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Dentistry





Novel Agent Against Gram Negative Resistant Pathogens

Indicated for¹



Complicated intra-abdominal infection

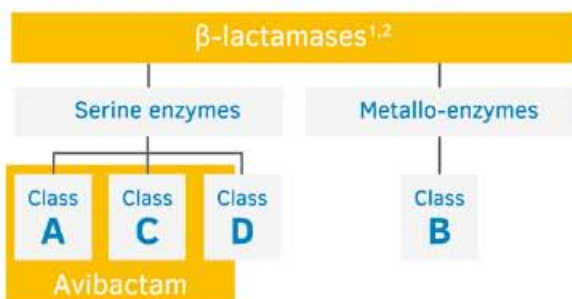


Complicated urinary tract infection, including pyelonephritis



Hospital-acquired pneumonia, including ventilator-associated pneumonia

Novel β -Lactamases Inhibitor with Breakthrough Inhibition^{1,2}



Avibactam inhibits both Ambler class A and class C β -lactamases and some class D enzymes, including :^{1*}

- ESBLs • KPCs • OXA-48 carbapenemases • AmpC enzymes

* Avibactam does not inhibit class B enzymes (metallic- β -lactamases) and is not able to inhibit many class D enzymes.¹ ESBL, extended-spectrum β -lactamase; KPC, Klebsiella pneumoniae carbapenemase.

ZAVICEFTA ABBREVIATED PACKAGE INSERT

1. TRADE NAME: ZAVICEFTA **2. PRESENTATION:** Powder for concentrate for solution for infusion 2g ceftazidime/0.5g avibactam **3. INDICATIONS:** Indicated in adults for: (a) complicated intra-abdominal infection (cIAI); (b) complicated urinary tract infection (cUTI), including pyelonephritis; (c) hospital-acquired pneumonia (HAP), including ventilator associated pneumonia (VAP) **4. DOSAGE:** 2.5g Q8H for 2 hours. Refer to full PI for duration of therapy. **5. CONTRAINDICATIONS:** Hypersensitivity to active substances, to any of the excipients or to any cephalosporin antibacterial agent. Severe hypersensitivity (e.g., anaphylactic reaction, severe skin reaction) to any other type of β -lactam antibacterial agent (e.g., penicillins, monobactams or carbapenems) **6. WARNINGS & PRECAUTIONS:** Hypersensitivity reactions; clostridium difficile-associated diarrhea; in patients with renal impairment; nephrotoxicity; direct antiglobulin test (DAT) or COOMBS test seroconversion and potential risk of haemolytic anaemia; in patients with controlled sodium diet. Ceftazidime may interfere with copper reduction methods (Benedict's, Fehling's, Clinistest) for detection of glycosuria leading to false-positive results. Ceftazidime does not interfere with enzyme-based tests for glycosuria. (Please refer to the full Prescribing Information for details) **7. INTERACTIONS:** Probenecid and chloramphenicol. Concurrent treatment with high doses of cephalosporins and nephrotoxic medicinal products such as aminoglycosides or potent diuretics (e.g., furosemide) may adversely affect renal function. **8. PREGNANCY AND LACTATION:** Should only be used during pregnancy only if the potential benefit outweighs the possible risk. Ceftazidime is excreted in human milk in small quantities and a decision must be made whether to discontinue breast feeding or to discontinue/abstain from ceftazidime/avibactam therapy taking into account the benefit of breast feeding for the child and the benefit of therapy for the woman. **9. SIDE EFFECTS:** **Very Common:** Coombs direct test positive. **Common:** Candidiasis (including vulvovaginal candidiasis and oral candidiasis), eosinophilia, thrombocytosis, thrombocytopenia, headache, dizziness, diarrhea, abdominal pain, nausea, vomiting, alanine aminotransferase increased, aspartate aminotransferase increased, blood alkaline phosphatase increased, gammaglutamyltransferase increased, blood lactate dehydrogenase increased, rash maculopapular, urticaria, pruritus, infusion site thrombosis, infusion site phlebitis, pyrexia. Reference: HK PI (version date/LPD date) OCT 2018 Date of preparation: MAR2019 Identifier number: ZAV/0319 **FULL PRESCRIBING INFORMATION IS AVAILABLE UPON REQUEST.**

References: 1. Zavicefta[™] (Ceftazidime-avibactam) Prescribing Information, Pfizer Corporation Hong Kong Limited Version October 2018 2. Liscio JL, et al. *Int J Antimicrob Agents* 2015;46:266-71





