles and guidelines for flap designs as follows:

1. Avoid horizontal and severely angled incisions. 2. Avoid incisions over bony eminences. 3. Flaps must end over solid bone. 4. Avoid incisions across major muscle attachments. 5. Provide adequate visual and operative access with minimal soft tissue trauma. 6. Tissue retractor must rest on solid bone. 7. Do not split interdental papilla. 8. Always involve the entire mucoperiosteum.

That being the case, a mucogingival flap (limited periosteal flap) of the submarginal curved /semilunar design was used in Fig 2g and 2m. A better alternative in hindsight would be the submarginal scalloped rectangular (Luebke-Ochsenbein) flap for case 2g. However our hands are tied in case 2m. Case 2r utilised a full mucoperiosteal flap of the trapezoidal variety as the gum margins are located posteriorly and not visible from the front.

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ii. Scar tissue was curetted in Fig 2m whilst cysts were removed as in Figs 2j and 2q. Consistency of the 2 specimens in correlation with the intra appearance in Figs 2a, 2b and 2c and the respective pathogenesis process. There are 2 phases of cyst formation i.e. cyst initiation followed by cyst enlargement. Cyst initiation involves proliferation of the epithelial lining, fluid accumulation in cyst cavity and bone resorption. Cyst enlargement may be by mural growth, peripheral cell division, accumulation of contents, hydrostatic enlargement and secretion either by transudation or exudation. Accordingly depending on the chronological age, the lesion may be completely solid, semi solid or cystic in consistency. Tooth 21 in Fig 2m shows a distinct vertical split of the root canal while Fig 2n shows the final retrograde filling with IRM.
iii. In Figs 2i, 2m and 2q, part of the apical root was resected. Flaps used and the 4 stages of hard tissue management.

Flap designs (Soft tissue): There are 2 categories of flap design ie 1. Mucoperiosteal flap, comprising triangular, rectangular, trapezoidal and horizontal, and 2. Mucogingival flaps incorporating semilunar and Luebke-Ochsnebein variety.


a. Osteotomy. Osteotomy is the removal of the anterior cortical plate to expose the root end and it is made exactly over the apices . To ensure precision, periapical radiographs are imaged perpendicular to the roots from two different horizontal angles to ascertain the length and curvature of the roots, position of the apices in relation to the crown, and number of roots. Additionally, the proximity of each apex to apices of adjacent teeth, mental foramen, inferior alveolar nerve, and antrum must be ascertained.

Cavity preparation must be done slowly and meticulously so that the heat generated during osseous tissue removal by bur avoids heating bone tissue above 60°C, as excessive thermal insult results in interruption of blood flow and tissue necrosis. The heat production can be minimized by the use of:
- Liquid coolant during bone removal. Use saline cooled overnight in refrigerator.
- Use light brush strokes with short, multiple periods of cutting.

Visual and operative accesses are the factors that determine the osteotomy size. Failure to achieve sufficient visual and operative access results in extending the time required for the surgical procedure, increasing the stress level of the surgeon, and trauma to adjacent tissues.

b. Curettage and biopsy. Periapical curettage involves removal of the periradicular inflammatory tissue by using sharp surgical bone curettes and angled periodontal curettes. Administering a local anaesthetic solution containing a vasoconstrictor (0.5 % Marcain with 1:200,000 adrenaline) into the soft tissue mass will reduce the possibility of discomfort to the patient during the debridement process and will also serve as haemorrhage controller at the surgical site. The entire tissue mass is removed by inserting the bone curette, or PF6, consistent with the size of the lesion between the soft tissue mass and the lateral wall of the bony crypt with the concave surface of the curette facing the bone . The tissue is placed in buffered formalin and sent for histopathological examination.

c. Root-end Resection. Periapical curettage only eliminates the effect (periapical lesion) of the leakage but not the cause/origin of the lesion. Hence, periapical curettage without root-end resection and root-end filling should never be considered as a definitive treatment in periradicular surgery unless associated with concurrent orthograde root canal treatment. Indications for root end resection: They can be classified as:

- Biologic factors:
  - Persistent symptoms and continued presence of a periapical lesion.
- Technical/Mechanical factors:
  - Intraradicular posts.
  - Crowned teeth without posts.
  - Irretrievable root canal filling materials.
  - Procedual accidents

Three important factors are to be considered before performing a root-end resection:

a. Instrumentation: The choice of bur type and the use of a low speed handpiece for root-end resection is considered as a smooth, flat, resected root surface is preferred clinically to promote tissue healing. Plain fissure burs produce the smoothest resected root surface, with plain fissure burs and a low speed handpiece resulting in the least gutta-percha distortion. (See Fig 2)

b. Extent of root-end resection: The amount of root to be resected is dependent on various factors that have to be evaluated on an individual case-by-case basis. The factors are:

- Visual and operative access to the surgical site
- Anatomy of the root. (See Fig 2b)
- Incidence of lateral canals and apical ramifications at the root end – 3mm root resection significantly eliminated the major anatomic entities.
- Number of canals and their position in the root.
- Need to place a retrofilling surrounded by solid dentine.
- Presence and location of procedural error. Presence and extent of periodontal defects.
- Level of remaining crestal bone.
c. Angle of root-end resection: The root resection must be done perpendicular (90°) to the long axis of the root whenever possible. In situations where a perpendicular bevel may not be possible as in the mesiolingual root of the mandibular first molar, a 10° bevel may be used. Two major reasons contraindicate the use of acute bevel angle (<90°) for root resections are:
- Acute bevel angle may result in an uneven or incomplete resection of the apex with the buccal aspect resected completely leaving the lingual part partially or not resected at all.
- Beveling results in opening of dentinal tubules on the resected root surface that may communicate with the root canal space and result in apical leakage even after retrofilling.

d. Root end retropreparation: The purpose of a retropreparation in periapical surgery is to create a cavity to receive a retrograde filling. There are 5 requirements i.e.:
(i) Apical 3mm of the root canal must be freshly cleaned and shaped
(ii) Preparation must be parallel to and co-incident with the anatomic outline of the pulp space
(iii) Adequate retention form must be created
(iv) All isthmus tissue must be removed
(v) Remaining dentine walls should not be weakened.

