THE DENTAL SURGEON

JUNE 2017 ISSUE

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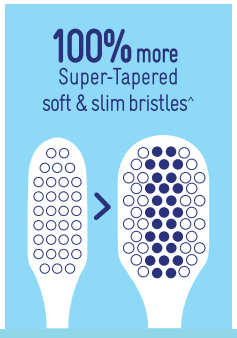

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EDITOR'S NOTE

Solidarity

The Singapore Dental Association (SDA) has just celebrated 50 years of serving our ever-changing dental community. In the face of modernity, an uncertain economy and an influx of dental practitioners with diverse backgrounds and training, the SDA has been working hard to engage its members and keep abreast of the times. Its landmark 50th anniversary convention held at Orchard Hotel Singapore in April 2017 was a stunning success scientifically, socially and gastronomically, where SDA members and our all-important vendors re-affirmed their ties and connections with one another.

All this came at a timely juncture; we are all aware of the negative press our profession has received in recent months. It is thus an opportune moment to come together, take stock of how far we have come in the last 50 years, and face the future as a united body. To quote Dr. Wong Libeng in his article on page 53: "Life as a dentist is never a bed of roses. All of us will have our fair share of unpleasant clinical interactions or experiences. However, I look at these "downer" moments as means to strengthen our resolve to do something good for the profession."

Dr. Terry Teo
Editor-in-Chief
The Dental Surgeon

Terry Teo is a paediatric dentist at Q&M Dental Group, and a part-time tutor at the Faculty of Dentistry at NUS. When he was young he loved reading and writing, until life and dentistry got in the way. He thus relishes this opportunity to have his cake and to eat it at the same time.

Convener and Editor

Dr. Dephne Leong is an endodontist at JurongHealth. Dephne is a Singapore Dental Association Council Member and has recently joined ***The Dental Surgeon*** team. With her eye for detail, she hopes to contribute to maintaining the high quality of the publication so that readers will continue enjoying it. Dephne loves travelling and playing squash in her free time.

Layout Editor

Dr. Tan Keng Wee is a general practitioner in private practice and has recently joined the editorial team of ***The Dental Surgeon***. He hopes to be able to contribute to the publication and help maintain its high quality. Keng Wee also volunteers with the SDA Ethics Committee as a mediator, and spends his free time practising yoga and searching for the perfect waffle.

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Editors

Dr. Tong Huei Jinn is currently teaching at the Faculty of Dentistry in NUS, and works as a Paediatric Dentist in NUH and School Dental Services, HPB. Huei Jinn is delighted to return to ***The Dental Surgeon*** after her stint as its Editor before leaving for post-graduate studies in 2007, and hopes to continue to do the magazine and our profession proud. When time permits, Huei Jinn loves travelling.

Dr. Ivan Koh is an endodontist at NUH, and a part-time tutor at the Faculty of Dentistry in NUS. Ivan has been with ***The Dental Surgeon*** since 2005, starting off by contributing an article or two per issue. He then took on the role of layout editor for 3 years before taking a hiatus for his MDS studies and he is now back as Assistant Editor. Ivan likes to read in his free time and that has been one of the driving forces for him to rejoin ***The Dental Surgeon*** team. He hopes readers find joy in this publication, not looking at it merely as a "dental newsletter", but perhaps, as a magazine worth its weight to leave on the coffee table at the reception area of their clinics!

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Looking Back on 50 Years

BY **DR. ASHA KARUNAKARAN**

Built at a cost of nearly $100,000, this building as the Headquarters of the Alumni Association is the realisation of the dream of two generations of graduates. The picture shows the Main Entrance.

Old Alumni Association Building

As the oldest contributing writer for The Dental Surgeon, it was perhaps natural that I was assigned to look back on Singapore Dental Association's (SDA's) 50 years. According to archival information, SDA was formally established in 1967 – two years after Singapore separated from Malaysia. Sadly, records from the early years have been lost.

Browsing through old photographs in the SDA office, I was struck by a black-and-white photograph (see photo above) of the old Alumni Association building with a caption stating that it was built with "nearly $100,000" from "two generations of graduates".

I recall in the early 1980s, SDA had a little office there with a single, part-time staff. Now SDA has a team of five full-time staff.

SDA Council
Sitting from left to right: Dr. Goh Soo Wan, Dr. Chee See Kong, Dr. Wong Yew Cheong who was President, Dr. Oliver Hennedige and Dr. George Armstrong.
Standing from left to right: Dr. Lim Swee Teck, Dr. Peter Tay, Dr. Chiam Tim Jian and Dr. Patrick Chin.

Another interesting find from the SDA cupboards was a "vintage" photograph of SDA Council circa 1972-73.

I was amused by photographs of an old "D&D" – Dinner and Dance – complete with 'big band' musicians in bow-ties, side-burns and bell-bottom trousers.

Apart from musing on the effects of inflation, the passage of time and changes in fashion, SDA's 50th Anniversary gave pause to ruminate on what the Association has achieved.

Band at D&D

Dr. Yip Wing Kwong

Dentists were not always Doctors

One of the early stalwarts of SDA, Dr. Yip Wing Kwong who held the office of Honorable General Secretary (Hon Gen Sec), told me how back in the 1970s, he had to write a formal submission to the Ministry of Health to allow dentists to be addressed as "doctors". That request was met with some opposition but eventually, the honorific was bestowed on dentists. The thing we take for granted today is a privilege that had to be fought for by our predecessors.

Of course, with that privilege, comes obligations and responsibilities. In 1977, after much consultation, SDA produced the Code of Ethics as a guide on how the profession should conduct itself.

Raising Standards of Practice

Dr. Myra Elliot

SDA has done much to raise professional standards. In the early years, scientific conferences were often held in conjunction with the Malaysian Dental Association. Past President Dr. Ng Ler Poey wistfully told me that many of the early lectures were held free of charge.

Dr. Myra Elliot, who used to chair the education committee, recalls that as the 1990s began, there was a climate of alarm regarding transmission of infection from dentistry. With the National University of Singapore (NUS) dental student research team, she ran a survey of all the dentists in Singapore on how they sterilised their instruments. There were only two practices in the whole island that owned autoclaves. The rest had water boilers and some even had UV light "sterilizers". At the SDA Meeting, her committee held an infection control exhibition where information on Human Immunodeficiency Virus (HIV) and Hepatitis was displayed on giant posters. Members were told why water boilers were not sterilizers, wearing gloves was essential, disposable dental needles had to be used and so forth. There was also a provocative exhibition called "If Saliva was Red" showing red saliva on light handles, x-ray machines, dental chairs and, most horrifically, dentists' faces and glasses. That was of course a game-changer, and shortly after that, SDA published several practice guidelines.

Book Covers of Guidelines on Infection Control, Fee Schedule

Complying with higher standards also meant that members in private practice had to cope with rising costs. To help members, SDA issued a Minimum Fee Schedule. This was replaced later with a SDA Fee Guideline. According to past President Dr. Lewis Lee, "The Guideline was based on fees charged for basic dental treatment at the National Dental Centre Singapore and National University Hospital at the unsubsidised 'A' class rate (as our members were in private practice). It was just a guideline and there was no compulsion for members to comply, allowing free market forces to work. It became such a public relations furore with the press and forum pages of the Straits Times. This issue even went into the Sunday Times Editorial. I took tremendous flak for this but my Council stood firm. Personally, I felt members in private practice benefited tremendously from this". As it turned out, the SDA Fee Guideline had to be withdrawn to comply with the Competition Act of 2005.

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References:
1. Akwagyriam I, *et al.* Poster 174485 presented at the International Association of Dental Research, Seattle, WA. March 2013.
2. Yankell SL, *et al. J Clin Dent* 1993;**4**(1):26–30. **3.** Data on file, RH01530, January 2013.

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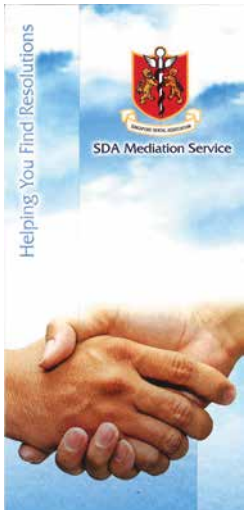
Throughout its history, SDA has served as a channel of communication between regulatory bodies and dentists in the private sector. When new and important regulations were introduced, SDA organised fora for these regulations to be clarified; and for members to give feedback on how the regulations would impact them. Recent examples of this have been the Public Hospitals and Medical Clinics Act, the Personal Data Protection Act and the Community Health Assist Scheme (CHAS). I would like to think that members' combined voices helped to refine some of the regulations.



Mediation Brochure

SDA is also the "go-to" organisation when things need to be done for the private dental sector. In 2006, SDA helped to develop a training programme for Dental Surgery Assistants (DSAs) together with the Institute of Technical Education. Dr. Betty Mok still heads the programme. SDA members served as instructors and drew up didactic modules that supplemented on-the-job trainings at private clinics. The fact that the 11th batch of students has been recruited this year shows that this programme meets the continuing need of members.

One service that SDA provides for members – and that members will hope not to use – is the Mediation Service. The Ethics and Practice Management Committee members volunteer to mediate complaints or disputes between patients and members. The cases mediated usually involve unsatisfactory treatment outcomes. Instead of patients taking legal actions against their dentists, the mediation service gives an opportunity for the problems to be resolved in a private and informal way. Confidentiality is given the highest importance when handling these cases, so many members may not know about the important work done by this special group of very discrete volunteers.

Representing the Little Red Dot

One of the advantages that SDA has enjoyed was leadership that had the vision and the boldness to take SDA onto the world stage. Back in 1981, under the leadership of Dr. Oliver Hennedige, SDA hosted the Asia Pacific Dental Congress (APDC). It was a resounding success with 1780 delegates from 34 countries, generating a handsome profit for the Association. It was such a landmark event that, the then President of Singapore, Dr. Benjamin Sheares graced the opening ceremony.


President Dr. Benjamin Sheares & Dr. Oliver Hennedige

Long before terms like the "silver tsunami" became buzzwords, SDA had already envisaged the need for geriatric dentistry. As early as 1986, SDA hosted the Gerodontology Conference. Dr. Oliver Hennedige – SDA's longest serving President – was recorded as saying that hosting events like the Gerodontology Congress not only brought knowledge to local dentists but also built the organisational

skills of office bearers to hold international conventions. This has certainly proven to be true, as SDA has gone on to successfully run many large-scale conferences.

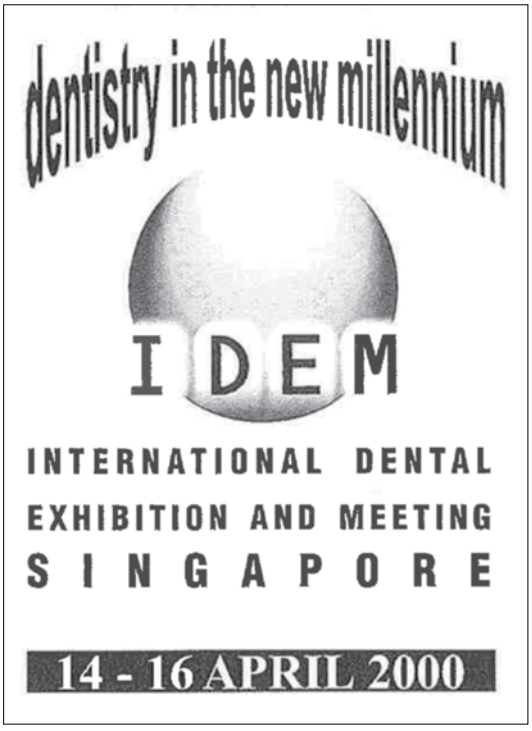
In 1990, SDA hosted the World Dental Congress of the Fédération Dentaire Internationale (FDI). The Organising Chairman, Dr. Loh Hong Sai considers it a great achievement for SDA. "There were more foreign participants than all the local dentists. SDA mobilised the entire dental faculty's support. In addition, we recruited the assistance of about 400 personnel from the dental division of the Ministry of Health." SDA was honoured to have Singapore's then President, Mr. Wee Kim Wee to officially open the World Dental Congress.

President Wee Kim Wee with FDI President at Opening Ceremony

Not only was the 1990 World Dental Congress a resounding success, it resulted in a pleasant problem. What to do with the proceeds? The money was set aside as the Building Fund.

As Dr. Lewis Lee recalls, "There was always a concern whether SDA could continue to rent the premises at the Medical Alumni. The Building Fund had been placed in fixed deposits for about a decade and it was not matching the rise in property prices in Singapore. With a lot of on-site recce we made a bid to purchase a property. There was much trepidation about the consequences of making this long-term decision. We just bit the bullet, called an extraordinary general meeting (EGM) and went ahead." That determination saw SDA becoming the landlord of a 2-and-a-half-storey, 1.5 million dollar shophouse in 1 Circular Road which is still generating revenue today.

As the new millennium dawned, Singapore continued to develop as a global hub. SDA's leaders saw that interest in conferences was growing. Hosting such congresses would generate a regular income stream. This led to SDA collaborating with a professional convention organiser to launch the International Dental Exhibi-



Original IDEM logo

2008 IDEM logo

tion and Meeting (IDEM) in 2000. The success of IDEM resulted in some rancour from international bodies. Fortunately, SDA was resolute and now IDEM has become an established feature in the international calendar of dental meetings.

And, any acrimony with other associations was overcome with diplomacy. This was evident when SDA was again given the honour of hosting the FDI Annual World Congress in 2009, and the Asia Pacific Dental Congress in 1999 and 2015.

As Immediate Past President Dr. Kuan Chee Keong states, "SDA's role in the international arena reflects the government's diplomatic policy – we remain neutral and friendly to all member associations. Over the past 50 years, we have hosted 2 FDI Annual World Congresses and 3 Asia Pacific Dental Congresses. Our members have also served in both organisations in various capacities. Most famous of all our "diplomats" are Dr. Choo Teck Chuan who served as Scientific Programme Director in FDI for many years, and Dr. Oliver Hennedige who continues to serve as Secretary-General of Asia Pacific Dental Federation (APDF).

Dr. Choo Teck Chuan

SDA is currently contributing significantly to APDF with three of our members serving in the APDF Council. We should continue this effort for mutual benefit and elevation of the standard of Continuing Dental Education. Regionally we have actively pursued friendly collaborative ties with many National Dental Associations. Most of our collaborations focus on educational programmes by mutually supporting each other's congresses or sponsoring speakers. These activities serve to enhance SDA's reputation as an efficient and credible organisation."

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Giving Back to the Community

SDA's work internationally is not only about holding conferences. Our members have volunteered to provide dental treatment for under-served groups in several countries.