Contents

| | | | |
|-----------------------------------------------------------------------------------------------------------------------|----|--------------------------------------|----|
| Editorial | | Lifestyle | |
| ■ Editorial | 2 | ■ The Joy of Sailing | 25 |
| <i>Dr Tony TO</i> | | <i>Dr Tony TO</i> | |
| Dental Bulletin | | Dermatology Quiz | |
| ■ An Overview of Surgical Treatment for Temporomandibular Joint Pathologies | 4 | ■ Dermatology Quiz | 22 |
| <i>Dr Dion Tik-shun LI & Dr Yiu-yan LEUNG</i> | | <i>Dr Lai-yin CHONG</i> | |
| ■ MCHK CME Programme Self-assessment Questions | 9 | Medical Diary of September 29 | |
| ■ CAD/CAM Dentistry | 10 | Calendar of Events 30 | |
| <i>Dr BK YIU</i> | | | |
| ■ A Call to 'Retire Statistical Significance': It Ain't What You Do It's The Way That You Do it. | 14 | | |
| <i>Professor Colman McGRATH, Dr Hua FANG, Dr Susan BRIDGES, Professor Brian O'CONNELL & Professor May CM WONG</i> | | | |
| ■ Clear Aligner Therapy in Orthodontics | 17 | | |
| <i>Dr Derek BARAM</i> | | | |
| ■ An Overview of Special Care Dentistry | 23 | | |
| <i>Dr Arthur See-king SHAM</i> | | | |



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The Cover Shot



Norway is known for its spectacular and mesmerising view of nature, such as the fjords, the Northern Lights and the Midnight Sun. Listed as one of the UNESCO world heritage sites, Nærøfjord never disappoints tourists. The mirror images of the mountains and the houses in the fjord inlets are simply stunning and breathtaking to look at.

Among the Scandinavian countries, my favourites are Norway and Sweden. During the final semester of my undergraduate years, I had a precious opportunity to visit the Faculty of Odontology of the University of Gothenburg in Sweden. This experience has broadened my horizon through observing how different treatment protocols in other countries can be used to treat the same disease. It is beneficial to be open-minded in order to adopt new ideas, which is very crucial to learning.



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Editorial

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Editor



Dr Tony TO

The origins of Dentistry can be dated back to as early as 7,000 B.C. based on the research work on the history of ancient Egypt. In the Middle Ages, barbers who owned the expensive sharp razor blades and steady hands were responsible for shaving hair as well as performing surgery. Barbers were later divided into two groups: surgeons who were trained to perform complex operations; and barber-surgeons, who performed shaving, dental extraction and bloodletting. The diagonal red and white pole of a barber's shop is the remnant of such history, the red reflecting the blood and the white reflecting the bandages used to wrap the wounds during bloodletting.

The idea of dental decay caused by tooth worms was once widespread. A French surgeon Pierre Fauchard (1678-1761) first published a book in 1728, *The Surgeon Dentist*, provided a systematic and comprehensive approach to caring for and treating the teeth. Fauchard earned the title of Father of Modern Dentistry by describing that acids from sugar caused dental decay and by invention of instruments for oral surgery. G.V. Black (1836-1915) is called the Father of Operative Dentistry. He described the classification of caries lesions and the concept of ideal cavity preparation. Per-Ingvar Brånemark (1929-2014) is the Father of Modern Dental Implantology. His work on osseointegration has established evidence and standards for implant dentistry.

The world of dentistry has advanced dramatically over the past centuries. The breakthrough in technology, making available computer-assisted design (CAD) and computer-assisted manufacturing (CAM), dental lasers, digital radiology, 3-D imaging, digital scanners and dental implants, has much transformed dental practice into various high-quality treatments to enable healthy, confident and bright smiles in our patients.