A miniature contra-angle handpiece with an inverted cone bur works well but ultrasonic preparation is preferred as it gives better results.

iv. The importance of post-surgical care should not be underestimated. Disaster has struck in Fig 21-2 secondary to the extensive flap raised in Fig 2h. The important twin components of post-operative care and post-operative instructions must always be emphasised to the patient more so as this patient was on Cardioprin (aspirin effect), which resulted in prolonged haemorrhage causing the severe subcutaneous ecchymosis. Spreading down the loose subcutaneous tissue of the neck. In any oral surgical procedure likely post-operative sequelae may include any of the following or a combination:
- Pain
- Bleeding
- Swelling
- Ecchymosis
- Infection
- Transient paraesthesia

To maintain goodwill and to pre-empt misunderstanding the dentist should be proactive by:
- Genuine expression of concern and reassurance to the patients regarding both their physical and emotional experience.
- Good patient communication with post –surgical instructions conveyed both verbally and in written form.

Sample of postoperative instructions
- Do not undertake any strenuous activity for the rest of the day. Be careful not to knock into/injure that part of the face where the surgery was performed. Should not drink any alcohol or use any tobacco for next 7 days.
- It is important to have a good diet and drink lot of fluids for the first few days of the surgery. A soft diet and food supplements will help.
- Do not lift-up the lip or pull back the cheek to look at where the surgery was done. This may undo the stitches and cause bleeding.
- A little bleeding from the surgical site is normal. This should only last for a few hours.
- In surgery involving the upper teeth, there may be temporary bloody discharge from thenose. There may be little swelling and bruising of the face. This should only last for a few days.
- Place an ice pack on the external part of the face corresponding to the internal area where surgery was done. Leave it on for 10 minutes and then leave it off for 20 minutes. Do this for 6 to 8 hours.
- After 8 hours, the ice pack should no more be used. The day after surgery, put a soft, wet hot towel (soft warm pack) on the face where the surgery was done. Do this as often as possible for the next 2 to 3 days.
- Discomfort after the surgery should not be bad, but the area will be sore. Use the pain medication recommended up to every six hourly. Complete all medications provided as prescribed
- Rinse the mouth with 1 tablespoon of 0.1% Chlorhexidine mouthwash two times a day, once in the morning and once at night for 5 days.
- It is important to remove the stitches between 5-10 days.

v. To understand surgical endodontic principles, which will give consistent results, refer to studious adherence of the soft and hard issue management alluded to in question (iv). The ideal Retrograde Filling Material should have most of the following 12 properties i.e.:
- Should be well tolerated by periapical tissues
- Should adhere (i.e. ideally bond) to the tooth structure
- Should be dimensionally stable
- Should be resistant to dissolution
- Should promote cementogenesis
• Should be bactericidal or bacteriostatic
• Should be noncorrosive
• Should be electrochemically inactive
• Should not stain tooth or periapical tissue
• Should be readily available and easy to handle
• Should allow adequate working time, and a quick set
• Should be radiopaque

Retrograde Filling Materials commonly used include:
• Amalgam
• Gutta-percha
• Glass ionomers
• Ketac silver
• Zinc oxide-eugenol
• Cavit
• Composite resins
• Polycarboxylate cement
• PolyHEMA
• Bone cements
• IRM
• Super EBA
• Mineral trioxide aggregate (MTA)

vi. The trapezoidal flap and the histo-pathological examination (HPE) report. A mucoperiosteal flap involves an intrasulcular horizontal incision with reflection of the marginal and interdental gingival tissue as part of the flap. The trapezoidal flap (Fig 2r-l) is actually a broad based rectangular flap with 2 vertical releasing incisions intersecting the horizontal intrasulcular incision at an obtuse angle. This broad based flap has the advantage of providing a better blood supply to the flapped tissues. However this flap is not popular as it has the dubious distinction of causing shrinkage of the flapped tissues. HPE reported as apical periodontal cyst arising from the epithelial residues in the periodontal ligament as a result of inflammation.

vii. Changes that has transpired over the 4-year period to the cyst and the need for endodontic intervention plus possible complications. The cyst has gone through all 3 phases of initiation, cyst formation, and enlargement. Notice that the well circumscribed lesion of year 2005 has now increased in size with loss of the clear sclerotic margins and encroached into the right maxillary antrum in 2009. As the lesion has now broken through buccal bone causing the intraoral sinus and increased opacity of the encroached antrum, any surgery may result in an oro-antral communication and a chronic maxillary sinusitis. However we still need to resolve the problem with a good orthograde root filling, enucleation of the cyst and send the specimen for a HPE report.