And locally, our volunteers have organised visits to charitable homes. In 2009, SDA "adopted" the Children's Society.

SDA also gives as a corporation, having set up endowment funds and making donations to the NUS Faculty of Dentistry. The Association has continuously supported the Singapore Dental Health Foundation in its public health education programmes.

Volunteers and Village Children

Volunteers in Senior Citizen Home

Dr. Kuan Chee Keong presenting cheque to NUS Faculty of Dentistry Dean

Royal Australasian College of Dental Surgeons

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The subjects of the examination are:

- Anatomy
- Histology
- Physiology
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- Cell Biology & Biochemistry
- Pathology

Please note that candidates should also be familiar with standard statistical methods and pharmacology.

The Primary exam is structured in two sections:

Six (6) written papers of two (2) hour duration, with two (2) subjects scheduled on each of three (3) consecutive days.

viva voce examinations of ten (10) minutes duration are conducted in each of the six (6) subjects. The focus is on the candidate's ability to effectively communicate knowledge.

The primary exam will not get you Membership and/or a recognised qualification to the College, but will assist in obtaining postgraduate qualifications and is recognised as higher learning by universities. Candidates must sit the Primary exam to be eligible to sit the Final exam (should they follow this pathway).

WHO CAN ATTEND?

RACDS subscribed candidates.

COST?

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$5,750.00 AUD (for the *viva voce* in Hong Kong or Malaysia)

HOW TO ENROL?

Please submit the enclosed enrolment form for the examination

* Enrolment close on **Monday 2nd October 2017**

** Enrolments close on Friday 1st September 2017 for *viva voce* examinations in Hong Kong or Malaysia

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A Toast to the next 50 years

Chairman of the 2009 FDI Annual World Congress Organising Committee, Dr. Teo Choo Soo, and Past President Dr. Lewis Lee raising glasses of champagne

I have been a volunteer in SDA since I graduated. I have seen firsthand the conviction and dedicated work of many office bearers. Of course, there have been fractious debates, which are only normal when people are passionate about what they do. It is part of the democratic process that has made SDA grow. To all the many members, who have shown faith and commitment to the Association, I say "Thank you".

Let's look forward to another 50 years of achievement.

Dr. Asha Karunakaran *is a long-time volunteer of the SDA currently serving as Chair of the Ethics & Practice Management Committee. She is a general dentist in her own practice in Novena Medical Center.*

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50 Years and Beyond

The Singapore Dental Association's (SDA's) 50th Anniversary Convention was a stunning success. The Dental Surgeon shares with you some of the highlights of this milestone event.

BY **DR. LIM LII**

50 years! Indeed an important milestone. For this special 50th Anniversary, our Council has dedicated the year 2017 to honouring our SDA members. Members, the foundation of our Association, have been ever supportive of SDA since her establishment on 27th March 1967. The SDA has indeed grown from strength to strength under the able leaderships of past Councils. This could not have been possible without the confidence and support given by our members.

Focus on our members' needs is my main priority. 2017 is the time to show such appreciation, and we started off with the $50 registration fee for the 50th Anniversary SDA Convention. Together with my Council, the decision was made to heavily subsidise this momentous event, despite the financial burden that we would incur. This however is a small price to pay in gratitude to those members who have contributed to SDA over these 50 years.

I sincerely thank all our members for their overwhelming support and hope to have their continued confidence in SDA. It was hard work for my Organising Committee, especially Prof. Chew Chong Lin. Prof. Chew and his team worked tirelessly to ensure that the scientific programme was world-class.

The celebrations do not end here. My Continuing Professional Education (CPE) Committee has plans for many more interesting CPE programmes at special 2017 rates. My Welfare Committee has also lined up a host of activities to cater for members' social needs this year. Do look out for more details to come.

Delegates' quotes of the SDA Convention 2017

"Reaching 50 years is a significant milestone in our Association's history. SDA Convention 2017 was an appropriately organised event to celebrate this momentous occasion. Enjoyed the continuing education from the great lineup of speakers which were targeted for the dental clinicians."

– Dr. T. C. Phua

"Learning NEW things, with OLD friends, in a fantastic environment.....
Always something to look out for at our SDA conventions."

– Dr. Vijayan Loganathan

"A big thank you to the SDA for their organisation and hospitality last weekend. The variety of topics and the choice of speakers were excellent. A good overview of how to make sensible clinical choices regarding restoration type and materials, practical tips for achievable aesthetics and lab communication as well as a glimpse of cutting edge technology. It's the first time in a long time I was motivated to rewrite my notes for easy reference at work."

– Dr. Nadia Davachi

"Wow!! What a wonderful way to spend a glorious weekend. The speakers both local and overseas were phenomenal, plenty of tips and suggestions for our day to day clinical work. Marvellous presentations for both days. Unfortunately could not attend the workshops but I heard from participants who attended that they came away 'feeling very educated and inspired'. The venue was first-rate in terms of space for the exhibitors and for participants. Food was plentiful and the popular items were replenished very fast. Overall a great meeting and splendid opportunity to network and meet up with friends and colleagues. Kudos to the Organising Committee!!"

– Dr. Jeffrey Seow

"The SDA Convention 2017 was well organised and managed. It exposed the audience of participants to a wide range of interesting clinical and research presentations. The SDA Council and Organising Committee, as well as the supporting administrative staff, must be applauded for their fine hard work."

– Dr. Richard Ow

"Food was amazing, enjoyed and learned a lot from the high quality speakers of the two-day convention. Great job SDA!"

– Dr. Chan Yi How

"I attended the endo workshop by Dr. Marino and I found his lecture and practical session informative and useful. Apart from revisiting the basics of endodontics, he also demonstrated the proper use of rotary endodontics. He also taught us handy tips and tricks during each stage of the endodontic treatment. I find that each clinician has their own techniques and it is useful to attend multiple hands-on courses like this, to learn different skill sets and ultimately finding one which suits you the best. I definitely have no regrets and I would like to thank and congratulate the SDA for organising a successful convention!"

– Dr. Faisal Bin Abdul Aziz

"Congratulations to SDA on their 50th Anniversary.

It was a pleasure to attend the 2017 SDA Convention. Normally we would be busy in our little offices; here we could catch up with old friends and make new ones. It was also great that our suppliers were there – a good chance to build our relationship with our own Singaporean partners. The Scientific Programme was obviously the main focus and I really appreciate the efforts of the team bringing in excellent speakers who educate and entertain us at the same time. It is also gratifying to see our local speaker Prof. Ho Kee Hai give a short but information-packed talk. A big thank you to the SDA committee and staff for all the hard work that makes for a successful, sometimes noisy, dental family celebration."

– Dr. Sitoh Ling

"To celebrate 50 Years of our Dental Association, SDA convention 2017 has done very well having good topics and very knowledgeable speakers sharing applicable clinical tips and information. It also provided a good opportunity for friends to catch up!"

– Dr. Loh Poey Ling


nvention
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SDA Convention Traders' quotes

"I get to interact with Doctors from various clinics and to create an awareness for my products."

– Ms. Sharon Lim, Marketing of Junnimed Services Pte Ltd

"The SDA Convention is a good opportunity to engage the dental professionals who are instrumental in recommending our products to their patients."

– Ms. Shermaine Lee, Brand Manager of Johnson & Johnson Pte Ltd

"We were very happy with the event as it drew a record number of participants. As traders who pledge our support to SDA, we also hope for overall good exposure if not good sales. This has been achieved quite well. Our appreciation goes out to the great team who made this a very successful event. Cheers to all."

– Mr. Richard Lim, Director of Eastland Dental Supplies Pte Ltd

"It is inspirational to see the cohesive side of the dental community coming together to celebrate this big occasion of SDA 50th Anniversary. Definitely a good example of commitment as one."

– Ms. Jean Chng, General Manager of Raydent Supplies (S) Pte Ltd

Dr. Lim Lii *is a Singaporean who graduated from the University of Western Australia. She came back home in 1997, after a two-year working stint with Australian Dental Services, to be closer to her family. She has been in private practice since and now maintains a part-time position, allowing her to contribute wholly to SDA. She has thus served SDA since 2003 in almost every subcommittee. She is married to Desmond, and they are blessed with two teenage sons, as well as two adopted fur-kids.*

Towards Needs Unmet

Clinical Associate Professor Poon Choy Yoke, Director, National Dental Centre Singapore (NDCS), shares with ***The Dental Surgeon*** how the centre's Geriatric Special Care Dentistry Clinic (GSDC) is meeting the demands of a greying population, as well as those who may have fallen through the cracks of society.

BY **CLINICAL A/PROF. POON CHOY YOKE**

Singapore's population is ageing rapidly and as with all mature developed countries, this will be a key demographic change. Currently, 1 in 8 of us are aged 65 and above and this will increase to 1 in 4 by 2030. With rising demand for healthcare services, there is an urgent need to expand public service's dental capacities and capabilities to ensure that we continue to serve the nation's oral healthcare needs.

To this end, I stewarded the National Dental Centre Singapore's (NDCS's) drive to set up a Geriatric Special Care Dentistry Clinic (GSDC). The clinic was developed in consultation with the Ministry of Health (MOH) in 2008, which supported the development of this new and emerging specialty that caters to the dental needs of elderly and special needs patients.

To provide better care for our seniors, MOH offered post-graduate training scholarships to dental professionals in the field of Geriatric and Special Needs Dentistry. Seven scholarships have since been awarded and four scholars have completed their specialty trainings. In

Figure 1

view of this, GSDC was built and officially launched in 2016, and a second geriatric and special needs dentistry clinic has been planned at the upcoming Centre for Oral Health at the National University Health System.

Providing specialist oral healthcare for the elderly can be challenging as many may be afflicted with complex medical conditions, and some may have geriatric conditions such as Parkinson's Disease, Alzheimer's Disease and dementia, which can affect an individual's ability to perform good oral hygiene. As we all know, this consequently puts them at a higher risk of dental decay and gum disease.

The GSDC sees patients aged 65 years and above who may have intellectual disability, medical, physical or psychiatric issues. The clinic also treats special needs patients aged 13 years and above. GSDC is set up to deliver coordinated and holistic treatment for patients requiring special care, by integrating the provision of services to geriatric and special needs patients under one roof. It also serves as a training ground for more dentists to be trained in this emerging field of geriatric and special care dentistry.

In addition to the elderly, the oral health of special needs adults is under-served in Singapore. Many patients do not have regular dental care and they end up seeing a dentist later in life, only because they are in pain. Many of these patients have little or no exposure to dental care and the dental setting, and many are fearful of the dental experience. As a result, many special needs patients have to be put under general anaesthesia to get their severely decayed teeth extracted. To prevent such a situation, the GSDC was set up to remove the barriers preventing this vulnerable and often forgotten group of patients from receiving timely and regular dental care.

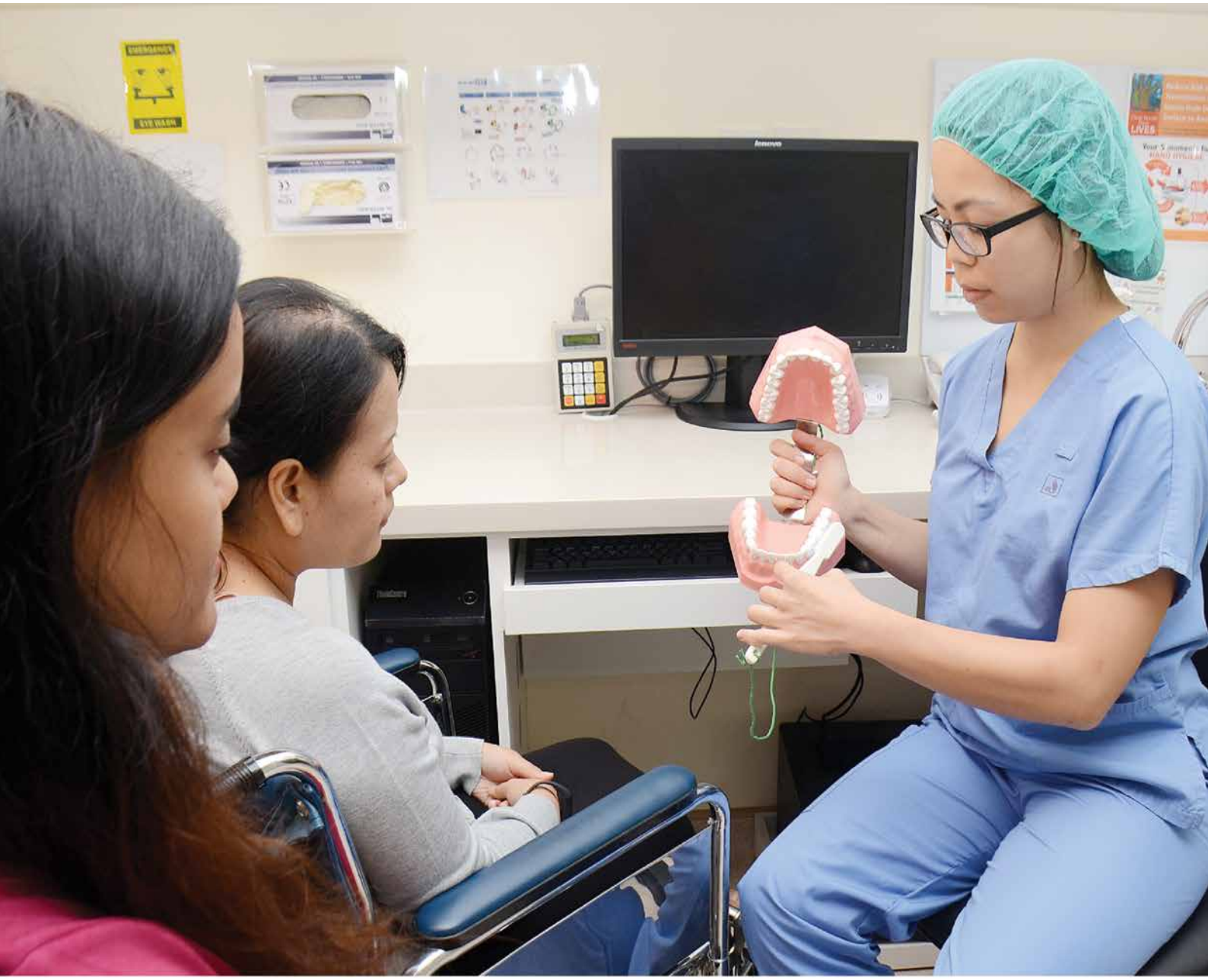
Spanning across a floor area of 410sqm, GSDC has 10 dental chairs (one specially designed dental chair for wheelchair- and bed-bound patients as shown in Figure 1), a minor operating theatre and an X-ray room. A dedicated vehicle drop-off area has been designed at the

Figure 2

porch facilitating non-ambulant patients in wheelchair and bed-bound trolleys.