Oral-B
BRAUN



HELPS FIGHT AGAINST
GUM BLEEDING[^] &
REPAIR ENAMEL*
IN JUST 2 WEEKS

IMPROVEMENT IN GUM PROBLEMS PROVEN IN CLINICAL STUDIES

GUM & ENAMEL REPAIR SHOWED SIGNIFICANT IMPROVEMENT
IN GUM PROBLEMS ACROSS ALL TIME POINTS ($P < 0.001$)¹

At baseline



UP TO **74%**
LESS SITES WITH
GUM PROBLEMS



At 3 months

¹on weakened enamel, in laboratory study [^]P&G research data, effect is different from person to person, gum bleeding caused by accumulated dental plaque

*基於在受損琺瑯質上的實驗室數據 *寶潔研發數據, 效果因人而異, 指牙菌膜積聚所引起的出血 *指2D/3D旋轉震動或Trizone電動牙刷系列及OC20、MD20口腔淨器

continuing the care that starts in your chair

Oral-B

An Overview of Surgical Treatment for Temporomandibular Joint Pathologies

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This article has been selected by the Editorial Board of the Hong Kong Medical Diary for participants in the CME programme of the Medical Council of Hong Kong (MCHK) to complete the following self-assessment questions in order to be awarded 1 CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 30 September 2019.

INTRODUCTION

Diseases related to the temporomandibular joint (TMJ), collectively termed Temporomandibular disorders (TMDs), are common and could result in significant pain and disability. It has been reported that TMDs affect up to one-third of the population^{1,2}. Some of the most common presentations of TMDs include painful joint clicking, limited mouth opening with pain, and pain in the masticatory muscles. TMDs could occur as a result of direct trauma, prolonged mouth opening such as a lengthy dental procedure or scuba diving, or psychogenic issues such as stress, depression and anxiety. However, the cause remains largely unknown in many cases.

INDICATIONS FOR SURGERY

In some of the less common diseases, such as neoplasms, ankylosis of the joint, growth disturbances, or recurrent joint dislocation, surgical treatment of the TMJ is no doubt clearly indicated³. However, the role of surgical treatment is less well-defined in the most common causes of TMDs, such as arthralgia related to displacement of the articular disc, with or without clicking or limited jaw opening. This is due to the fact that conservative therapy can be effective in the management of the majority of patients with TMDs^{4,5}. Furthermore, it has been reported that some TMDs have the potential to resolve spontaneously without treatment⁶. However, there remains a small portion of patients who are refractory to conservative approach. Conventional wisdom dictates that surgical treatment should only be attempted when conservative approach has failed; nevertheless, consensus on the timing of surgical treatment in the literature is non-existent. When chronicity develops in the symptoms of TMDs, they become more difficult to manage⁷. Of course, an accurate diagnosis is crucial prior to the consideration for surgery. For example, pain in the masticatory muscles without clinical and radiographic anomalies of the actual joint is not an indication for surgery. On the other hand, early minimally invasive surgical treatment of disc displacement coupled with reduced mouth opening has been shown to respond more favourably than conservative treatment alone⁸.

CLOSED PROCEDURES

Arthrocentesis

Arthrocentesis of the TMJ is the least invasive surgical procedure, during which two 19-gauge needles are inserted into the superior joint space, which is then washed with normal saline, one needle for in-flow and the other for out-flow of the irrigating solution. It was developed in the early 1990s after the observation that symptoms of TMDs as well as mouth opening improved after simple lavage under arthroscopic means⁹. Due to its simplicity, low morbidity, cost-effectiveness, and convenience, it is currently the most common surgical treatment for arthralgia. After lavage of the joint, any additional medicaments, such as hyaluronic acid, can also be injected into the superior joint space. With a success rate of over 80%¹⁰, this procedure has led to the question of whether the re-establishment of normal disc position by open surgery, which was common prior to the development of the closed approach, is at all necessary to relieve pain symptoms. Of note is that the nature of the technique to allow access to the synovial fluid has sprouted a new era of biochemical studies, which in turn has provided important insights into the pathogenesis of TMDs. The therapeutic mechanisms of arthrocentesis are thought to be removal of inflammatory mediators, loosening of fibrous adhesions, and elimination of the negative pressure, or suction cup effect, between the articular disc and the glenoid fossa.

Arthroscopy

The success of arthroscopic surgery of the TMJ has since opened up new horizons in the management of TMDs¹²⁻¹⁴. Arthroscopy of the TMJ was first introduced in Japan in 1975, where a miniature version of an orthopaedic arthroscopic telescope was adapted for use in the TMJ¹¹. Arthroscopy provides diagnostic information that was not available previously, and can also be used as therapeutic application (Fig. 1). Nowadays, arthroscopy of the TMJ can broadly be classified into either arthroscopic lysis and lavage or operative arthroscopy. Arthroscopic lysis and lavage involves an arthroscopic sweep with a blunt trocar to release the fibrous adhesions and suction cup effect in the superior joint space with concomitant arthrocentesis (Fig. 2). On the other hand, operative arthroscopy consists of more sophisticated instruments and techniques including



the use of lasers, electrocautery, bone anchors, and various disc repositioning and suturing techniques. Interestingly, studies comparing the clinical outcomes between lysis and lavage vs operative arthroscopy show no significant differences¹². More perplexing is that it seems that the clinical outcomes between arthrocentesis and arthroscopy are comparable¹³. However, arthroscopy does have the advantage of providing diagnostic information which is not offered by arthrocentesis.