eight. The dental anatomy of the anterior tooth (Fig 2a-1: the pathogenesis of lateral periodontal cysts). There are two distinct types of lateral periodontal cyst. The lateral periodontal cyst is an uncommon but well-recognized type of odontogenic cyst. These cysts appear to arise directly in the lateral periodontal ligament of an erupted tooth, and several possibilities have been suggested to explain the mode of development:
• It has arisen initially as a dentigerous cyst developing along the lateral surface of the crown. If the expansion of the cyst is slow, tooth eruption may be normal, and eventually the cyst will assume a position in approximation to the lateral surface of the root. The lateral periodontal cyst in this case develops directly in the periodontal membrane from the epithelial rests of Malassez.
• Another possible origin is from cell remnants of the dental lamina. During growth of the jaws an ectopic gingival cyst in some cases may assume a position on the lateral root surface.
• The most likely explanation for the lateral periodontal cyst is that it represents simply a primordial cyst of a supernumerary tooth germ. The predilection for occurrence of this cyst in the mandibular cuspid-bicuspid area corresponds well with the known high incidence of supernumerary teeth in the mandibular bicuspid area. This lesion should be referred to simply as a primordial cyst, reserving the term “lateral periodontal cyst” for the inflammatory lesion arising in the lateral periodontal ligament from the rests of Malassez.
• Commonly it arises from the lateral canal of a non-vital tooth especially upper lateral incisor.

Clinical Features. The lateral periodontal cyst has been reported chiefly in adults. The majority of these cysts have occurred in the bicuspid region of the mandible. The majority of cases have presented no clinical signs or symptoms and have been discovered during routine radiographic examination of the teeth. Occasionally, when the cyst is located on the labial surface of the root, there may be a slight obvious mass, although the overlying mucosa is normal. Unless otherwise affected, the associated tooth is vital. If the cyst becomes infected, it may then resemble a lateral periodontal abscess and even seek to establish drainage.
Radiographic Features. The periapical roentgenogram discloses the lateral periodontal cyst as a radiolucent area in apposition to the lateral surface of a tooth. The lesion is usually small, seldom over 1 cm in diameter, and may or may not be well circumscribed. In most cases the border is definitive and is even surrounded sometimes by a thin layer of sclerotic bone.

Histologic Features. The cyst is comprised essentially of a hollow sac with a connective tissue wall lined on the inner surface by a layer of stratified squamous epithelium. This epithelium is generally thin and shows little evidence of proliferation. In some cases, this epithelium is forming parakeratin or orthokeratin and thus the cyst would qualify for classification as an odontogenickeratocyst. However, in other cases there is no evidence of keratin formation. Papillary infoldings of the cyst wall are common as in some odontogenickeratocysts.

Treatment and Prognosis. The cyst must be surgically removed, if at all possible without extracting the associated tooth. If this cannot be accomplished, the tooth must be sacrificed. It is especially important that the diagnosis be established because of the similarity in appearance between this cyst and other more serious lesions such as an early ameloblastoma. There is no reported tendency for recurrence of this type of cyst following its surgical excision.

ix. Answers to the miscellaneous questions:
(a) The purpose of the apicectomy procedure in surgical endodontics is to resolve the perpetuation of apical inflammation or infection due to poorly obturated canals. Sometimes tissue is left in the canal or quite often an apical delta of accessory foramina containing remnants of necrotic tissue may persist. The removal of this apical segment via an apicectomy usually removes the nidus of infection.
(b) The patient in Fig 2a had a previous apicectomy on a maxillary central incisor with has previously failed endodontic therapy. A well-done porcelain–to–gold crown is present with the gold margin placed in the gingival sulcus for aesthetic purposes. A full mucoperiosteal flap involving the marginal and interdental gingival tissues may potentially cause the loss of soft-tissue attachments and crestal bone height thereby causing an aesthetic problem with the exposure of the gold margin of the crown. Instead, a submarginal rectangular (Luebke-Ochsenbein) flap that preserves the marginal and interdental gingival is recommended.
(c) The material of choice for root end fillings in surgical endodontics is still very varied. Histologic studies have compared several materials including amalgam, EBA cement, resins, polycarboxylate cements, glass ionomers and gold foils. Although no study has shown a definitive superiority of one over another, themost commonly used today are amalgam, EBA cements and MTA. Current literature suggests that the type of retrograde root filling material is in fact secondary in importance to the root resection technique, apical preparation, curettage of the lesion and technique in placement.
(d) Accepted success rates in endodontic surgery is only about 70%. Numerous studies have addressed the success rates of endodontic surgery. Most agree, however, on certain basic conclusions. First, the success of endodontic surgery is closely related to the standard of treatment of the root canal. Second, orthograde (conventional) root fills are preferred, if possible. Thirdly, the success rate is about 20% lower for retrograde fills than for properly done orthograde fills.
(e) Does the ideal retrosurgical root filling material exist? No. Many research studies have been published about a myriad of materials. However, the ideal is not yet determined. Most likely the material itself is not as important as the surgical preparation, the depth of the preparation and how it is placed. Refer to the part on mechanical preparation.
(f) Some dentists use citric acid and are fastidious about the angle of the apical bevel and its relationship to the depth of the retrograde fillings. After root end resection during endodontic surgery, many practitioners apply citric acid to the expose dentin surface. The rational behind this practice is that a desired result of root end surgery (Apicectomy) is to achieve, if possible, a functional apicaldentoalveolar apparatus with cementum deposition on the root end. However, the resected root end is covered with a smeared layer of dentin from the high-speed bur, which does not allow reattachment of newly deposited cementum. Applying citric acid for 2–3 minutes dissolves the smear layer and causes a small degree of demineralisation of dentin. This in turn exposes collagen fibrils of the dentinal organic matrix and allows a proper area for attachment of collagen fibrils from newly formed cementum.
In performing apical surgery, the angle of the apical bevel during apicectomy and how it relates to depth of retrograde fillings is important to the success rate. Recent studies have shown that increasing the angle of the apical bevel increases the potential for apical leaking due to exposure of more dentinal tubules. A bevel as close to zero degrees as possible is ideal. However as illustrated in Fig. 2-1 this ideal is not feasible for reasons of visibility and mechanical access. In addition, increasing the depth of retrograde preparation and filling decreases apical leaking by sealing more dentinal tubules.