GSDC has age-friendly design features such as spacious walkways, handrails, low counters, and large and bright signage to assist patients in better way-finding. One key feature is the wheelchair tilting unit which allows the patient to be treated whilst still seated in his/her wheelchair. This eliminates the need for patients to be manually transferred to the dental chair, providing a safe environment for both clinicians and patients. Every room is wide enough for wheelchairs, and is equipped with an intra-oral X-ray machine doing away with the need for patients to be transferred to another room to get their X-rays done. General dental radiography and surgical procedures under local anaesthesia can also be done within the clinic (Figure 2).

Staff undergo training to equip themselves with the relevant knowledge and skills to render better care for these patients. Dental surgery assistants are specially trained to carry out patient triage with the help of a medical questionnaire prior to seeing the clinicians. In addition, special training is conducted with the department of physiotherapy to safely and effectively assist in patient transfers. Staff also make follow-up



calls to patients and caregivers to check on post-operative care for pain or drug allergies after visits. They are also taught to recognise patient's medical needs when scheduling appointments so as to improve patient's compliance with treatment.

As part of the team-based approach, oral health therapists provide patient-specific oral hygiene instructions to caregivers and their family members such as the use of toothbrush handles for patients with poor dexterity.

NDCS recently launched its Delivery on Target (DOT) programme with the aim to create closer links between General Practitioners (GPs) and tertiary institutions, to better manage this group of patients at primary care. The programme seeks to strengthen and enhance the

care of patients with chronic conditions, and to facilitate and support the right-siting of patients who are dentally stable.

We have started outreach programmes to Intermediate- and Long-Term Care (ILTC) Centres, nursing homes and hospices, where nurses are taught how to assist their residents in oral hygiene regimens, and to identify potential oral conditions to refer to dental specialists should the need arise.

Free oral health screenings have also been driven at grassroots level. Together with the SingHealth Regional Health System, we have been working with community partners such as Tanglin-Cairnhill Constituency to provide oral hygiene education, screening and care for the elderly in partnership with GPs located in the neighbourhoods.

Understandably, the elderly and special needs patients have complex needs, and most dental practioners may feel overwhelmed trying to manage them. I would like you to know that the GSDC is here to meet such needs. However, more young dentists are also needed to be trained in this field to manage this demand. This specialty will require dental professionals who have a strong calling to help this often neglected patient group, and have the passion and patience to treat and care for these patients throughout their lives.

In the next few pages, we bring you such an example of a young dentist who worked in the GSDC – Dr. Kong Rui Ling. She shares with us her experiences and passion to care for such patients. In addition, Dr. Chelsia Sim, a dual-trained Oral Medicine and Oral Pathologist working at our Centre, brings us through her expertise in the diagnosis and management of common oral mucosal lesions.

*Clinical Associate Professor **Poon Choy Yoke** is Director at the National Dental Centre Singapore (NDCS) and Academic Chair, Oral Health Academic Clinical Programme, Singhealth Duke-NUS Academic Medical Centre. She is also Senior Consultant, Oral Maxillofacial Surgery and a Clinical Associate Professor at the Faculty of Dentistry, National University of Singapore (NUS). She obtained her BDS degree from NUS in 1984 and her Fellowship in Dental Surgery at the Royal College of Surgeons England in 1988. Together with a team of dedicated fellow colleagues and united in their purpose to improve lives through oral healthcare, she looks forward to lead NDCS by delivering quality oral healthcare, conducting impactful research and nurturing the next generation of oral healthcare professionals.*

In Darkest Hour: A Dental Officer's Perspective

"Finish each day and be done with it. You have done what you could. Some blunders and absurdities no doubt crept in; forget them as soon as you can. Tomorrow is a new day. You shall begin it serenely and with too high a spirit to be encumbered with your old nonsense." – Ralph Waldo Emerson

BY **DR. KONG RUI LING**

It has been 10 months since I embarked on this journey of caring for patients in National Dental Centre Singapore's (NDCS's) Geriatric Special Care Dentistry Clinic (GSDC). I am immensely grateful to be given this opportunity to serve in this relatively new department (we just turned a year old on 6th September 2016!), and up till this day, I can confidently say that I wake up every morning excited to start my day at the clinic.

The patients I see are broadly categorised into three groups: patients with history of pre- or post-radiotherapy of the head and neck, geriatric patients mostly with dementia, and special needs patients usually with global developmental delay. These are not patients undergraduate dental students are exposed to, and treatment planning is certainly more complex. There are many grey areas in treatment planning for these patients, as the care they can receive is often limited by their cooperation.

Communicating effectively is an essential part of my job. I believe in investing time in explaining treatment rationale, and laying down the pros and cons of each treatment option according to each patient's ability to comprehend. Dental awareness is improving in Singapore, but I still face patients who are disinterested, and would prefer to conveniently leave decision making to me. That is never permissible as I 'force' my most 'bochap' patients to sit through my explanations, and come to a decision themselves in their own time. Committing to treatment is not only a financial burden to some, but also a logistics nightmare involving difficulties in transport or caregiver accompaniment. Dental treatment may not take priority when one is laden with multiple comorbidities.

Many patients are afraid of what treatment would entail once they step into my operatory. Extraction is their most feared treatment, understandably. Often they argue that they are not experiencing pain or discomfort, or sometimes they are in denial about their mobile teeth despite having molars which are "flapping in the breeze". At times it is impossible to explain to patients why grossly carious, periodontally involved, supra-erupted teeth are ticking time bombs of infection, hindrances to fabrication of proper removable prostheses, or causes of aspiration pneumonia.

But I remain undaunted by occasional failures to impress upon my patients the importance of their oral health. To date, my most traumatic injury was a bruised fingernail and temporary numbness at that fingertip from the forceful biting of a demented patient whilst trying to floss his teeth. Once, I was almost punched by a restrained patient, but I managed to dodge in time. On the other hand, treating people with Down syndrome has brought me the greatest joy. I am envious of their beautifully uncomplicated view of the world, and once I earn their trust and win their compliance they become excellent patients.

Of the thousand and one lessons I have learnt, the greatest one is to care for my patients in the most holistic way possible. Often I find myself filling the role of not just a dentist but a counsellor, a confidante, and even a friend. I have to consider their emotional, psychological, physical and dental well-being comprehensively, and not be overly engrossed in the technicality of dentistry. This job has definitely sharpened my emotional quotient so as to discern if my patient prefers facts over feelings, or lots of pampering instead of a more straightforward approach.

I am heartened to see my patients in high spirits in the face of adversities; however there will be those who struggle to come to terms with their newly diagnosed terminal diseases, or to cope with a deteriorating quality of life. It is sobering to see them dispirited, particularly in between radiotherapy review appointments. Yet, it is during these periods of affliction that I see the best of human spirit: domestic helpers, nursing staff, friends, children and spouses who stand by firmly with unfailing love. It is mentally and emotionally draining at times, but I am glad I am grounded in a

religion that views illness and death as inevitable and purposeful.

I have learnt to be unashamed to sometimes put 'textbook' dentistry aside, and perform "compromised" dentistry. I would rather leave affected dentine during caries removal, than cause pulp exposure and result in the need for endodontic treatment, thus saving on cost, time and additional procedures for certain patients. My patients cannot even tolerate drilling on occasion, leaving me with no choice but to excavate caries by hand instruments.

Multiple desensitisation visits before my special needs patient allows me to just use a hand scaler on his or her teeth remind me that the virtue of patience ultimately reaps its own rewards. Practising empathy is easier said than done however. Not many of us will be able to fully understand what hypersensitivity to sensory stimuli translates into in autistic patients, or how it feels to be mentally locked in a body that no longer listens to you. In rare occasions, even infinite patience in behaviour management cannot gain a special needs patient's cooperation, and general anaesthesia is the only option left. Instead of reproaching myself, I have learnt that some things are simply not within my control.

In times like this, I hold on dearly to Ralph Waldo Emerson's quote on finishing each day since it was shared with me by my esteemed tutor at King's College London. While I may not be able to perform ideal treatment for each patient, I try to reflect on my mistakes and improve the next time I am faced with a similar situation. I consciously remind myself to treat all my patients the way I would like my loved ones to be cared for. And it is heartwarming to see my rapport with patients grow – some geriatric patients have appointed themselves as my new godparents or even "grandparents".

The GSDC though new, already has a team rooted in strong work ethics. I am proud to say that we have excellent team spirit and good chemistry with one united purpose to serve. Dental assistants and clinicians have days where much sadness and aches are incurred, but we know that the satisfaction and joy we derive from our work make them absolutely meaningful. Despite the sweat and tears, I cannot thank the entire GSDC team enough.

Dr. Kong Rui Ling *graduated from King's College London in 2015 and is a NDCS-employed dental officer working in the GSDC. Besides collecting antique bone china tea sets, Dr. Kong is also an avid squash player, and enjoys pottery and flower arrangement. She has a keen interest in Prosthodontics, and Geriatric and Special Needs Dentistry, and plans to pursue further studies in these areas.*

Not Just Skin-Deep

BY **DR. CHELSIA SIM**

Oral Medicine and Oral Pathologist Dr. Chelsia Sim shares with ***The Dental Surgeon*** her clinical expertise on a common soft-tissue oral condition.

The public has this perception of dentists as "gum farmers" or "teeth drillers" but the truth is, the dentist plays an important role in ensuring optimal oral health, which includes the hard and soft tissues in the oral cavity. A thorough oral examination allows a holistic approach to the patient's chief complaint and may be the key to making an early diagnosis of an underlying systemic condition. In this article I hope to share with you all a common condition that most of us dentists may encounter throughout our careers.

First off, a thorough medical history should be taken at the first visit, preferably asking patients about specific organ systems. For example, asking specifically about hypertension or high cholesterol levels is better than "do you have any medical problems". This is because patients may not be able to understand how these medical conditions can affect their dental health. Any medications taken should be recorded at the beginning of every visit as these may change with time. Comprehensive oral examination should include palpation of the lymph nodes, the muscles of mastication and the temporomandibular joint (TMJ) prior to the examination of the dentition.

The clinical case I want to share with you is regarding a healthy 18-year-old Chinese female whose chief complaint was a painful tongue, with "tightness" and "surface roughness" in the cheeks. She was unable to eat well. Oral symptoms had been ongoing for 3 months, and began during her preparation for school examinations. She reported no use of tobacco, alcohol, allergies or regular medication.

On examination, she presented with diffuse white reticular striations with erosive mucosal changes, covered with yellowish fibrinous exudate and erythematous margins on the bilateral lateral surfaces of the tongue (Figures 1 and 2).

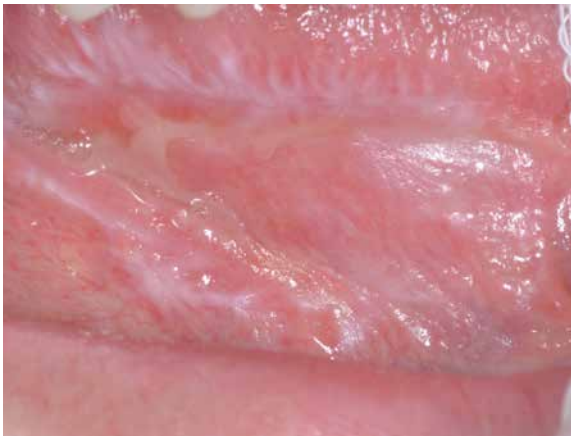


Figure 1. Right lateral border of tongue. Central area of ulceration, covered by yellow fibrinous membrane with surrounding white reticular striations.

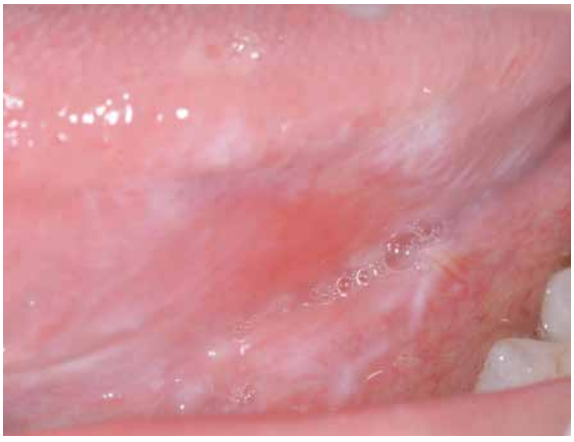
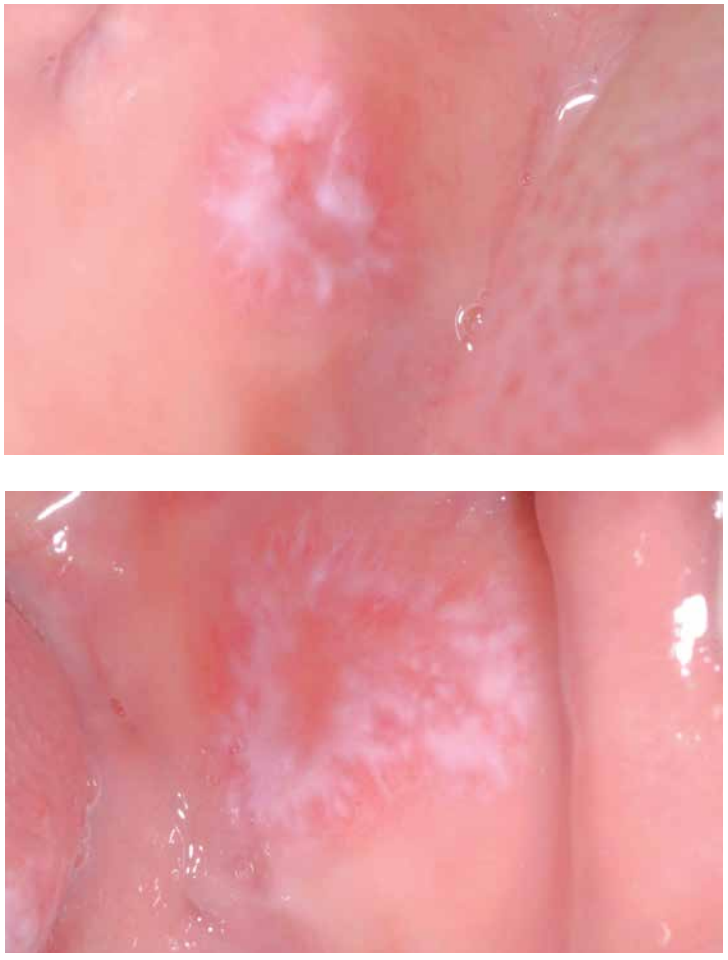


Figure 2. Left lateral surface of tongue. Central focal area of erosive changes with surrounding white striations.