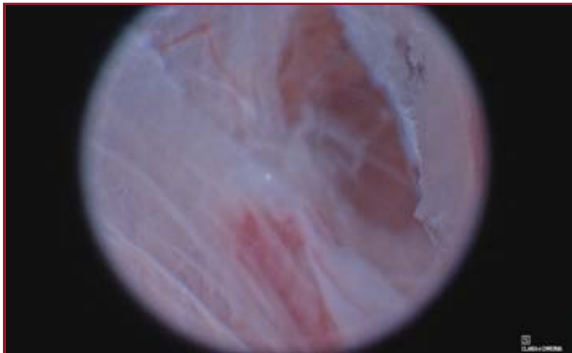


Fig. 1. A TMJ arthroscopy showing a highly degenerative joint with signs of arthritis. (Photo belongs to HKU.)



Fig. 2. TMJ arthroscopic lysis and lavage can release joint fibrous adhesions and improve symptoms. (Photo belongs to HKU.)

OPEN PROCEDURES

Open procedures were once common in the treatment of TMDs, but the spotlight has been overtaken by the recent advances and success in closed procedures. Nevertheless, there is still a place for open procedures, such as in the case of severely damaged articular disc justified for discectomy, or in the management of certain pathologies such as neoplasms, growth disturbances or ankylosis. The most common approach to the TMJ is the pre-auricular approach. The scar is usually inconspicuous postoperatively, but there is a remote risk of symptomatic gustatory sweating and facial nerve palsy.

Disc-repositioning Surgery

When pain in the TMJ is not responsive to conservative approach, and there is evidence from imaging modalities that the symptoms are related to a displaced disc that is still salvageable, disc-repositioning surgery

is a well-established treatment option (Fig. 3). Since most cases of displacement of the disc are in the anterior direction, the procedure involves plication of the disc in the posterior direction with non-resorbable sutures, with or without a releasing incision in the anterior portion of the disc for mobilisation. This procedure has been shown to provide symptomatic improvement in 90% of the patients in the long term¹⁴. However, it seems that the stability of the new disc position is short-lived in many patients¹⁵. Nowadays, disc-repositioning surgery can be done via an arthroscopic approach^{16,17}.



Fig. 3. A displaced disc is repositioned and secured with non-resorbable sutures. (Photo belongs to HKU.)

Discectomy

Complete removal of the disc via an open approach of TMJ may be indicated when there is pain related to a severely damaged articular disc which is non-salvageable. Discectomy has been shown to completely eradicate the symptoms in the long term, despite the fact that radiographic evidence of bone changes is to be expected¹⁸. Replacement of the resected disc with alloplastic materials was a historical approach but has been abandoned due to high incidence of complications, and autogenous graft has not been shown to provide any additional benefit than not replacing the disc⁹.

Modified Condylotomy

In the case of TMJ clicking with pain not amenable to more conservative approaches, modified condylotomy has been proposed to be a viable treatment option¹⁹. It is basically a surgically-induced subcondylar fracture, similar to the intraoral vertical ramus osteotomy (IVRO), which is a common surgical technique in jaw corrective surgery. The technique was proposed after the observation that the complaint of TMDs was uncommon in patients who sustained condylar fractures²⁰. Modified condylectomy has also been suggested to be beneficial in the treatment of TMDs related to psoriatic arthritis²¹. The mechanism is that the condyle is allowed to sag after a subcondylar fracture, thus increasing the superior joint space and allowing more unrestricted movement of the joint. The benefit of this procedure is that the surgical approach is intraoral, and the actual joint and related soft tissues are not violated. However, the patient needs to be placed into inter-maxillary fixation for a few weeks, and that there is a possibility of occlusal changes postoperatively. Due to the advent of more conservative closed procedures, the popularity of modified condylectomy has dwindled in recent years.