(g) Guided tissue regeneration may have a role in saving a peri-endo lesion with massive pocketing and severe bone loss. During apical surgery in the past, teeth with extensive periodontal defects were extracted because of the poor prognosis. Today, however, guided tissue regeneration can save many of these teeth by preventing the downgrowth of epithelial cells. An inert barrier is place over the periodontal defects. These membranes allow proliferation of undifferentiated cells of the periodontal ligament and surrounding bone to grow across the wound, potentially forming a new attachment and prevent the downgrowth of epithelial cells to form a junctional epithelium.

(h) The goal of apical surgery is to eliminate the source of periapical irritation emanating from the root canal, which perpetuates apical infection. In addition, it is important to allow reformation of cementum around the apex, to re-establish a functioning periodontal ligament and to allow alveolar bone repair. If these goals are not possible, we aim at least to allow repair by scar tissue which is less than ideal but is still a form of tissue repair.

FDI POLICY STATEMENT

Dear friends,
The FDI World Dental Federation, which represents the interests of dentists globally, organized yet another one of its Annual World Dental Congresses (AWDC) in Singapore at the Suntec Convention Centre. In spite of global economic slowdown, the Congress managed to attract a good turnout from international delegates and dental trade exhibitors. This year’s scientific programme not only featured popular topics like implants, esthetics and periodontics, it also gave insight into new challenges and developments in dentistry. Among others, the prevalence of oral cancer, salivary biomarkers as well as the therapeutic potential of dental stem cells and tissue engineering were discussed.

The FDI Parliament also appointed its new President Dr. Roberto Viana of Brazil, who takes over the presidency from Dr. Burton Conrod of Canada.

The FDI General Assembly adopted three new and seven revised FDI Policy Statements at the 2009 Annual World Dental Congress.

New Policy Statements
- Dentin Hypersensitivity
- Edentulism and General Health Problems of the Elderly
- The Use of Academic, Professional and Harmony Titles

Revised Policy Statements
- The Association between Oral Health and General Health
- Dental Bleaching Materials
- Effect of Masticatory Efficiency on General Health
- Fluoride in Restorative Materials
- Infection Control in Dental Practice
- Post-Exposure Prophylaxis for HBV, HCV and HIV
- Research

The FDI Policy Statement on Dental Unit Water Lines and Tuberculosis and the Practice of Dentistry were withdrawn at General Assembly B and Open Forum 1, respectively.
The association between oral health and general health

Revised version adopted by the General Assembly: 4th September 2009, Singapore

Recent increased awareness of the association between oral diseases and systemic diseases has generated interest and hope for a clearer understanding of the role of oral health care professionals in the screening and prevention of generalized diseases, as well as to foster understanding among medical professionals regarding the effect systemic disease may have on oral health. Many patients often seek oral health care when they perceive themselves as being healthy. This affords oral health care professionals the opportunity to screen and monitor patients for chronic diseases that have yet to manifest clinical signs and symptoms.

Studies have revealed an association between the presence of oral infections (especially periodontal disease) and systemic diseases, including cardiovascular and cerebrovascular diseases, adverse pregnancy outcomes, diabetes mellitus, pulmonary infections, and different forms of cancer. Intervention studies in small patient samples have generated contrasting outcomes. It is not clear if these results can be generalized to the population at large.

Statement

- It is essential that both medical and oral health care professionals are able to evaluate and understand the implications of studies on the association between oral and systemic diseases.
- While an association between oral and systemic diseases has been established, it remains unclear if a causative relationship exists.
- Given the importance of oral health as a part of general health, both oral health care professionals, patients and the public at large, should strive for optimal oral health.
- Oral diseases may be signs of or serve as indicators of the presence of systemic diseases or conditions.
- Currently, there are no definitive studies to justify specific oral interventions for the prevention of systemic diseases, such as cardiovascular and cerebrovascular diseases, or for reduction of the incidence of adverse pregnancy outcomes.
- Further interdisciplinary intervention studies are necessary to determine if a causative relationship between oral and systemic diseases exists.

References


Dental Bleaching Materials


Introduction

For the purpose of this Statement, dental bleaching materials are peroxide-containing materials which are intended to remove intrinsic and/or extrinsic tooth discolourations. Professional in-office tooth bleaching products have been used in dentistry for more than a century. In contrast, at-home tooth bleaching products intended for patient use under limited professional supervision were introduced in 1989. There are two types of professional bleaching systems currently available for treating natural teeth: 1) in-office bleaches prescribed by dentists; 2) products that are issued to patients for in-home use under the dentists’ supervision. Currently, the most commonly used professional formulations are gel preparations of hydrogen peroxide or carbamide (urea) peroxide.

In recent years a variety of over-the-counter (OTC) products, formulations and delivery systems has been introduced to the profession and general public. There is ongoing controversy and confusion as to whether bleaching products should be regulated as cosmetic or therapeutic devices, or if dental bleaches should be sold over-the-counter or used without direct professional supervision.