Both sides of the buccal mucosa exhibited patches of white reticular striations with no ulcerations or mass effect (Figures 3 and 4). These lesions were non-indurated. Her oral hygiene was fair with minimal plaque and she was caries-free.



Figures 3 and 4. Right and left buccal mucosa with white reticular striations.

The working diagnosis encompassed oral lichen planus as the oral involvement of a possible underlying systemic autoimmune condition such as systemic lupus erythematosus, or discoid lupus. An incisional biopsy was performed to confirm the diagnosis.

Microscopic findings were consistent with lichenoid mucositis, recommending clinicopathologic correlation for the diagnosis of oral lichen planus. Thankfully, blood serology tests performed to check for autoimmune conditions had no significant findings. The patient was thus diagnosed with oral lichen planus (OLP) based on the clinical and histopathologic findings.

OLP is a chronic mucocutaneous inflammatory condition that tends to affect the oral mucosa, although the skin and other mucosal surfaces such as the oesophageal and vaginal mucosa can be involved. OLP has several clinical presentations including the reticular, plaque-like, erosive/atrophic, ulcerative and bullous forms. An individual patient can have a combination of these several types.

Reticular OLP (Figure 5): Most common and characteristic of OLP. This form of OLP is usually asymptomatic, commonly found on bilateral buccal mucosa as lacy, white lines referred to as Wickham's striae. One of the common complaints from patients with reticular form of OLP is roughness of the cheeks with some tightness.

Plaque-like OLP (Figure 6): A less common form of OLP. It often occurs on the dorsum of the tongue and can be accompanied by depapillation of the surrounding dorsal surfaces of the tongue. Some patients complain of dysgeusia or reduced taste sensation.

Erosive/Atrophic OLP (Figure 7): The mucosa commonly presents with redness due to thinning of the surface epithelium which can affect any mucosal surface, including the tongue, gingiva and buccal mucosa. In most instances, individuals with erosive lichen planus feel uncomfortable when eating and drinking, particularly with extremes of temperature, acidic, coarse, or spicy foods.

Ulcerative OLP (Figure 8): In severe cases, ulceration can develop. Individuals affected by ulcerations may experience pain even when not eating or drinking, with complaints of reduced quality of life.

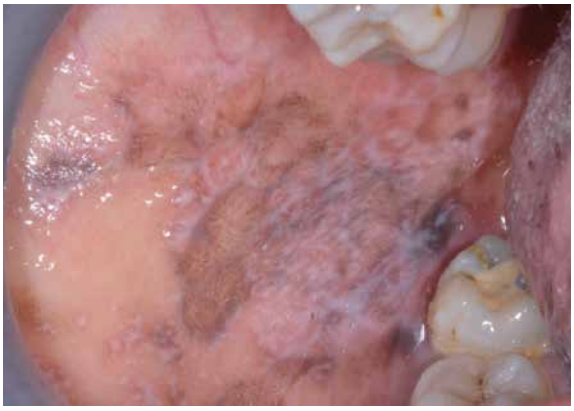


Figure 5. Oral lichen planus – Reticular form. Post-inflammatory hyperpigmentation is also present, which is a common clinical finding, especially in patients with racial pigmentation.

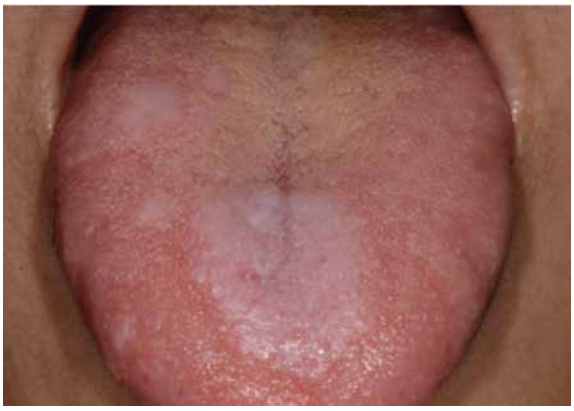


Figure 6. Oral lichen planus – Plaque-like form. Several white patches present on the anterior midline dorsum of tongue as well as the right dorsum of tongue.

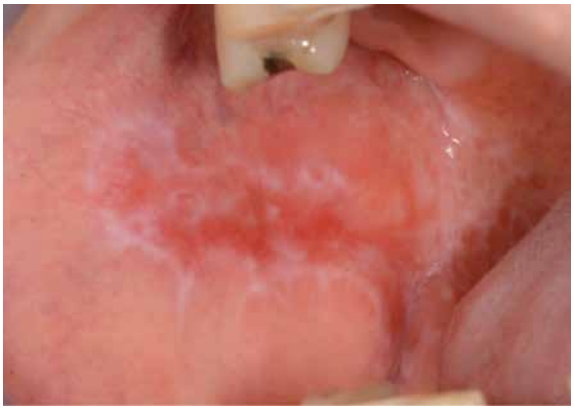


Figure 7. Oral lichen planus – Erosive/Atrophic form. Central area of erythematous changes with no ulceration, surrounded by white striations.

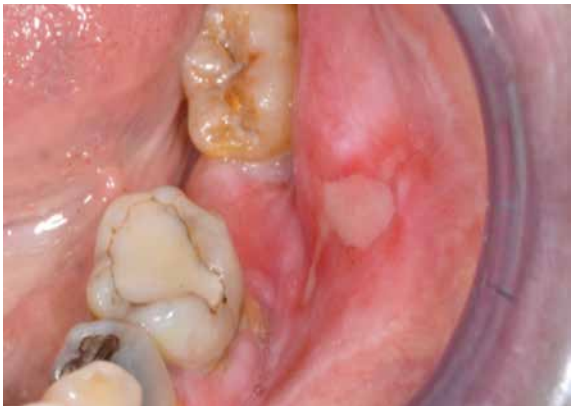


Figure 8. Oral lichen planus – Ulcerative form.

The main treatment goal is elimination of oral symptoms to improve the quality of life. Often the reticular form of OLP does not require any treatment. Adequate information on OLP should be made available to patients and more importantly, patients must be informed of the significance of periodic observation even if the oral lesions remain asymptomatic.

Most times, the erosive or ulcerative lesions tend to be more symptomatic, especially when patients consume spicy foods or hot drinks. Management of these erosive or ulcerative lesions involves the use of topical corticosteroids with or without tacrolimus, intra-lesional corticosteroid injections, and in severe cases, systemic corticosteroids. Commonly used corticosteroids we can prescribe are: triamcinolone acetonide, betamethasone, dexamethasone, and clobetasol propionate.

Note that at times, patients may develop oral candidiasis (pseudomembranous or erythematous types) (Figures 9 and 10 respectively), even before the initiation of topical corticosteroid therapy.

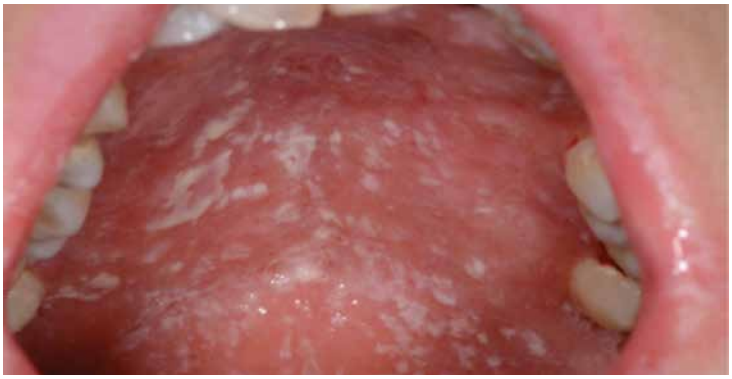


Figure 9. Pseudomembranous oral candidiasis on the hard and soft palates.

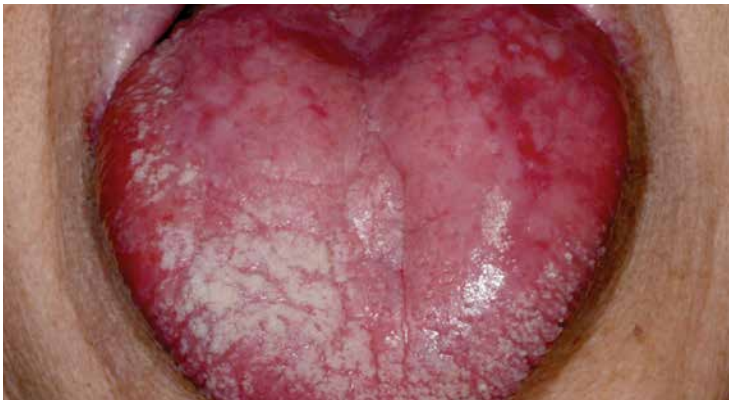


Figure 10. Erythematous oral candidiasis on the dorsum of the tongue, along the lateral borders and the posterior dorsum of tongue.

For cases with oral candidiasis, topical and/or systemic antifungals can be prescribed. Chlorhexidine mouthwash can also be given as it has some fungicidal properties. From my experience, nystatin suspension has been ineffective in eradicating oral candidiasis due to several reasons such as the need for multiple dosing daily, high sugar content and bad taste, leading to poor patient compliance. A preferred topical antifungal agent is miconazole 2% gel or ketoconazole 2% gel in addition to chlorhexidine mouthrinse. In some cases, a course of systemic fluconazole can be prescribed.

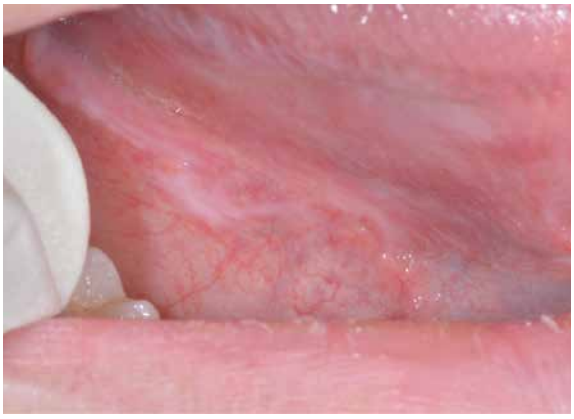
Unfortunately, for cases with persistent erosions or ulcerations unresponsive to topical therapy, referral to an oral medicine practitioner may be required. Also, with an ageing population, there is an increasing number of patients with medical comorbidities that can affect the management of these oral lesions, such as those with poorly controlled diabetes and hepatitis B infection.

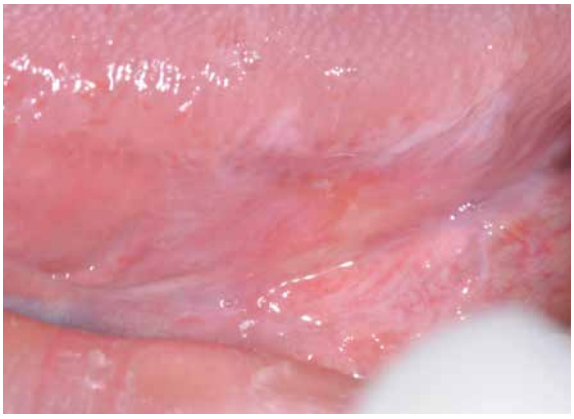
OLP is defined as a premalignant condition by World Health Organization (WHO), with a reported 1-3% risk of undergoing malignant transformation. This is controversial and until more evidence is available, I think it is crucial to ensure continued patient follow-up, especially patients with more severe forms of OLP.

In this case of a young girl who complained of severe discomfort and reported loss of appetite, a short course of high dose systemic prednisolone was administered and at her first week review, there was significant improvement of the tongue ulcerations (Figures 11-14).

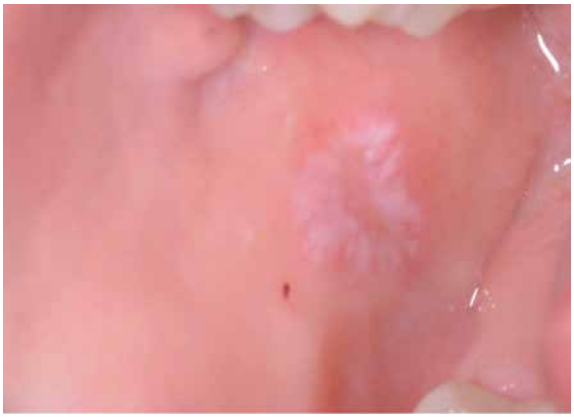
Subsequently she was placed on maintenance therapy with dexamethasone mouthwash and triamcinolone acetonide paste whenever she had new oral ulcerations, with half-yearly recalls.

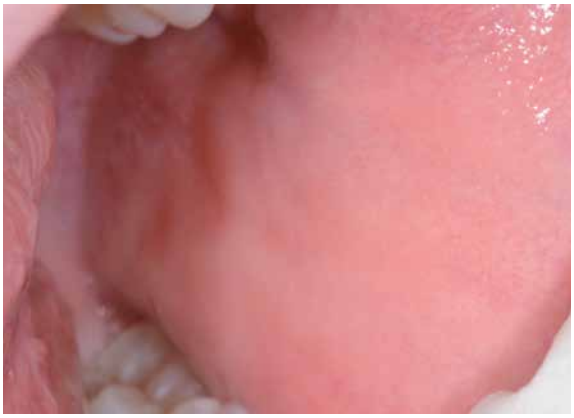
I want to highlight another case also involving the lateral borders of the tongue. A 42-year-old Chinese female complained of a non-healing ulcer on the right lateral border of the tongue for a period of 3 months (Figure 15). Her medical history was non-significant with no known drug allergies. She did not recall any trauma to the lesional site.





Figures 11 and 12. Bilateral lateral surfaces of tongue showing healing of the ulcerations and reduction in erythematous mucosal changes.





Figures 13 and 14. Reduction of white striations on bilateral buccal mucosa.

On examination, there was no palpable cervical lymph nodes, facial asymmetry or abnormal jaw movement. Her oral hygiene was good with no active caries. Toluidine blue dye was utilised, as an adjunctive test, to delineate neoplastic change and to determine the site of possible biopsy. There was a positive uptake of toluidine blue at the area of ulceration, which was not unusual and occasionally might yield a false positive result. The clinical differential diagnoses were traumatic ulcer and oral squamous cell carcinoma.