Release of TMJ Ankylosis

The most common causes of ankylosis of the TMJ are traumatic and infective (Fig. 4a & b). When this occurs in the developing patient, it could lead to airway compromise, feeding issues, growth disturbance, and dentofacial deformity. The most accepted protocol for the management of TMJ ankylosis is the one published by Kaban²², where it involves aggressive resection of the ankylosis, followed by ipsilateral with or without contralateral coronoidectomy. The resultant gap is then interposed with a lining material, followed by early mobilisation and aggressive physiotherapy. In a recent systematic review, it has been shown that using a lining material to interposition the gap (interpositional gap arthroplasty vs gap arthroplasty alone), and using an autogenous graft as opposed to alloplastic material result in lower recurrence rate of ankylosis²³. Some of the traditional autogenous lining options include the temporalis fascial or myofascial flap and cartilage graft harvested from various sites (Fig. 5). In recent years, it has been shown that the less invasive dermal graft produces a similar result compared to the temporalis myofascial flap²⁴.



Fig. 4a. A 24 year-old lady suffering from TMJ ankylosis that was caused by the spread of infection from an impacted upper third molar. (Photo belongs to HKU.)

Fig. 4b. The right TMJ was fused with the skull base. (Photo belongs to HKU.)



Fig. 5. Release of the TMJ ankylosis and interpositioning with a temporalis fascial flap. (Photo belongs to HKU.)

TMJ Reconstruction

When resection of the TMJ is necessary due to neoplasms, ankylosis, severe arthritic conditions with multiple failed surgical interventions, avascular necrosis, or in the case of congenital or acquired deformities of

the TMJ, reconstruction of the joint with autogenous graft or alloplastic prosthesis is indicated.

Autogenous Graft

The costochondral graft is the most recommended autogenous graft for TMJ reconstruction due to its anatomical similarities with the mandibular condyle, and is specifically indicated in the growing patient due to the graft's potential to grow with the patient (Fig. 6). It is essentially a free bone graft; therefore, surgical success is based on rigid fixation and a rich vascular bed in the recipient site. Case selection for costochondral graft for reconstruction of the TMJ is critical, because increased failures are seen in patients with multiple previous surgeries leading to fibrosis and reduced blood supply²⁵, in patients with preoperative diagnosis of ankylosis²⁶, and in patients with a previously failed and removed alloplastic prosthesis due to residual foreign body reaction in the recipient site²⁷.



Fig. 6. Reconstruction of the TMJ with a costochondral graft after release of TMJ ankylosis and gap arthroplasty. (Photo belongs to HKU.)

Alloplastic Prosthesis

In the skeletally mature patient, reconstruction of the TMJ with an alloplastic prosthesis is a viable option. Both the condyle and the articular fossa have to be reconstructed, because a prosthetic condyle against a natural fossa could cause bone erosion and possible penetration into the middle cranial fossa; conversely, a prosthetic fossa against a natural condyle could result in resorption of the condyle. The advantages of alloplastic prosthesis include the lack of requirement of a robust blood supply from the recipient site, the resistance of the prosthesis to resorption or previous foreign body reaction in the recipient site, and that physiotherapy can commence immediately in the postoperative period. Delayed physiotherapy could lead to reduced mandibular function due to muscle atrophy, fibrosis, and heterotopic bone formation²⁸. The alloplastic TMJ prosthesis can be stock, or patient-specific owing to the advent of CAD/CAM and 3-D printing technologies. Systems where both the condylar and fossa components are metal have been abandoned due to the risk of metallosis. Currently, alloplastic prostheses for the TMJ tend to be made with a metal condyle against a fossa made of ultra high-molecular weight polyethylene, and success has been reported up to 20 years²⁹ (Fig. 7).



Fig. 7. Patient-specific 3-D printed titanium TMJ and plastic fossa for TMJ reconstruction. (Photo belongs to HKU.)

CONCLUSION

While most common diseases associated with the TMJ are responsive to conservative treatment, there remains a need for surgery where the symptoms are refractory to non-surgical approaches, and in the case of less common diseases that are obviously indicated for surgery. Although open joint surgery was popular in the mid part of the 20th century, current advances have allowed us to tackle the diseases with a more minimally invasive surgical approach. Research in progress regarding the biochemical and genetic influences of TMDs holds great promise in the diagnosis and treatment of these disorders in the future.

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Briefings on the Private Healthcare Facilities Ordinance (Cap 633)

The Private Healthcare Facilities Ordinance (“the Ordinance”), passed in November 2018, provides for a new regulatory regime for private healthcare facilities.