Statement

FDI supports the appropriate use of dentists’ prescribed and supervised tooth bleaching procedures. Dentists must to complete a comprehensive examination to assess the patient’s oral health conditions, needs and desires prior to initiating any tooth-bleaching treatment. Peer reviewed studies indicate that peroxide-containing tooth bleaching products are safe and effective when used under the supervision of a dentist and according to the directions for use.

Dentists and patients should consider the following:

- products vary in formulation, concentration, dosage and the method of treatment
- to maximize benefits and minimize risks, individuals should seek professional guidance to determine if bleaching is suitable for their specific condition(s)
- specialized devices such as trays (which reduce the quantity of material used and the amount swallowed), heat sources, lights and lasers may enhance the effectiveness of some professional bleaching products
- the most common side effects from tooth bleaching are transient tooth sensitivity and soft tissue irritation during or immediately following treatment
- high concentration hydrogen peroxide products should not be used without gingival protection
- for nightguard vital bleaching, minimal amounts of low-dose hydrogen peroxide are preferred
- activation of bleaching agents by heat, light or laser may have an adverse effect on pulpal tissue
- the long-term effects from higher concentrations of bleaching agents on the dental pulp, dentine, enamel and oral soft tissues remain unclear.
References

Dentin Hypersensitivity
Adopted by the FDI General Assembly: 4th September 2009, Singapore

Introduction
Dentin hypersensitivity is characterised by short sharp pain arising from exposed dentin most commonly at the tooth cervical area in response to stimuli (typically thermal, evaporative, tactile, osmotic or chemical), but which cannot be ascribed to any other dental defects, diseases or restorative treatments. It is a commonly encountered but frequently misunderstood clinical problem. It occurs in many adults at various levels of prevalence ranging from 3% to 57%, owing to differences in the populations studied and the methods of investigation used. In general, patients with periodontitis have a relatively higher prevalence of dentin hypersensitivity, presumably because of the greater risk and extent of root exposure as a result of periodontal destruction. In recent years, there are increasing numbers of younger adults with this noxious problem, likely due to the exposure to some predisposing factors such as acidic diets, traumatic brushing, personal habits, and the inappropriate use of tooth whitening products. Growing numbers of patients are seeking professional care for this problem.

Exposure of open dentinal tubules due to loss of enamel and/or gingival recession or both with subsequent loss of cementum and/or dentin is considered to be a primary cause of dentin hypersensitivity consistent with the hydrodynamic theory. Over time there can be a natural process for obliteration of open tubules by calcification crystals. In addition, dentin hypersensitivity could often be combined with other conditions, such as erosion, abrasion, attrition, abfraction, bruxing, genetic conditions, and periodontal conditions.

FDI recognises that:
• Understanding of the etiological/predisposing factors and appropriate diagnosis are crucial to effectively manage dentin hypersensitivity.
• Currently, there is inadequate evidence to establish a specific guideline for management of dentin hypersensitivity.
• There is a wide range of treatment options that can modify, block, or alter fluid flow through dentinal tubules and thereby prevent pulp nerve response.
• Following identification of predisposing factors and appropriate diagnosis, dentin hypersensitivity could be co-managed by oral health care professionals and the patients at home as appropriate. Usually, the relevant predisposing factors should be addressed and appropriate prevention measures be reinforced. Least invasive treatments (e.g. use of desensitising toothpastes and agents) are undertaken first, and if necessary, invasive treatments may be provided later by dentists.
• Further multidisciplinary research into dentin hypersensitivity is encouraged.

References

Edentulism and General Health Problems of the Elderly
Adopted by the FDI General Assembly: 4th September 2009, Singapore

Edentulism (complete tooth loss) has decreased over the last decades, but there remains a proportion of edentulous individuals in ageing societies worldwide. Although not a life-threatening condition, edentulism has important implications for individual functional and social limitations as well as the community’s use of public resources.

The impact of edentulism on daily oral function and social interactions is well known. However, evidence clarifying the relationship between general health and complete tooth loss is limited.

Statement
• As a result of the ageing population, edentulism is expected to affect individuals in all countries.
• Denture use can positively influence general well being and daily oral function for edentulous patients.
• Denture wearers frequently modify and limit food choices and consequently nutritional intake may be inadequate compared to a dentate population.
• The loss of all teeth results in changes in oral perception, which can only be partly compensated by wearing dentures.
• In appropriate patients, implant-supported overdentures offer a substantial benefit from psycho-social, structural and functional aspects.
• The loss of all teeth can be difficult to accept, and careful psychological preparation by the dentist prior to tooth extraction is recommended.
• Edentulism and poor health conditions often co-exist. A causal relationship has not been demonstrated.
• Further research based on longitudinal cohort studies with adequate control for confounding factors is encouraged to investigate the impact of edentulism on general health
Effect of Masticatory Efficiency on General Health
Original version adopted by the General Assembly: 18th September 2003, Sydney, Australia
Revised version adopted by the General Assembly: 4th September 2009, Singapore

Introduction
Masticatory efficiency in adults may be compromised if there are less than 20 functional teeth.

Masticatory efficiency has essential benefits, not only for the digestion of food, but also for its contribution to physical and mental well-being. Dentists and patients have a shared responsibility to contribute to overall health by maintaining an appropriate and acceptable level of masticatory efficiency to meet patients’ needs. However, further research on the relationship between masticatory efficiency, general health and quality of life is necessary.