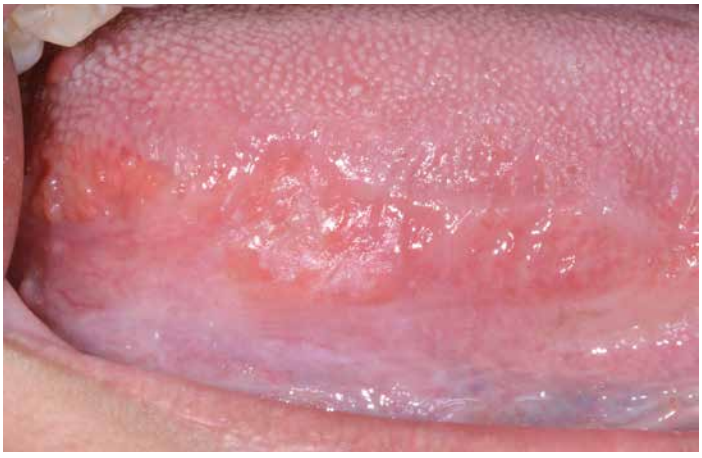


Figure 15. Focal area of ulceration on the right lateral border of tongue. The lesion remained the same after the use of topical steroids. Note how easily it might be missed on examination.

To rule out traumatic ulcer, a topical corticosteroid (Clobetasol propionate 0.2% ointment) was prescribed for 2 weeks. At her review, there was no improvement in the lesion and an incisional biopsy was carried out. Microscopic examination revealed a superficially invasive squamous cell carcinoma. The patient was subsequently referred to oncology for wide surgical excision with ipsilateral neck dissection. Further histologic examination revealed no involvement of the lymph nodes and the surgical margins, both deep and peripheral were cleared of tumour.

Differential diagnoses for oral ulcers are not exhaustive, but one must be vigilant and timely referral for management of these oral ulcers is important. As with this case, a delay in diagnosis may lead to the spread of cancer cells, affecting the prognosis and management of the condition. Dentists thus have a role to play as the gatekeepers of good general health. Always impress this fact upon your patients, and stay vigilant every time you perform a dental examination!

Dr. Chelsia Sim *is a consultant at the National Dental Centre Singapore and part-time tutor of Oral Pathology at the National University of Singapore Faculty of Dentistry. She was trained in Oral Medicine at the University of California, San Francisco, and subsequently in Oral Pathology at the University of Iowa. She has a profound clinical interest in oral vesiculobullous diseases, oral premalignant lesions and oral manifestations of systemic diseases, and strongly believes pathology is the basics of medicine and dentistry. To that end, she opines that the recognition of Oral Medicine and Pathology as one of the dental specialties in Singapore is much needed.*

A Ball of a Time: Bowling Good Times 2017

By **DR. JEREMY SIM**

It was a beautiful Sunday morning on the 26th of February, 2017. The brilliant rays of the sun filtered gently through the canopy of leaves as the song of magpies filled the air with a comforting glow. The peaceful precedent painted a foolish façade that failed to forewarn our furtive minds for what was to come. An earth-shattering crowd of 51 from the dental community gathered at the decorated Forte Bowl for a livid display of bowling prowess.

If you are reading this, you already know how our community strives for nothing short of perfection. The air was thick with competition. Behind the friendly smiles, handshakes, and the obligatory pleasantries and enquiries into family, there lurked a burning desire in all to come out on top.

As if our egos were not inflated enough, the 9-Pin No-Tap rule was put in place. This meant that it was considered

a strike even if only 9 pins were knocked over in the first turn of each frame, thus boosting scores to astronomical levels. Being a female also earned players an additional 10 points per game. Equal rights!

The morning started with the team competition. 17 teams of 3 members each rolled solid balls of polyester (or polyurethane) down polished wooden lanes with the desire to strike down the hopes and dreams of the opposing teams.

After much blood, sweat and tears, team Mount E Bowlers, consisting of Prof. Loh Hong Sai, Chris Chandran and Sany Joseco, destroyed the other competitors with a total of 1667 points over 3 games. They were followed closely by the team comprising of Zainal, Dennis, and Chua Ek Kiam who came in second, and the two-man Team RED of Joseph and Tan Shao Yong who came in third.

Between the games, "lucky" draws were conducted to douse the competitive infernos that raged on. Red packets were given to fortunate individuals; these were merely bandied about as metaphors for the red-hot desire to eliminate the competition.

The morning of competition ended with the Men's and Women's individual tournaments. Consequently, the players were reduced to their

most primal states. The men displayed their dominance with chest thumps and howls as the ladies bared their nails and hissed. They were not to be outdone by one another.

After a gruelling three games, Andrew Tay stood as the alpha male of the pack, with the highest total of 704 points, also clinching the highest individual game score of the morning with 265 points. Prof. Loh Hong Sai (606 points) and Zainal (602 points) came a close second and third respectively.

Andrew's female counterpart was none other than Sany Joseco, with a total of 655 points. She eclipsed the next highest scoring female by over 200 points. Chris Chandran and Julie both fought valiantly to score 406 and 391 points to take the second and third spot respectively.

After the dust had settled, the players were found slumped in their chairs with sweat beading their brows from either victory or defeat. We glanced around and realized — are we not all but family? Tears erupted from this epiphany as congratulatory hugs and words of encouragement filled the atmosphere, catalysing a camaraderie that would last in our community for generations to come.

The morning came to a jubilant end with the prize presentation. The winners were presented with trophies made from the finest of plastics as the rest of us sought satisfaction in the joy of the victors. All in all, everyone had a ball of a time for SDA Bowling 2017. Train hard, for we hope to see you again next year.

Dr. Jeremy Sim *is currently a dental officer at Woodlands Polyclinic. He enjoys writing poetry, short stories and music for personal consumption. As an amateur playwright, Jeremy is currently working on a full-length stage play that is to be performed at an unspecified point in the future.*

A Smash Hit: SDA Badminton Tournament 2017

On a sunny Sunday morning, the Singapore Dental Association (SDA) Badminton Tournament was in full swing. Thirty-five SDA members including young dentists, experienced dentists and dental students battled it out on the courts in a friendly competition.

BY **DR. AMY CHANG**

Players exchanging friendly handshakes (From left, clockwise: Dr. Marco Li, Dr. Tan Kian Meng, Dr. Wee Teng Yau and Dr. Andy Lim)

On 8 January 2017, a wonderful scene unfolded at the Singapore Badminton Hall at 10.30am. Wielding colourful rackets, players from the dental profession began their warm-ups on over multiple courts with shuttlecocks sailing swiftly over nets. The *'thwacks'* and *'tings'* from strokes and drop-shots made a chorus, while the endless squeaks of rubber-soled shoes resonated in the background. Shuttlecocks littered the floor and jubilant crowds of family and friends filled up the spectator benches.

The tournament attracted 19 teams across the dental community to participate in three categories:

- Men's Doubles
- Mixed Doubles
- Women's Doubles

The group fixtures, semi-finals and finals were played in one set of 21 points, best of three sets of 15 points, and one set of 15 points respectively.

After a quick briefing on match schedules and basic rules of badminton, the first round of group matches was underway at 11.00am. As most players had experience playing badminton, they immeditately eased into the competition. In/out calls of shuttlecocks were determined by players themselves based on the *honesty system*. Needless to say, this proved to be not a problem for all.

The Men's Doubles category was the most heated division with a whopping total of nine teams. The teams showcased brilliant badminton skills and admirable sportmanship through a series of exceptionally tight games. Of course, occasional friendly taunts were unleashed at each other to playfully ruffle a few feathers.

The Mixed Doubles matches were equally vigorous with six teams contesting. Most of the Mixed Doubles players competed in two categories. Despite this, they still managed to pull off a high quality games, displaying an incredible reserve of both mental and physical strengths.

The Women's Doubles category was a boisterous affair with only four teams vying for the top spot of the podium. Although the matches took on a more leisurely nature, the sharp accuracy of cross-court shots and defensive tactics by the girls were no less captivating.

The tournament concluded at 2.00pm with the Prize Presentation Ceremony followed by a simple buffet lunch. Medals were presented to the winners by the SDA Vice President, Dr. Terence Jee. It was encouraging to see members of varying experience and skill levels coming together to share their passion for the sport and treating this as a platform to build camaraderie while exercising. The sentiment was reflected in badminton novice Dr. Jee's own words: "My aim is to complete, not compete".

Participants of the Badminton Tournament 2017

Aerial View of Group Matches

Dr. Kuan Chee Keong (left) and Dr. Goh Seng Teik (right) in action

Seasoned player Dr. Goh Seow Ling (left) partnered final year dental student, Joe Lim (right) for the first time. The pair clinched the bronze medal in Men's Doubles category

Women's Doubles (From left to right: Cheryl Lai, Kimberly Chan, Dr. Lee Yun Hui and Dr. Rachel Seet)

Youth triumps over experience in Mixed Doubles category where first year dental students – Seet Ren Hao (left) and Eunice Ho (right) – emerged victorious

Dr. Jason Chua (left) lunging for the shuttlecock while his partner Dr. Joshua Lee (right) watched closely

Group Photo after the Prize Presentation Ceremony

The SDA would like to extend its gratitude to all players who participated, and to the volunteers Dr. Phua Tin Cock, Dr. Paul Lim and Dr. Christopher Ow who lent a helping hand. This event was indeed a smash hit and will be held again in January 2018.

The Results

Men's Doubles

1st Dr. Jason Chua / Dr. Joshua Lee
2nd Seet Ren Hao / Samuel Lau
3rd Dr. Goh Seow Ling / Joe Lim
4th Dr. Tan Kian Meng / Dr. Marco Li

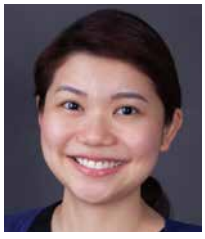
Mixed Doubles

1st Seet Ren Hao / Eunice Ho
2nd Dr. Jason Chua / Dr. Lee Yun Hui
3rd Dr. Tan Kian Meng / Dr. Jasmine Cheong
4th Dr. Soong Poh Luon / Dr. Joanne Woo

Women's Doubles

1st Dr. Rachel Seet / Dr. Lee Yun Hui
2nd Dr. Tan Li Wen / Dr. Tracie Ooi
3rd Clarissa Ho / Lee Su Lynn
4th Kimberly Chan / Cheryl Lai

Dr. Amy Chang *graduated from the University of Melbourne in 2013 and is a general dentist at Q & M Dental Group. She is fortunate enough to have several wonderful mentors at work, which enables her to find time to play badminton. She is currently serving the Welfare Committee of Singapore Dental Association and Executive Committee of College of General Dental Practitioners Singapore.*



Ships to Serve

Care, Connect, Serve, Build. It's what we do! - YWAM Medical Ships

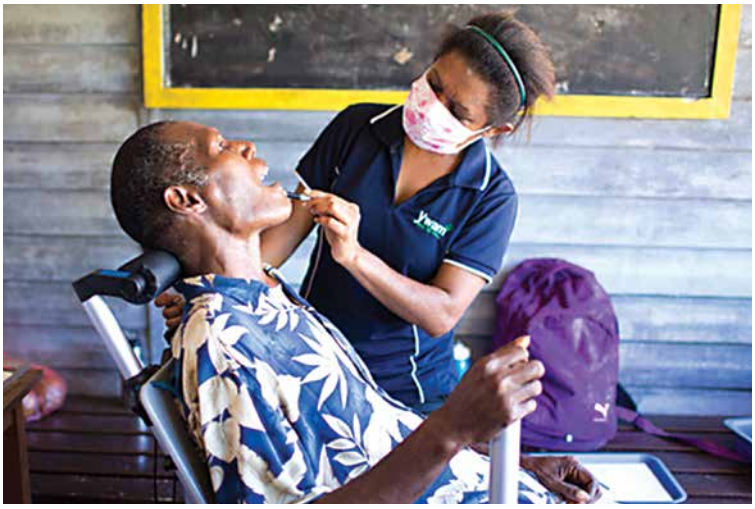
BY **DR. SUSAN COLE**

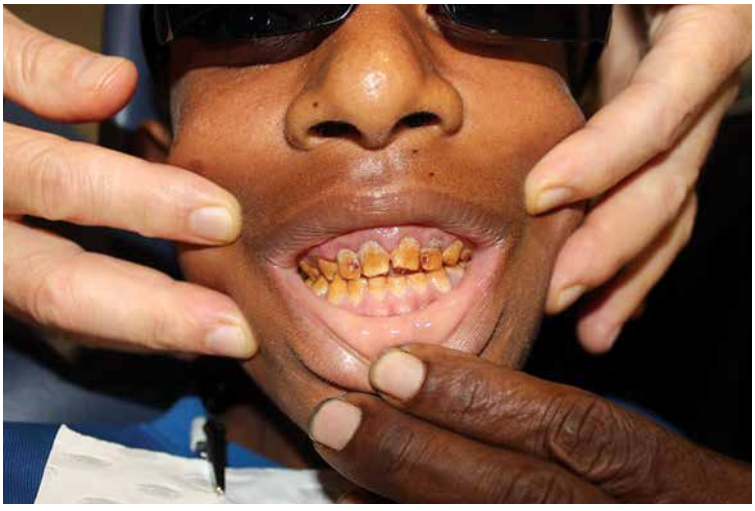
Mikasi, a blind woman, lived with her family in a small hut in rural Papua New Guinea (PNG). When her family heard that a Youth With A Mission (YWAM, pronounced *why-wham*) Medical Ship from Australia was anchored in the nearest port, her family paddled for two weeks in the hope that her sight could be restored. After undergoing a simple cataract surgery on board the well-equipped vessel, Mikasi was able to see her children for the first time.

Mikasi's story, and others like it, fueled my desire to mobilise health care professionals and volunteers to provide basic health care needs where they are needed most. As a dental student I first heard Loren Cunningham, the founder of YWAM, share his vision for a fleet of ships that would go to isolated regions meeting basic medical and dental needs. He also saw the potential to transform nations through serving alongside local health workers. Immediately I was interested and felt that bringing my dental

skills to areas with limited dental services was one way I could give something back to isolated, impoverished communities.

In 2005 I made my first volunteer trip to the Fiji Islands. I joined a dedicated team comprising of dentists, hygienists, assistants, doctors, nurses, ophthalmologists, optometrists, educationalists, addiction specialists, business people, builders, and young people, in addition to the ship crew. I loved working alongside the Fijians in the well-equipped dental clinic. Pain relief through multiple extractions, restoration of anterior teeth fractured due to dental trauma through composite restorations, transformation of people's smiles through simple prostheses – the deep appreciation and change brought to individual lives were more than enough rewards.