Under the Ordinance, all premises where registered medical practitioners and/or dentists practise are required to have either a licence or a letter of exemption from the Department of Health (DH).

DH is organising a series of briefing sessions on the Ordinance with interactive discussions in various venues on the Hong Kong Island, Kowloon, and the New Territories, starting August 2019.

Seats are limited. Please register early.

| Date | Time | Venue |
|--------------|--------------------------------------------------|------------------------------------------------------------------------------------|
| 5 Sep (Thu) | 1:30pm Registration 2:00-4:00pm Briefing & QA | Long Ping Community Hall Long Ping Estate, Yuen Long |
| 16 Sep (Mon) | 1:30pm Registration 2:00-4:00pm Briefing & QA | Henry G. Leong Yaumatei Community Centre 60 Public Square Street, Yau Ma Tei |
| 28 Sep (Sat) | 2:30pm Registration 3:00-5:00pm Briefing & QA | Yuen Chau Kok Community Hall 35 Ngan Shing Street, Sha Tin |

All briefing sessions will be conducted in Cantonese.
No food or drinks will be served at the briefing sessions.
CME and CPD applications are in progress.

For enquiry and registration, please contact us at (+852) 3107 2939.

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MCHK CME Programme Self-assessment Questions

Please read the article entitled "An Overview of Surgical Treatment for Temporomandibular Joint Pathologies" by Dr Dion Tik-shun LI and Dr Yiu-yan LEUNG and complete the following self-assessment questions. Participants in the MCHK CME Programme will be awarded CME credit under the Programme for returning completed answer sheets via fax (2865 0345) or by mail to the Federation Secretariat on or before 30 September 2019. Answers to questions will be provided in the next issue of The Hong Kong Medical Diary.

Questions 1-10: Please answer T (true) or F (false)

1. Conservative therapy is useful for treatment of most types of temporomandibular disorders (TMDs).
2. All patients with clicking of the temporomandibular joint (TMJ) require treatment.
3. Arthrocentesis can be used for treatment of limited jaw opening with pain due to disc displacement.
4. Total joint replacement is a standard treatment for TMJ ankylosis in the growing patient.
5. Repositioning of the articular disc can be performed via a closed approach.
6. Most arthrocentesis procedures are done under general anaesthesia and require hospital stay.
7. Modified mandibulotomy is a common first-line treatment for painful joint clicking.
8. Discectomy is a procedure whereby the whole articular disc is removed, and is indicated when the articular disc is severely damaged and the pain symptoms are not responsive to more conservative treatment options.
9. The most common autogenous graft for replacement of the TMJ is costochondral graft.
10. In total joint replacement, a prosthetic condyle is placed against a natural fossa.

ANSWER SHEET FOR SEPTEMBER 2019

Please return the completed answer sheet to the Federation Secretariat on or before 30 September 2019 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

An Overview of Surgical Treatment for Temporomandibular Joint Pathologies

Dr Dion Tik-shun LI

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1 2 3 4 5 6 7 8 9 10

Name (block letters): _____ HKMA No.: _____ CDSHK No.: _____

HKID No.: ___ - ___ - ___ X X (X) HKDU No.: _____ HKAM No.: _____

Contact Tel No.: _____ MCHK No.: _____ (must fill in)

Answers to August 2019 Issue

Nocturia and Nocturnal Polyuria

1. T 2. F 3. T 4. T 5. T 6. T 7. F 8. T 9. T 10. T

CAD/CAM Dentistry

Dr BK YIU

BDS (Hong Kong), MGD SRCs (Edinburgh), FCDSHK (Family Dentistry), FHKAM (Dental Surgery)
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INTRODUCTION

CAD/CAM Dentistry is a field of dentistry and prosthodontics using computer-aided design and computer-aided manufacturing to improve the design and creation of dental restorations and prostheses.

In September 1985 at the University of Zurich Dental School, the first chairside ceramic restoration was placed by using computer-aided design/computer-aided manufacturing (CAD/ CAM) technology. At the time, it was a revolutionary concept for restorative dentistry that an industrially made ceramic material could be fabricated chairside by using a milling device with the benefits of a direct restorative treatment modality.