There is evidence to support that:
• mastication stimulates the flow of saliva, which helps to maintain the health of hard and soft oral tissues and protect the body against pathogens
• loss of masticatory efficiency may be associated with emotional health problems
• Deranged occlusions with reduced masticatory efficiency may lead to the risk of alimentary problems, stress and temporomandibular joint disorders
• patients with morbid obesity require educating to chew food for longer, as a requirement of a weight loss program
• restoration of masticatory efficiency following dental treatment may lead to an improvement in Quality of Life
• mastication increases blood flow within the brain and stimulates central neural activity. However, the implications of these findings are unclear
• nutritional guidance should be provided to patients, specific to their level of masticatory efficiency
• there may be an association between a healthy Body Mass Index and masticatory efficiency.

References

Fluoride in Restorative Materials
Original version adopted by the General Assembly: 18th September 2003, Sydney, Australia
Revised version adopted by the General Assembly: 4th September 2009, Singapore

Rationale
• The most common reason for the replacement of restorations is secondary caries
• Ionic fluoride has an anti-caries activity, can alter the dynamics of the caries process, can modify the dental hard tissues and has an anti-microbial effect
• The effect of fluoride-releasing restorative materials on the incidence of secondary caries should therefore be further investigated.

Evidence
• Research has been carried out into the release of fluoride from glass-ionomer and resinmodifiedglass-ionomer cements, resin composites, polyacid-modified resin composites (‘compomers’), fissure sealants and amalgam
• There is substantially more laboratory-based research than clinical research
• Comparisons between studies are hindered by the lack of common study designs
• There is equivocal clinical evidence that there is less secondary caries associated with glassionomer cements than with other restorative materials
• There is negligible clinical evidence that other fluoride-releasing materials are associated with the inhibition of secondary caries

Future Research
• There is a need for long-term randomised controlled trials on the effect of fluoride-releasing materials on secondary caries
• There is a need for research to establish the dynamics of fluoride release from such materials
• There is a need to establish the clinical significance of the fluoride ‘recharge’ capability of fluoride-releasing materials

Clinical Significance
• When selecting a restorative material for a specific situation, all properties, including fluoride release, should be considered
• The success of a restoration depends not only on the choice of material, but also on the skill of the dentist and appropriate caries-preventive measures, including dietary counselling, oral hygiene and exposure to fluoride

References
Infection Control in Dental Practice


Revised version adopted by the General Assembly: 4th September 2009, Singapore

Current epidemiological data clearly indicate that the risk of oral health care professionals contracting diseases through the provision of dental treatment is minimised when recommended infection control procedures are routinely followed.

A key element of infection control is the concept of ‘standard precautions’, as a means to reduce the risk of disease transmission (e.g. the human immunodeficiency virus, hepatitis viruses and others) in healthcare settings. The primary precept underpinning this concept is the consideration that all patients are potentially infectious.

‘STANDARD PRECAUTIONS’
The FDI World Dental Federation (‘The FDI’) urges all oral health care professionals to adhere to ‘standard precautions’ as set forth by the local or regional authorities, as appropriate.

General measures
Members of the oral health care team are obliged to take adequate measures to protect themselves and their patients against blood-borne infections, including to:

• exercise special care when using cutting instruments and needles; remove them from the work area immediately after use.
  
  • follow protocols accepted and/or recommended by local authorities for the cleaning, disinfection, sterilization and disposal of used instruments and equipment
  
  • make sure that sterile instruments are protected from contamination by the use of appropriate barrier packaging, and are sterile when used
  
  • where possible, implement tracking, tracing and biological indicator monitoring systems for sterilization
  
  • use single-use instruments if sterilization is not possible
  
  • adopt the principles of cleanliness, and disinfect all exposed surfaces in the work environment
  
  • adopt disinfecting principles for devices, prosthesis, impressions, instruments and applicable items transported to and from the prosthetic laboratory and within the laboratory itself
  
  • use disposable covers to protect documents, suction tubes and any other handling areas. Change the covers after each patient
  
  • handle biopsy specimens with care and place in leak-proof containers labelled with the biohazard symbol.

Specific measures for clinic attendance

• Carefully wash hands with neutral pH liquid soap or use alcoholic hand gels prior to donning and after removal of gloves.

• Wear appropriate gloves and masks

• Change gloves between patients, and masks when wet

• Use protective eyewear with side-shields

Wear appropriate protective clinical attire

VACCINATION
The FDI urges oral health care professionals who may be exposed to infectious risks to be appropriately vaccinated according to current guidelines issued by the local authorities, and to take advantage of other vaccines as and when they become available.

EXPOSURE INCIDENTS
The FDI recommends that all oral health care professionals should be familiar with post-exposure protocols for the management of occupational exposures to blood-borne pathogens, and proprietors of oral health care clinics should institute policies in the workplace to ensure appropriate and efficient management of such incidents.

MANDATORY TESTING
The FDI opposes any legislation that mandates testing of oral health care professionals to determine their blood-borne pathogen status. However, oral health care professionals must recognise signs and symptoms in themselves which indicate the possibility of blood-borne and other infectious diseases and undergo the necessary diagnostic tests. An oral health care professional with a diagnosed blood-borne infection should comply with medical advice regarding continuation of practice.

REFERRAL FOR MEDICAL EVALUATION
The FDI urges all oral health care professionals to be alert for signs and symptoms related to blood-borne and other infectious diseases in their patients. Patients with medical histories or conditions suggestive of infection should be advised to undergo appropriate investigations. Such advice should be given in a supportive environment with due regard to privacy and sensitivity.