Seeing my other colleagues working on building projects, educational seminars and youth meetings showed me that we were all working together towards something far greater than ourselves. Together we saw a tangible difference in the lives of individuals and the island communities we served. On the aft deck after a particularly strenuous day, an ophthalmologist remarked, “This has been the highlight of my working life.” I agreed. Involvement in the ship volunteer programme had merged mission and professionalism, and I knew I had found an opportunity for ongoing service. I have continued to be involved practically as a dentist and more recently as an Ambassador for YWAM Medical Ships.

YWAM currently operates thirty vessels worldwide, ranging from small riverine ships and ocean going yachts to our largest vessel the *MV YWAM PNG*. They are staffed by permanent volunteer crew members, who are joined by short term skilled volunteers, generally for two week periods. They operate in areas which are inaccessible by other means, where little health care is available and where the needs are greatest. In PNG, where two Medical Ships operate, there is only one dentist for every one hundred thousand people. The Prime Minister described the state of the Health Care System as “Cardiac Arrest”. Bill Gates noted that PNG comprised the most difficult terrain to reach with medical care. In a nation where eighty-four percent of the population lives in rural areas, ships provide a way to deliver much needed basic support.

In Indonesia a smaller vessel operates from Singapore and covers one small part of a riverine system to bring medical and dental care. “Already we are overwhelmed with trying to keep pace with patients”, said Steve Loh, YWAM Singapore Medical Ships Director.

Dentists on board the ships complete a normal and full workday. The first time a ship visits an area, the majority of treatment

would be pain relief and emergency restorations. It is common to complete multiple extractions, treat large cellulitides and repair numerous broken teeth. One young female patient I treated was very shy and hid her mouth behind her hand. She did not smile. After I completed large composites on all her upper anterior teeth, her broad smile and shy giggles were all the rewards I wanted. Her life was transformed.

Besides dental care and dental health education, patients receive optical care, and undergo immunisation programmes. During a recent two week trip involving almost one hundred volunteers from fourteen nations, in partnership with PNG Central Provincial Health, the YWAM Medical Ships team delivered health care training services to over three thousand five hundred patients in twenty-one villages.

Not only are dental, medical and optical needs met, some spiritual and educational needs are also fulfilled. Teams conduct health educational seminars and work alongside local churches, youth programmes and schools. Volunteers on board the ship thus provide holistic care to needy communities. In PNG, women are generally held in low esteem but as teams model gender equality at all levels of operation and relationship, a great cultural impact can be made too.

One of the main aims of YWAM Medical Ships is to build capacity by strengthening the skills and capabilities of the local people. Approximately one third of the volunteer teams are local volunteers. Many local nurses, doctors, dentists, optometrists and even ophthalmologists have had the opportunity to upgrade their skills to serve their communities better.

All of YWAM Medical Ships programmes are guided by the vision and priorities outlined in PNG's national health plan; working to strengthen the national health system as a strategic partner when it comes to the delivery of health and training services in rural areas.

Dentists, dental assistants, administrators, sterilisation assistants, oral health therapists and general volunteers are needed either for two weeks in PNG or less than a week on the remote rivers of Sumatra, just one hour direct flight from Singapore. Singapore National University Hospital has approved YWAM Medical Ships Australia (MSA) as a destination for medical electives.

While land-based outreaches to needy areas are very effective, the logistics of transporting appropriate dental equipment and consumables can be daunting. A volunteer trip aboard a well-equipped ship eliminates the hassle of transporting equipment and materials. It is simply a matter of gathering a team or going as individuals, booking flights, and organising visas and other personal arrangements.

Some think that it will not make much difference volunteering just for a few days (Indonesia) or up to two weeks (PNG) where the health needs are so vast. I disagree as I have observed the transformation in individuals, families, communities and eventually a nation. YWAM Medical Ships provide an opportunity for you to make a difference and to give something back. We warmly invite you and your colleagues aboard!

Check these links to view forthcoming opportunities

Papua New Guinea: https://ywamships.org.au
OR https://ywamships.net
Indonesia - email contact: mbm@ywam.org.sg

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Dr. Susan Cole *graduated with a BDSc. from Melbourne University in 1981. Since then she has served as a volunteer with Youth With A Mission (YWAM), in Australia, New Zealand, Pacific Islands and Asia. She lived in Singapore for ten years and was employed as a dentist for some of that time by Q & M Dental Group. Dr. Cole currently resides in South Korea and has six children. She is an Ambassador for YWAM Medical Ships.*

That Magic Moment

BY **DR. WONG LIBENG** AND DRAWING BY **DR. SABRINA ONG**

Most of us who have watched the movie "E.T." will remember the classic scene of little Elliot and alien E.T.'s bicycle flight into the night sky. The iconic scene of both of them silhouetted against the backdrop of a moon has been regarded by film magazine Empire as the most magical moment in cinema history.

Magical moments in movies can leave an everlasting impression. They stimulate your neurons, touch your souls and give you that tingling, irresistible drive to go back to the theatre again to recapture that feeling (like how I re-watched Titanic in my school uniform 20 years ago). Similarly, magical moments can, and do happen during one's career in dentistry, and these often serve as little nuggets of motivation to strengthen our core belief in what we do as health care providers. A dental magical moment is the isotonic drink that quenches your thirst in the marathon of your career, especially when fatigue sets in.

Every dentist has a unique magical moment. For example, a colleague recounted his experience with an underprivileged patient who had been chewing using her fully edentulous ridges for the past forty years. During the last denture appointment, with the upper and lower full dentures all adjusted and nicely seated in the patient's mouth, the patient was given the mirror to see her first dentate smile. At that moment, tears of joy flowed down uncontrollably as the elderly clasped my colleague's hand in an unspoken gesture of gratitude. According to my colleague, it was an "electrifying and career-defining" moment.

For me, during my dental officer days, an urgent referral was given by the National Cancer Centre to see a young lady with end stage squamous cell carcinoma under the tongue. The lady was accompanied by her husband and two toddlers. I had to do a full mouth scaling before she could move on with her medical treatment. Due to the size and fixative nature of the malignant growth on the floor of the mouth, it was a challenging task retracting the tongue to debride the lingual surfaces of the lower posterior teeth. The patient tried her best to cooperate despite the pain.

When the treatment was finally completed, she looked straight into my eyes and said "my life is coming to an end soon and it is only now that I know the feeling of a totally clean mouth. Doc, continue to do good things with your hands for other patients". There and then, I felt for once that my humble existence in the universe could have a positive impact on others (there were too many occasions back in dental school when I was made to feel that my existence was a liability to the world).

Magical moments reminds us that dentistry is not just for curing, but also for caring

Magical moments in dentistry can enhance one's job satisfaction, which is defined as the feeling an individual has about his or her job *(Herzberg et al 1967)*. Herzberg and co-workers developed a two-factor theory of job satisfaction by distinguishing between intrinsic-motivation factors such as job recognition, achievement and personal growth and extrinsic-hygiene factors like job security, working conditions or salary. The presence of intrinsic-motivation factors can generate positive job satisfaction, whereas the absence of extrinsic-hygiene factors can create dissatisfaction. A recent study was carried out in Germany to evaluate the impact of intrinsic and extrinsic factors on job satisfaction of dentists *(Goetz et al 2012)*. It was found that the overall job satisfaction was high for dentists in Germany, which was comparable to studies done on dentists in United Kingdom, Turkey and Australia. Intrinsic factors like job recognition and opportunity to use abilities are strong predictors of overall job satisfaction, while extrinsic factors including long working hours and poor salary can create job dissatisfaction (no surprises on this).

Life as a dentist is never a bed of roses. All of us will have our fair share of unpleasant clinical interactions or experiences. However, I look at these "downer" moments as means to strengthen our resolve to do something good for the profession. Additionally, they make us even more appreciative when magical moments happen. Regardless of whether you are a bright-eyed bushy-tailed junior dentist or a veteran nearing the end of your illustrious career, always try to look out for and capture that magical moment whenever it comes by, just like in the ending scene of the movie when E.T. departed from planet earth, leaving behind a beautiful trail of rainbow.

So what is your Magic Moment in dentistry?

Dr. Wong Li Beng *graduated from NUS in 2005 and went on to obtain his MDS in Periodontics in 2010. In 2012, he received the certificate of Specialist Registration with Singapore Dental Council as a Periodontist. Besides Dentistry, he also obtained his Graduate Diploma in Acupuncture in 2011 from the Singapore College of Traditional Chinese Medicine. He is currently working in Ng Teng Fong General Hospital and Jurong Medical Centre, serving as a Consultant and Director of Service for Preventive Dentistry.*

Dr. Sabrina Ong*, a Queensland graduate, is practising at Dental Werks. She would love to contribute her artistic talents to future issues of* ***The Dental Surgeon****.*

Digestion 101

BY **DR. SURINDER POONIAN**

The digestive system is made up of the gastrointestinal (GI) tract, liver, pancreas, and gallbladder. The GI tract, or 'gut', starts at the mouth and includes the oesophagus, stomach, small intestine, large intestine, finally ending at the anus. This system is needed to extract nutrients from food in order to sustain bodily functions.

Ayurvedic medical sciences call the gut our 'second brain', placing a huge emphasis on digestion — it is believed that when gut functions are not optimum, the rest of the body suffers as a consequence.

Bacteria in the GI tract known as gut microflora aid digestion. Our gut is home to approximately 100,000,000,000,000 (100 trillion) microorganisms![1] Breastfeeding is associated with protection from a number of infections and is encouraged to develop a healthy gut microflora.[2] The gut is home to around two thirds of our immune system; if the system is down or if there is a tip in the balance of gut flora ("good" versus "bad" bacteria), we find ourselves experiencing discomfort or disease.

The Digestive System

So, you've just eaten a scrumptious meal. What happens next?

- Mouth: Food enters here, and this is where digestion starts. We use our teeth to chew and the enzyme salivary amylase is secreted to help with the break down of food. Many of us tend to inhale our food as we are so busy which has a direct impact on the quality of digestion. Slow down and chew your food! This will aid the digestive process and also make you feel fuller after your meal, which prevents overeating.
- Oesophagus: The food moves into the oesophagus, a muscular tube that runs between the mouth and the stomach. As the food meets the lower oesophageal sphincter, the sphincter relaxes and lets food pass into the stomach in a controlled manner.

References

[1] *Bäckhed F et al. Host-Bacterial Mutualism in the Human Intestine. Science 2005;307:1915-20.*

[2] *Wold AE1, Adlerberth I. Breast feeding and the intestinal microflora of the infant--implications for protection against infectious diseases. Adv Exp Med Biol 2000;478:77-93.*

- Stomach: It stores swallowed food and liquid. It is the size of a clenched fist when empty and then expands as food enters. The stomach produces an acid of around pH 1.9 to help break down the food further. Drinking water between meals rather than with meals allows the stomach pH to remain acidic, which permits better digestion.
- Small intestine: Peristalsis moves the food and mixes it with digestive 'juices' from the pancreas, liver and intestine. The walls of the small intestine absorb nutrients from the GI tract transporting them to the blood. The nutrients are then delivered to the rest of the body.
- Large intestine: Home to 3-4 kilograms of bacteria and 5-6 foot long. Undigested parts of food from the GI tract lining reach the large intestine by peristalsis. Water is absorbed here with any remaining nutrients. Stool is produced and is stored in the sigmoid colon until it is passed to the rectum for a bowel movement. It usually takes between 24-36 hours for stool to pass through the colon. The bacteria of the gut microbiome ferment whatever food comes through – if this part of the gut is not functioning at optimum, gas produced from fermentation leads to bloating.
- Rectum: An 8 inch chamber that connects the colon to the anus. The rectum receives stool from the colon, holds the stool and informs us via signals to the brain when it is time for evacuation. If it is appropriate to expel, the sphincter relax and the rectum contracts. If it is inappropriate, the sphincters contract allowing us to temporarily hold our stools.
- Anus: Made up of the pelvic floor muscles, and internal and external sphincters which regulate elimination of stools. The internal sphincter prevents expulsion when we are asleep or are not aware of stool and the external sphincter prevents expulsion when we have the urge to defecate. Healthy bowel movement can range from 1 to 7 times a day![3]

The Liver

The liver is responsible for detoxification and removes substances from the bloodstream that could potentially be harmful. It produces and secretes bile and purifies the blood after absorption in the small intestine. Lifestyle and food choices such as alcohol, caffeine, pesticides and refined sugars can affect the function of the liver.

Reference

[3] *The Liver Trust, Diet and Liver Disease https://www.britishlivertrust.org.uk/liver-information/diet-and-liver-disease/*

Foods to support the liver

Garlic	Helps to activate enzymes that can flush out toxins
Beets	High in plant flavonoids which enhance function
Leafy greens	Spinach and lettuce have the ability to neutralise metals and chemicals
Green tea	Full of plant antioxidants known as catechins which enhance function
Avocados	Contain antioxidant called glutathione which helps to filter out toxins
Cruciferous vegetables	Broccoli and brussels sprouts also increase the amount of glucosinolates (organic compounds) in our bodies that helps create enzyme production for digestion
Lemons	Cleanse out toxic materials and aid digestion
Turmeric	Digests fats and stimulates the production of bile

The Modern Day Lifestyle

The modern day lifestyle has a huge impact on our gut microflora. Antibiotics, medications, birth control, highly processed diet, reduction in consumption of dietary fibre, stress, and infections all contribute to varying levels of bacterial imbalance in the gut.

It is well-documented that antibiotics can have a devastating effect on the balance of gut microflora. A study in the Genome Medical Journal confirms that although the use of antibiotics in the last 80 years has saved millions of lives, there is “mounting evidence that they influence the function of the immune system’s ability to resist infection and our capacity to

digest food". In 2015, antibiotic resistance pathogens were estimated to cause over 50,000 deaths per year in Europe and America. This figure is expected to rise to 10 million by 2050.

The paper concludes that antibiotics can cause lasting detrimental changes to developing gut microflora. When antibiotics are taken, they wipe out a large proportion of the bacteria in the gut (good and bad) exposing the gut and making the body more susceptible to infections by other pathogens.

"A dysbiotic microbiome may not perform vital functions such as nutrient supply, vitamin production, and protection from pathogens. Dysbiosis of the microbiome has been associated with a large number of health problems and causally implicated in metabolic, immunological, and developmental disorders, as well as susceptibility to development of infectious diseases."[4]

Is my digestive system fully functioning?

Some serious digestive issues include gastroesophageal reflux disease (GERD), diverticulitis, ulcerative colitis, celiac disease, Crohn's disease, irritable bowel syndrome and gallstones. These can often arise from a poor diet, allergy or intolerance.