It was not until 25 years later that the concept of CAD/ CAM in a dental office became more widely accepted by dental practitioners. A basic CAD/CAM system in restorative dentistry consists of:

- A digital scanner that makes models readable by computers
- Software that can be used to process the data and design the prosthesis
- Technology that changes the data into a product

Traditional Restorative Dentistry:

- Dental impression by suitable impression material
- Pouring of the impression into stone model
- Fabrication of the dental prosthesis by a dental technician

CAD/CAM Restorative Dentistry:

- Digital impression and virtual model produced by intra-oral scanner
- Software that can be used to process and produce data for the prosthesis
- Machine and suitable material that can change the data into the product

TRADITIONAL IMPRESSION

For many decades, dental practitioners have to bear with errors that can be created during the process of impression taking, stone pouring (Fig. 1) and fabrication of the final prosthesis. Mounting dental models on articulators according to the bite registration record can be another source of error. All these contribute to unpredictable waste of chairside time spent in making

adjustments, or worse still, complete re-making of the prosthesis. In fact, achieving perfect impressions is quite difficult. Doctors and dental professionals are presented with many challenges, especially with regard to the materials and technique used for the traditional impression. Impression material, mixing, application and setting time have an impact on the accuracy of the impression. Other challenges include correctly tracing the margin, which most busy dental practitioners tend to delegate the duty to dental technicians, and being able to maintain patient comfort and obtaining accurate occlusal records. Over the last 50 years, new impression materials have been introduced with the objectives of reducing errors and improved patient comfort. Newly developed polyether vinyl silicone is mostly used. It has remarkable tear strength and dimensional stability, is more hydrophilic and is with a neutral taste. However we cannot deny the fact that used impression materials and other consumables can contribute hazard to the environment in the long term, as these materials are mostly resistant to hydrolysis.



Fig. 1. Stone dental model (Personal collection)

DIGITAL IMPRESSION

The use of an-intra oral scanner enables recording of precisely 3D images of the dentition and fabrication of restoration. Through the incorporation with software, this digital impression will be converted into a digital model. Intra-oral scanners have evolved from heavy and bulky-built monochrome images with a slow capturing speed to newer versions that are lighter and more ergonomically designed, and can capture colour images in high speed. With the increased accuracy and efficiency, digital impressions lead to more predictability in creation of restorations. (Fig. 2) There have been 132 studies from 2007 to 2017, 20 literature reviews, 78 in vivo studies and 34 in vitro comparative studies on intra-oral scanners. In general, there is



enhanced patient comfort and much less wastage of materials. As the learning curve for the operator to use an intra-oral scanner is relatively short, chairside time taken for impression-taking can be shortened. In the long run, a cleaner and more pleasant environment will be made possible. The chance of cross infection can be further reduced since there are no more blood contaminated impressions that need to be handled by other dental personnel.



Fig. 2. Digital model (Personal collection)

CLINICAL APPLICATIONS

1. Restorative – Chairside in-office / Clinic-to-dental Laboratory

Intra-oral scanning → Designing on digital model → Milling → Sintering / Finalisation

The digital model can either be manipulated in the dental office or be sent to a dental laboratory digitally for designing the restoration. The restoration is then produced by a milling machine. Desktop milling machines are available that can be used in dental offices. Most of these milling machines perform wet milling. However, these relatively small units can only mill one restoration at a time, while larger units used in dental laboratories can mill several restorations simultaneously. Finalising staining and sintering will prepare the final restoration ready for fitting or cementation. A variety of restorations can be fabricated digitally ranging from minimally invasive veneers, inlays, onlays to full crowns. According to various situations, different restoratives can be used. Hybrid ceramic is more suited for inlays and onlays. It serves the advantages of providing stronger than traditional resin composites yet with some degree of flexibility. Teeth preparations can be more conservative thanks to the precise fitting even when the size of the restoration is minimal. It does not require the process of sintering and so chairside time can be markedly reduced. Lithium disilicate has an excellent track record on durability and aesthetics. It possesses outstanding colour stability and carries higher flexural strength than hybrid ceramic. Lithium disilicate is indicated for veneers and crowns where aesthetics and strength are of top priority. The hardest material used in CAD/CAM dentistry is zirconium oxide. It is indicated for crowns and multi-unit bridges in situations where high occlusal forces will be anticipated. Lithium disilicate requires vacuum firing in a vacuum furnace, while zirconium has to be sintered in a sintering machine after the milling process. Therefore, the total treatment time is inevitably longer.