PATIENT DISCLOSURE AND CONFIDENTIALITY
The FDI believes that all patients infected with blood-borne pathogens should disclose their status as part of their medical history. The oral health care professional has to be cognisant of the complete medical history in order to make appropriate treatment decisions that are in the best interests of the patient.

The FDI urges oral health care professionals to have an appropriate protocol, in accordance with applicable local laws, for the confidential handling of information on patients with infections. This should not prevent oral health care professionals sharing information pertaining to the patient’s medical condition with other health care workers in the same practice/setting, as permitted by local regulations and with the patient’s consent.
Patients should be made aware of the Privacy Policy of the facility.

PUBLIC INFORMATION AND EDUCATION
The FDI recommends that local/regional dental associations should educate the public on both the efficacy of ‘standard precautions’ and the absence of a significant risk of contracting blood-borne diseases through the provision of dental care, when recommended infection control procedures are followed.

PROFESSIONAL EDUCATION
The FDI recommends that all oral health care professionals keep their knowledge and skills current with regard to the diagnosis and management of those infectious diseases that may be transmissible in the clinical setting.

The FDI recommends the development/updating of local and national educational programmes for the dental team that: address infection control recommendations in health care settings; address the management of the oral and systemic implications of blood-borne diseases; address the role of medical practitioners in treatment.

The FDI recommends that dental educators comprehensively address and incorporate current infection control recommendations in health care settings in curriculum content and clinical activities.

ACCESS TO DENTAL CARE
The FDI believes it is unethical for patients to be denied oral health care solely because of their blood-borne disease status.

References

Post-Exposure Prophylaxis for HBV, HCV and HIV
Original version adopted by the General Assembly: 26th August 2005, Montreal, Canada
Revised version adopted by the General Assembly: 4th September 2009, Singapore

Introduction
Exposure to blood-borne pathogens such as the human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV) is a potentially serious risk to dental care workers. In health care settings, blood-borne pathogen transmission occurs predominantly by percutaneous or mucosal exposure of workers to the blood or body fluids (including saliva) of infected patients. Prospective studies of health care workers have estimated that the average risk of HIV, HCV and HBV transmission after a percutaneous exposure to blood of an infectious patient, without postexposure prophylaxis (PEP) for HIV or without prior Hepatitis B vaccination and evidence of protective antibodies, is approximately 0.3% (HIV), 1.8% (HCV) and 6-30% (HBV).

The primary means of preventing occupationally acquired infections is avoiding exposure to blood and other body fluids by implementing standard precautions. However, appropriate post-exposure management including PEP is an important element of workplace safety.

Statement
The FDI World Dental Federation recommends that:
• all oral health care workers should adhere to standard precautions, including hand washing, protective barriers, extreme care in the use and disposal of needles and sharps and the additional precautions of masks and eye protection
• all oral health care facilities should adhere to cleaning, disinfection and sterilisation protocols
• vaccination against Hepatitis B for oral health care providers at risk of blood and body fluid exposures is available, with subsequent confirmation of protective antibodies
• all oral health care providers be provided with personal protective equipment
• all workplaces have available written protocols for prompt reporting, evaluation, counselling and treatment of occupational exposures that may place oral health care workers at risk of acquiring any blood borne infections
• all oral health care providers are educated with respect to the immediate management of occupational exposures
• access is available to expert post-exposure care as soon after the exposure as possible, i.e., within hours rather than days
• there are clear mechanisms of post-exposure follow-up and compliance with incident reporting requirements mandated by the local, regional or national authorities

References
Research
Original version adopted by the General Assembly: October 1998, Barcelona, Spain
Revised version adopted by the General Assembly: 4th September 2009, Singapore

In order to meet changing oral health needs and demands of the population worldwide, the continual search for new and improved methods of care is necessary.

The FDI therefore:
• supports the essential need for approval of research using humans, animals and their tissues by an appropriately recognised Ethics Committee/Institutional Review Board
• encourages the close co-operation between the dental profession and the research community
• supports the concept of collaborative research groups within and between countries
• encourages the concept of practice-based dental research in order to apply scientific findings in the practice environment and to stimulate the interests of science in the issues and problems relevant to dental practice
• encourages the funding of dental research
• encourages research programmes in all of the sciences related to dentistry
• encourages academic and industry scientists to promote the development and standardisation of high quality equipment, instruments, materials and therapeutic agents
• requests national dental associations and health authorities to support or initiate research programmes and procedures that promote these objectives
• supports research designed to improve the organisation of oral health care systems, delivery of health care, health education, undergraduate, postgraduate and continuing professional development and interdisciplinary cooperation.
• encourages the practising profession to keep abreast of advances in science

The Use of Academic, Professional and Honorary Titles
Adopted by the FDI General Assembly: 4th September 2009, Singapore

1. Professional dental qualifications should provide confirmation to dental bodies, to the public and to patients, of a dentist’s professional competence.
2. A dentist should therefore use, in connection with dental practice, only those qualifications/credentials or titles which are so permitted the dental regulatory authority(s) in that jurisdiction(s).
3. Whilst it must be for the dental regulatory authority(s) in that jurisdiction(s) to decide upon the legal requirements and restrictions applicable, the FDI considers that the use of honorary dental titles, including those obtained from international dental organisations, and of non-dental qualifications/credentials could be misleading both to patients and to the public by implying the attainment of a specialist or other higher diploma. Such titles should therefore be limited to communications with other dental colleagues, scientific papers and curriculum vitae.