Here are just a few signs your system may generally need some support: [5]

- Extra fluid retention – Every cell in the body excretes waste into the lymphatic system. The lymphatic system does not have a pump and fluid usually moves through movement, diaphragmatic breathing and massage. Fluid movement in the lymphatic system is needed to move waste away from the cells. When we are sedentary or have an excess of waste, the waste sits around the cells. The body then retains more fluid in an attempt to dilute the waste.
- Skin breakouts and congestion may be a sign that the skin is stepping in to help the body eliminate waste.
- Feeling super hungry.
- Poor energy.
- Digestive issues including diarrhoea or constipation.
- Cellulite – Waste cannot be left in the blood so the substances are moved away from the vital organs and they are typically stored in the fatty tissue of the thighs.

What can I do about it?

The spectrum of what could be irritating your intestine is vast. Common irritants or allergens include corn, dairy, eggs, nuts, wheat and grains containing gluten, soy and shellfish. Lack of balance in exercise and sleep can also affect digestion as well as emotions and the balance of good and not-so-good bacteria present.

The 4Rs are recommended to aid your gut back to health:[6]

- REMOVE factors causing inflammation.
  Eat a whole food diet and avoid processed drinks, flours and sugar. Eliminate corn, dairy, eggs, nuts, wheat, soy and shellfish.
- REPLACE nutrients vital for digestion including digestive enzymes (protease, lipase, amylase and pepsin) and hydrochloric acid.
- REINOCULATE to help regain a healthy microflora by eating fermented foods, taking prebiotics and probiotics.
- REPAIR the lining of your gut through good nutrition.

References

[4] *Langdon A et al. The effects of antibiotics on the microbiome throughout development and alternative approaches for therapeutic modulation. Genome Med 2016;8:39.*

[5] *Dr. Libby www.drlibby.com*

[6] *Valerie Sjoberg, L.Ac. Heal Your Gut with the 4R Program www.chopra.com/articles/heal-your-gut-with-the-4r-program#sm.00001so166cbs0f1bqts6hzpp6ozu*

Some simple action steps you can take for gut health:

- Drink plenty of water.
- Eat plenty of fermentable fibres (sweet potato, yams, leeks, onion, garlic).
- Eliminate the common irritants and food toxins.
- Eat fermented foods like kefir, yoghurt, kimchi, pickles and sauerkraut as well as probiotics under the guidance of a doctor or nutritionist.
- Manage your stress.

Dr. Surinder Poonian *is a general dental practitioner in Singapore taking a holistic view on healthcare. In her spare time she enjoys travelling, outdoor activities, karate and has a keen interest in general well-being. Surinder has also been involved with various volunteering projects including dental mission trips, teen retreats and public education on oral health.*

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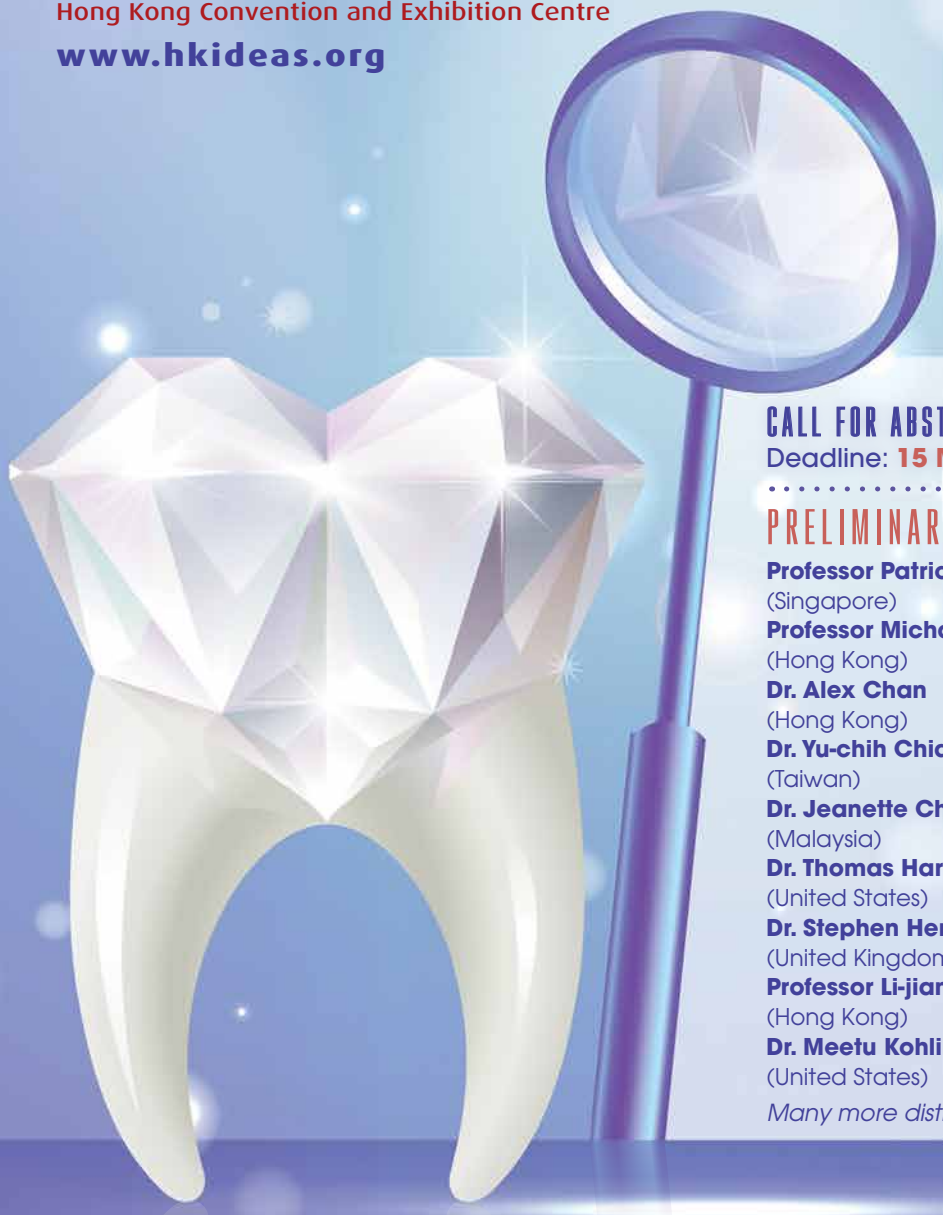

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Around the World in 15 Plates!

On a gourmet safari in Europe, the exuberant Travelling Gourmet™ had the opportunity to savour the tastes of the world in Moments Restaurant, Barcelona

STORY AND PHOTOS BY **DR. MICHAEL LIM**, The Travelling Gourmet™

This superb 2 Michelin Stars restaurant in Mandarin Oriental Barcelona is the place to try incredibly unique and delicious dishes by uber-creative Head Chef Raül Balam. The Mandarin Oriental Barcelona is close to the city's shopping, dining and cultural treasures and boasts suites overlooking Passeig de Gracia. Raül is the son of celebrated Chef Carme Ruscadela; when I first met him, he had one Michelin Star, now he has two!

Dining in Style and Elegance

Opulent gold and amber hues of the spacious dining room create a mystical ambience to enhance your dining pleasure; and at the end of the room, there is a large glass window permitting a view of Chef Raül and his team whipping up his culinary masterpieces. While I was there, Raül brought me around his kitchen and offered me a "tour" I could not refuse.

El Viaje

El Viaje means "The Trip" in Spanish. I was overjoyed to taste his special menu. This avant-garde menu draws inspiration from the cuisines of different cities across the world – each of the cities home to a Mandarin Oriental hotel. Chef Raül recreates the dishes of that city while highlighting amazing Spanish and Catalan products in each.

Barcelona

Pa amb tomaquet is a dish of bread with strawberries, appetising anchovies and white wine jelly. Traditionally, Pa amb tomaquet is served with tomatoes but Chef Raül brings us back to taste the dish as made in his childhood village where strawberries were used instead.

Hong Kong

Duroc pork dim sum and spicy sauce is a dumpling typical of Shanghai. Yet, Duroc (literally, red pig) is a breed of pigs that are red with droopy ears from Spain. The meat is bright red-pink when raw and richly marbled; when cooked, it is juicy, tender and flavourful.

Dr. Michael Lim with 2 Michelin Stars Chef Raül Balam

Paris

Paris is the home of the macaron, and Chef Raül's take on this, though looking very much like a sweet Parisian macaron, is actually savoury, filled with foie gras, apple, green celery and armagnac. Divine.

Tokyo

Fresh sea bream spiked with dashi, karashi and grapefruit vinaigrette. Karashi is made from ground mustard seeds and wasabi, giving your palate that tingling, spicy aftertaste. Oishii!

Madrid

Truly bitten by the travel bug, I was back in Europe for the stir-fried Chorizo sausage and cod Callos. Callos is actually a traditional Spanish stew made with tripe. Here Chef Raül cleverly replaced beef tripe with cod and with the use of Chorizo sausage he gives the dish a full-bodied, spicy flavour!

Milan

The next dish of scallops in saffron pesto was most appetising. The saffron sauce was an amazing accompaniment to the al denté homemade pasta. I paired it with a lovely Falanghina wine from Campania in Italy, satisfying my taste buds with sublime flavours, textures and aromas.

Other lovely dishes featured Bodrum, New York, Bangkok, Jakarta, London, Las Vegas, Miami and Marrakesh!

In that one sitting, I had the opportunity to savour the great diversity of food this world has to offer. I had gone around the world in 15 delicious plates, from Europe to America, Asia and Africa. Chef Raül had certainly been an international tour guide for this one trip.

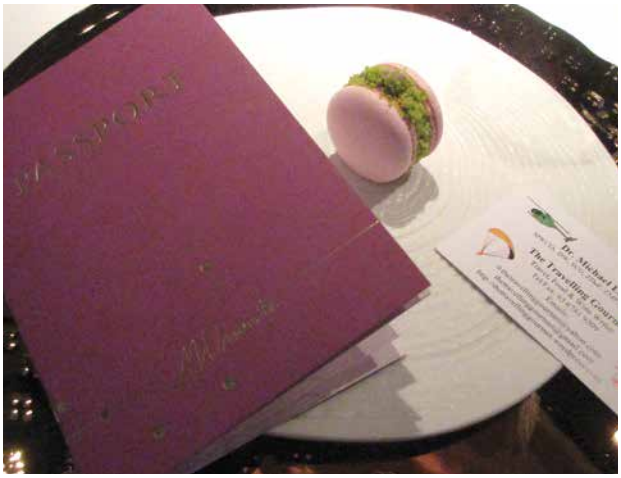
Moments Restaurant

2 Michelin Stars
Mandarin Oriental Barcelona
Passeig de Gràcia, 38-40, 08007 Barcelona, Spain
Tel: +34 93 151 88 88

Pa amb tomaquet

Flying Saucer Pita with Lamb

A Burger like no other!



Savoury Macaron with Foie Gras

Casa Batlló

Barcelona, the jewel of Catalonia, is not only a gourmet's paradise, but also a centre of art, history and culture. Barcelona is synonymous with the great and eccentric architect Antonio Gaudi.

From the Mandarin Oriental, I could stroll over to visit Casa Batlló, one of Gaudi's celebrated masterpieces, which was both futuristic and mind-boggling. This was the original residence of the Batlló family who commissioned Gaudi to build this unique mansion. Inside Casa Batlló, you are transported to a subterranean world beneath the deep blue sea. The entrance hall that is lined with a series of skylights that look like turtle shells, hemmed in with sinuous, vaulted walls and also boasting a spectacular staircase brings to mind the undersea grottos of Captain Nemo.

That swirling staircase has an intricately carved hardwood bannister much like a serpent's tail. As you take the stairs up to the roof terrace, pause for a moment and admire the backbone of the dragon slain by Saint George. Then claim your reward of a spectacular view of the city of Barcelona from roof terrace after having climbed up so many steps.

From the Batlló family's dining room inside the noble floor, you can stroll out to a big rear patio of colourful paving, laid out around the main curved ornamental element of a large planter. A complete riot of colours, as if right out of an Austin Powers' movie.

https://www.casabatllo.es/en/

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Passeig de Gràcia, 43
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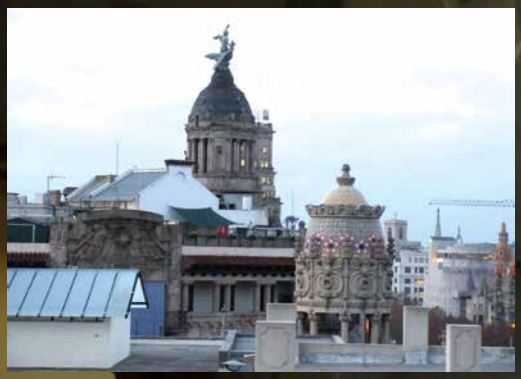

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La Sagrada Familia Basilica

This titanic Basilica is one of Antonio Gaudi's most famous works in Barcelona. It has been (and it still is) under construction since 1882! It is an architectural marvel, giving the visitor that spectacular sense of wonder. There is a small amphitheatre 60 metres above the floor of the church from where you can gaze at the church's psychedelic stained glass windows and imposing arched ceilings. The more energetic of you can climb to the top for panoramic views.

The basilica had more than 3.2 million visitors in 2014 thus making it one of the most popular tourist sites in Spain, so be prepared for long queues and security screening before you enter.

La Sagrada Familia Basilica
Carrer Mallorca, 401
08013 Barcelona, Spain

The La Sagrada Familia Basilica

Dr. Michael Lim *is* ***The Travelling Gourmet™*** *Travel, Food & Wine Writer/Editor/Educator extraordinaire.*

Icewine

Harsh Winters Produce Sweet Delights

STORY AND PHOTOS BY **DR. MICHAEL LIM**, The Travelling Gourmet™

Just like the famous kiwi fruit from New Zealand (whose humble origins actually hail from China as the Chinese gooseberry), icewine has its origins in Germany but is now Canada's most famous wine.

The most coveted dessert wine in Germany is icewine or *Eiswein* in German. *Eiswein* is made from grapes frozen on the vine. Grape varietals used to make it include Vidal, Riesling and Cabernet Sauvignon. When these grapes are naturally frozen on the vine, all the sugars and the flavours become concentrated, most of the moisture eventually left behind locked in the form of ice. Due to this high concentration of sugar, special yeasts have to be used for fermentation.