MDA representative to FDI General Assembly
Dr Haja greeting Dr Roberto Vianna
Dr Haja with outgoing FDI President Dr Burton Conrod

Dr Haja Badrudeen Bin Sirajudeen
FDI National Liaison Officer
Heartiest Congratulations to

DATO’ DR. NORAIN BINTI ABU TALIB
Principal Director of Oral Health
Ministry of Health Malaysia

On the conferment of

Darjah Kebesaran Mahkota Pahang Yang Amat Mulia

Darjah Indera Mahkota Pahang (DIMP)

On the 79th Birthday of the Duli Yang Maha Mulia Sultan of Pahang on 24th October 2009

From:

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ACCESS THE INACCESSIBLE
THE RIGHT POWER IN THE RIGHT PLACE

Optimized power output in three modes — standard power, high power and new plasma mode
Focused, columnar beam for a complete, uniform cure
Sleek, lightweight, low-profile accessibility
The proven efficacy in reducing aerosol contamination for a healthier working life

Aerosol contamination during dental procedures may cause long term negative impact to dentists’ health

Researches say:
- Bacteria from patients’ mouth can spread far beyond 6 feet.¹
- In clinics with multiple dental chairs there are 5 times more aerosol contamination during operation than before treatment.²
- Listerine reduces aerosol contamination by up to 91.3% and lasts for at least 45 minutes.³

Reduction of Viable Bacteria in Dental Aerosols by Preprocedural Rinsing With an Antiseptic Mouthrinse

<table>
<thead>
<tr>
<th>% Reduction</th>
<th>Reduction</th>
<th>Bacterial reduction was sustained for at least 45 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>91.3%</td>
<td>Cool Mint Listerine Antiseptic Mouthrinse</td>
<td></td>
</tr>
<tr>
<td>12.9%</td>
<td>5% Hydralcohol Control</td>
<td></td>
</tr>
</tbody>
</table>

In year 2000, the American Academy of Periodontology suggested that dentists let patients rinse with an antiseptic mouthrinse before ultrasonic scaling to reduce aerosol contamination.⁴

Reference
**INTRODUCING**

**Oral-B**

**CROSSAction®**

**PRO-HEALTH™**

With new tongue cleaner to remove odor-causing germs

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**ADVANCED PROTECTION FROM EVERY ANGLE**

7 oral care benefits in 1 premium brush for a cleaner, healthier mouth *from every angle*

- **Removes Plaque**
  - Up to 90% of plaque in hard-to-reach places
  - Proven to significantly reduce gingivitis after 4 and 6 weeks of use

- **Helps Reduce Gingivitis**
  - With unique CrissCross® bristles

- **Cleans Along the Gumline**
  - With varying bristle textures

- **Polishes Away Surface Stains**
  - With outer gingival stimulators

- **Removes Odor-Causing Germs**
  - With NEW tongue cleaner

- **Gentle on Enamel**
  - With soft, end-rounded bristles

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THE DENTURE CARE SOLUTION FOR YOUR PATIENTS’ Added Confidence!

- 88% of denture wearers complain about issues with food, specially food trapped under dentures causing irritation and discomfort\(^1\)

- Polident Adhesive seals out 71% more food particles than no adhesive, improving comfort\(^2\)

References:

Use POLIDENT\textsuperscript{®} Adhesive to help seal out food particles!
REGISTER NOW

To: All Members in Private Practice

The Malaysian Dental Association and Colgate-Palmolive would like to invite you to participate in the 2010 Oral Health Month (OHM) which will commence from 1st April to 30th April 2010.

OHM is a collaborative effort for the dental profession by the Malaysian Dental Association and Colgate-Palmolive. This campaign runs every year during the month of April and is into its 7th year of implementation. OHM aims to educate the public on the importance of oral hygiene through a series of activities. The theme for this year’s Oral Health Month is ‘Our Mission: Zero Cavities’.

To motivate the public to seek professional oral health advice, we seek your participation to provide them with a Free Dental Check-Up.

Mass publicity for this event will be through TV, Radio, Press, Internet advertising and point-of-sale materials. The list of participating clinics will appear in major newspapers and in the form of leaflets.

We look forward to your contribution and participation in this meaningful public health service event. Please confirm your participation either by mailing or faxing your reply slip latest by 31st December 2009.

Reply slip:
(If you have not registered, here is your chance to sign up now!)

I/We are interested to participate in the community service project to be held in April 2010.
(To facilitate delivery of Free Dental Check-Up materials, please fill in the following details and mail this slip to OHM MALAYSIA 2010, Colgate-Palmolive Marketing Sdn. Bhd., Jalan Semangat/Jalan Bersatu, Section 13, 46200 Petaling Jaya, Selangor, Malaysia or fax it to 03-7965 4441)*

Name of Participating Clinic: ____________________________________________________________ Telephone: __________________________

Name of Doctor-in-Charge: ___________________________________________________________ Signature: __________________________

Address of Clinic & Tel. No. to be Advertised: ____________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

Postcode: ___________ State: ________________ Tel. No.: __________________________

Delivery Address For Dental Kit: ______________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

Postcode: ___________ State: ________________ Tel. No.: __________________________

*Proof of mailing or fax is not proof of receipt. Incomplete/illegible/non-deliverable addresses will be automatically rejected.
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**Colgate offers a safe and effective new in-office treatment for sensitivity patients with innovative Pro-Argin™ Technology**

- Based on a natural process of tubule occlusion with the key components arginine and calcium carbonate
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- Clinically proven relief that lasts for 28 days**
- Sensitivity treatment and gentle polishing in one step

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* Graphical representation based on SEM photography; for illustration only