Midnight Mission

Midnight in the Niagara Peninsula. Groups of muffled and mittened figures crouch in pitch darkness by gnarled branches. It is bitterly cold and only the light from the Arctic moon shimmers on the snow. Commandos on a secret mission? No. We are staff and volunteers picking frozen grapes to make icewine!

One frozen grape produces just one rich luxurious drop of icewine. The grapes are plucked by hand, usually at night. When temperatures sink to below -8°C for at least a few hours, that is the time when the frozen berries are harvested, pressed and fermented. So because of the low yields each winter, *Eiswein* is expensive.

Eiswein offers a pleasurable concentration of sweetness and acidity, typically very crisp and clear.

The very first *Eiswein* was produced in Germany in 1794. Franconian monks left their grapes too long on the vine and the grapes froze. The rest is history. Ironically, Canada is now the most renowned makers of icewines!

Canadian Icewines

Two very excellent wineries are Inniskillin and Pillitteri. Both come from the Niagara Peninsula of Canada. The area is a designated Vintners' Quality Alliance (VQA) region like the French *Appellation d'Origine Contrôlée* (AOC).

Tasting Notes

Pillitteri Reserve Cabernet Sauvignon Icewine 2013 is a superb icewine made by this winery that was founded in 1988. When you taste this wine, you taste the richness of a harvest reaped during a magical icy Canadian winter. The grapes are taken from the harvest to be fermented at 15°C, 80% in stainless steel and the other 20% in French oak. The wine is 11.1% abv (alcohol by volume) with 219g/l of residual sugar that is well balanced with 8.7g/l of acid. The wine boasts a ravishing cherry red hue, with flavours of fresh raspberry, Amarena cherries and rhubarb that explode on the palate. Following this burst of flavour, candied lychees and caramel pleasure your tastebuds with a long and pleasing finish.

Some years ago when I was an International Wine Judge in Verona, Italy, I tasted this wine, gave it top marks and it won the Grand Gold Medal. Excellent with key lime pie and vanilla ice cream!

Pillitteri Icewine is available in Fairprice Finest supermarkets. Who said Singaporeans aren't spoilt for choice?

Inniskillin Icewine Vidal 2014

Inniskillin's name originates from the town of Enniskillen, Ireland. In 1688 the inhabitants of Enniskillen took up arms to defend their town against the threat of occupation by the forces of James II. The soldiers called the Inniskillingers Foot and Dragoons, made repeated aggressive expeditions to seek and destroy the enemy. They were so successful that they were incorporated into the army of William III, becoming the *Inniskilling Regiment*, that became the *Royal Inniskillin Fusiliers* in 1881.

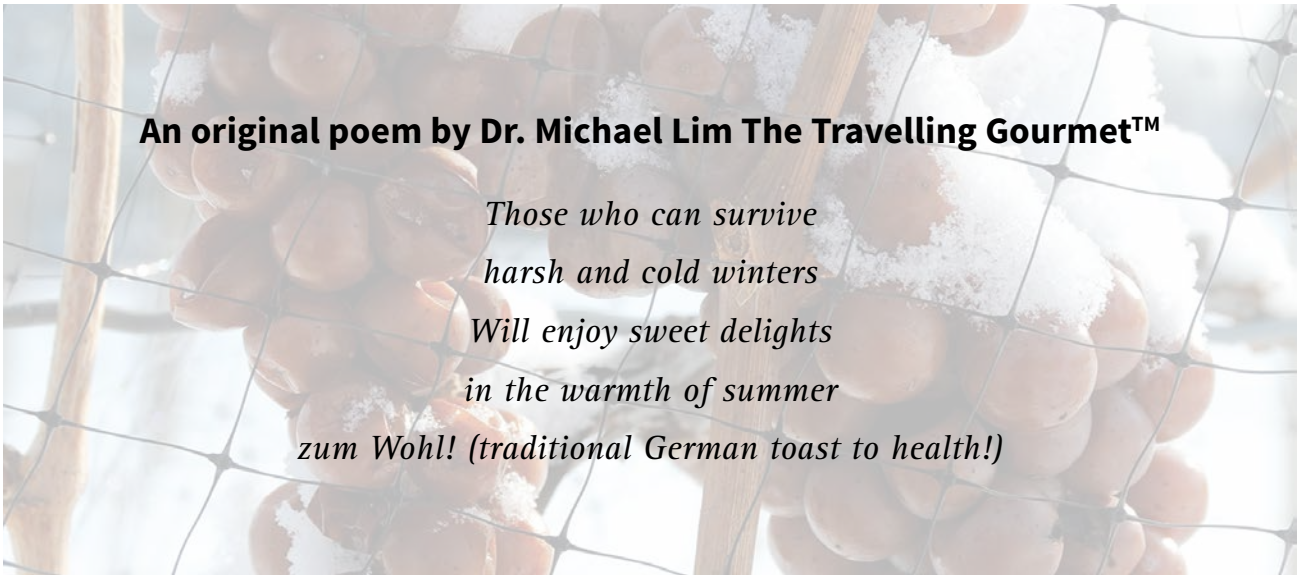
The harvest for this wine began in January 5, 2015 with ideal temperatures of -10°C. Under a full moon in the dead of night Vidal grapes were harvested at the Pratt Vineyard.

On the nose, there are aromas of tropical fruit like Thai mango and pineapple, while on the palate white peach, nectarine and candied lemon flavours are balanced by lively and crisp acidity. The wine is only 9.5% abv with a residual sugar content of 240g/l, well balanced with 12.08g/l of acids.

My friend, Donald Ziraldo, who founded Inniskillin Winery always says with a mischievous chuckle, "When you drink icewine you get the big *O*!" No prizes for guessing what the 'big *O*' is.

Food pairings: Think texture, not just sweetness. The wine goes perfect with a variety of cheeses like Gorgonzola and Roquefort blue cheeses as well as foie gras and duck rillette.

Inniskillin Icewine is available in Culina, on SIA Inflight Sales and Changi Airport Duty Free shops.



An original poem by Dr. Michael Lim The Travelling Gourmet™

Those who can survive
harsh and cold winters
Will enjoy sweet delights
in the warmth of summer
zum Wohl! (traditional German toast to health!)

Dr. Michael Lim *is* ***The Travelling Gourmet™*** *Travel, Food & Wine Writer/Editor/Educator extraordinaire.*

Cars that Make Even the Worst Days Seem OK

BY **DR. KEVIN CO**

There is no denying that dentistry is hard work. Reports reminding us that we work in one of the most stressful environments among professionals are not helpful either. So for this 50th anniversary issue, we decided that doing a feature of two incredible cars might perhaps put a smile on your face after a day of back-breaking work. Introducing the Porsche 911 Carrera S and Ferrari 488 Spider.

Porsche 911 Carrera S

The Porsche 911 has barely changed since it first came out, and there are those who often criticise Porsche for not changing the 911 enough. Perhaps they could now be satisfied with the efforts of Porsche after they finish reading this review.

For 2017, Porsche has updated the 911 Carrera S by giving it a slight makeover. That doesn't sound like much, until we get to the engine. The 2017 Porsche 911 Carrera S has gone turbocharged and there is no denying the fact that purists would have an opinion or two about it.

This means the new 911 Carrera S is actually a Turbo, but it isn't. That moniker is reserved for the flagship model. Call it what you may: The second generation 991 or 991.2, can the 2017 Porsche 911 Carrera S live up to its name? We shall find out.

Appearance

It still looks like a 911. The changes to the exterior are very subtle. You still get the familiar coupe shape with

wide hips and a low stance. Starting from the front, it features a string of four LEDs around the headlamps, now a Porsche signature. The new three-dimensional design of the tail-lights also uses LEDs.

While aerodynamic revisions to the front bumper are significant, also incorporating various cooling ducts and a splitter, it doesn't look much different compared to the 991. With a new turbocharged engine under the rear end, Porsche had to rethink the intakes and cooling required for two turbochargers. Hence, the grille up on top has been tweaked with a slatted design. Even the active rear spoiler has slats that channel air to the engine.

While, on the outside, they seem like minor design changes, a lot of work has gone into engineering the new 911. But, before I tell you how it drives, let me give you a low down on what has changed in the interior.

Interior and Comfort

With the 2017 model, Porsche has made big improvements to the infotainment system. The new Porsche Communication Management System now comes with a 7-inch touch screen with Google Earth and Apple Play. Porsche has provided conventional buttons and rotary controls if you do not find the touch screen interface to your liking.

Step inside the cabin of the new 911 and the biggest change you will notice is the steering wheel. Inspired by the 918 Spyder's steering wheel, this sporty, three-spoke design is just the right size and adds to the joy of driving.

The 911 has always been a practical sports car. The two-seater does have a pair of back seats that when folded away, creates 260 litres of storage space.

Performance and Drive

The 2017 Porsche 911 Carrera S still has a rear-mounted flat-six cylinder engine. But thanks to the twin-turbocharger setup, specific output is up compared to the old 3.8 litres naturally aspirated unit. Hence, capacity has been reduced to 3.0 litres.

The new engine gives 420 hp at 6500 rpm. That is 20 hp more than what you would get in the old car. More importantly, the new engine delivers 500 Nm of peak torque and while you would have to rev up the older engine hard to extract any performance, the new turbocharged motor pulls right from 1700 rpm and it doesn't fade until 5000 rpm.

This has been possible thanks to mono-scroll, fixed-vane turbochargers which use a vacuum operated waste-gate system. In simple words, the turbos are continuously spinning irrespective of throttle position, thus reducing turbo-lag.

The new 911 Carrera S is available with a 7-speed PDK automatic transmission, however purists can have their 911 installed with a manual gearbox. With the PDK and in Sport Plus mode, the 911 can hit 100 km/h in just 3.9 s. In fact, some have found that to be a conservative figure, rather, saying it can reach 100 km/h in 3.5 s with ease.

Porsche says they have re-tuned the chassis for a more pliant ride. However, by no means has it lost its sporty character. The Carrera S sits 10 mm lower than the outgoing model. If you opt for the optional PASM sports suspension, this drops the ride height 20 mm more.

Porsche also offers an active rear-wheel steering system as an option on the Carrera S. This is the same system that debuted with the 991 GT3. Though that is quite an expensive option to have, the system does improve handling and reduces understeer.

The new 911 is as exciting if not better to drive than its predecessor. My only grudge is the exhaust note which isn't as crisp as the naturally aspirated flat-six. That motor will surely be missed.

Final Say

With its turbocharged heart, the new 911 certainly has a different character. You can ride the torque wave as the tachometer nears the red line, the engine all the while making a slightly muted sound.

Unlike the previous 911, you would rarely have to rev the engine hard on your daily commute to work. That doesn't sound like fun but it is certainly better fuel economy, and in fact, the low-end grunt makes the new 911 more usable in traffic.

There is no doubt the new 911 is still a great sports car. Although it has lost a bit of its charm with the engine swap, the performance gains are pretty impressive. For sure, you are not going to get lapped on a race-track.

Smile factor – 8/10

Ferrari 488 Spider

The Ferrari 488 GTB was introduced back in 2015 as the replacement for the 458. It was launched at the Geneva Motor Show and a few months later in September, Ferrari showcased a Spider version at the Frankfurt Motor Show.

The Ferrari 488 Spider, the successor to the 458 Spider, is a mid-engine hard-top convertible sports car with a V8 heart. That said it is a lot different when you compare it with the 458. It is the first modern, mid-engine Ferrari convertible with a turbocharged V8. Thanks to the twin-turbo setup, the engine delivers even more performance and torque than the naturally aspirated V8 on the 458.

Let us take a closer look at how this turbocharged 488 Spider stacks up against the raw and responsive 458 Spider.

Appearance

Like its coupe version, the 488 Spider's exterior styling is highly influenced by Ferrari supercars from the past: An evolution of the 458's exterior design albeit with a few references to classic Ferraris. The most prominent features are the side vents that hark back to the 308 of 1975.

The design is highly influenced by aerodynamics. The vents up front are designed to channel air to the radiators without inducing too much drag. A subtle splitter has been neatly integrated into the styling. Vents on the rear fascia help extract air through the bodywork which despite cooling the engine also create downforce.

The 488 Spider's folding hard top is a two-piece unit which splits and folds away behind the passenger compartment. The roof can be raised or lowered in 14s even when the car is moving. Roll over hoops are neatly tucked under the bodywork covering the roof cavity.

Interior and Comfort

The 488 Spider boasts the same interior design as the coupe. Like all modern Ferraris, controls for the light, indicators and wipers are on the steering wheel. This takes

getting used to but the idea is to have each and every control at your fingertips.

The layout of the dashboard is pretty similar to the 458 except for a few aesthetic modifications. A large analogue dial is flanked by two configurable LCD displays on either side. The 488 Spider does not have a standalone satellite navigation display but an integrated one in one of the LCD screens. It is quite tiny and I feel a proper satellite navigation system would have been better.

Ferrari offers a wide range of options to help customers create a bespoke interior. There are 3 to 4 designs of seats on offer: Carbon fibre in place of plastics and optional alcantara instead of the usual leather.

Performance and Drive

As is With turbocharged engines, the cars are a bit muted compared with their naturally aspirated counterparts. Even with the roof down, the 3.9 litres twin-turbo V8 in the Ferrari 488 Spider does not sound as exciting as the 458, but that is made up for with fantastic performance.

Despite the smaller displacement, the engine delivers 670 bhp of peak horsepower at 8000 rpm and pushes out a meaty 760 Nm of torque at 3000 rpm. A 7-speed dual-clutch transmission sends the power to the rear wheels via an electronic limited-slip differential.

Variable Torque Management ensures the same responsiveness expected from any Ferrari engine is maintained. The system almost negates turbo lag at low rpm. According to Ferrari, it takes 0.8 s for the engine to respond to your inputs at 2000 rpm. As a result, the 488 Spider accelerates from 0-100 km/h in just 3 s while 200 km/h comes up in 8.7 s. Top speed is 330 km/h.

The retractable hard top on the 488 Spider is 25 kg lighter than the one on the 458 Spider. Overall, it weighs 50 kg more than the 458 coupe. Furthermore, the space-frame chassis is more rigid than its predecessor resulting in a 23% improvement in performance.

Final Say

With stiff competition from McLaren, Ferrari had to come up with a car that could go head-to-head with the 650S Spider. Maranello has delivered in style with the 488 Spider. It looks great especially in the new Blu Corsa shade and its turbocharged heart has the grunt to give McLaren a run for its money.

Responsive handling and a perfectly balanced chassis makes the 488 Spider a true supercar. It is a Ferrari that will tickle your senses, for sure.

Smile factor – 10/10

Dr. Kevin Co *is a full-time private practitioner at his clinic TLC Dental Centre. Cars remain his lifelong passion.*

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