2. Digital Implant Dentistry

Cone beam CT + Intra-oral scan → Surgical stent → Guided surgery → Intra-oral scan → Milling / Sintering

Cone beam CT, together with the intra-oral scan of the oral mucosa and remaining standing teeth combined together can reproduce the actual relationship between the surgical site and other important anatomical structures. A surgical stent can then be designed and milled. With proper planning and execution, surgical precision can be enhanced which renders lower risk of surgical complications. In the process of making the implant-supported prosthesis, a digital impression can be taken with special scan bodies connected at the implant level. An implant abutment can be milled with various materials such as titanium or zirconium. This will expand the choice of abutments from those provided by the implant system manufacturer. The final prosthesis, whether screw-retained or cement-retained will then be milled to a high precision. It has been shown that digital techniques demonstrated superior outcome regarding 3-dimensional accuracy, irrespective of the implant angulation and connection type.

3. Orthodontics

Digital impression → Analysis and treatment planning → Transfer of data to laboratory or aligner provider

Orthodontic treatment with clear aligners is one of the treatment alternatives to conventional fixed appliance treatment, in some carefully selected cases. Analysis of digital models and with relevant software capable of simulating tooth movements will be carried out. After this, a serial set of clear aligners will be designed and fabricated for the whole treatment period. Another very useful aspect of digital impression is the storage of the huge amount of orthodontic models in a dental office limited to orthodontic treatment.

LIMITATIONS OF INTRA-ORAL SCANNERS

Over the years intra-oral scanner design has improved in ergonomics, weight and overall feel/comfort in the hand of the operator. Nevertheless, there is room in improvement regarding weight reduction and scanner head size. Other features such as autoclavable scanning tips, touch screen, wireless scanning, caries detection and CAD integration should be considered. The accuracy of scanned images can be compromised when the prepared tooth has a deep subgingival margin, bleeding gingival margins and super thin edges. With the size of an intra-oral scanner head being bigger than a dental handpiece, it can be quite hard, if not impossible, to scan surfaces that are situated far back in the oral cavity. The no-touch scanning process cannot give a mucosa-displacing impression that is sometimes necessary in removable partial and complete denture cases. More research in improving both hardware and software abilities must be done in order to extend CAD/CAM dentistry to cover this area of oral rehabilitation.

Nowadays most intra-oral scanners are open allowing export of at least one of the following sources of

files: STL, OBJ and/or PLY. This is ideal for dental professionals allowing more flexibility and control over the technology. This was not the case for some scanners in the past.

ONE-VISIT INDIRECT RESTORATION

With all the advantages along with lesser manpower intensiveness of CAD/CAM dentistry, indirect restoration can now be achieved in one single visit instead of two or more visits with traditional restorative dentistry. The need for provisional restoration can be eliminated. The patient can just sit back and wait for the final product after a simple intra-oral scan. (Fig. 3 to Fig. 10)



Fig. 3. Minimal tooth preparation on tooth 37 (Personal collection)



Fig. 4. Digital model (Personal collection)



Fig. 5. Software proposed restoration (Personal collection)



Fig. 6. Hybrid composite inlay cemented on tooth 37 (Personal collection)

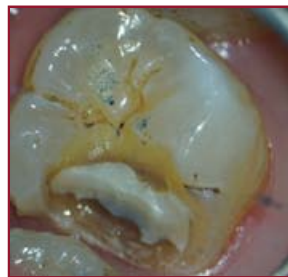


Fig. 7. Minimal tooth preparation tooth 26 with extensive caries (Personal collection)



Fig. 8. CAD/CAM lithium disilicate inlay cemented (Personal collection)



Fig. 9. Cracked tooth 16 undergoing root canal therapy (Personal collection)



Fig. 10. CAD/CAM lithium disilicate crown milled, crystallised and cemented after root canal obturation in the same visit (Personal collection)

CONCLUSION

It can be predicted that future intra-oral scanners will definitely be faster, smaller and lighter, and will adopt an open system allowing dental professionals to export the files. At present, desktop dental milling machines are mostly based on 4-axial technology. Newer systems developed recently can do 5 or more axial milling. This can greatly shorten the time taken for milling a restoration and can further enhance the details. Simultaneous milling of multiple restorations by a desktop milling unit will soon be feasible. The practice of one visit CAD/CAM dentistry has been growing at a tremendous speed in some foreign countries where dental laboratory support is not as readily accessible as here in Hong Kong. Dental practitioners will consider factors such as initial cost, benefits to patients and support from supplier before making the change.

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A Call to 'Retire Statistical Significance': It Ain't What You Do It's The Way That You Do it.

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INTRODUCTION

Many readers may have come across a recent publication in 'Nature', a leading scientific journal, with a call to "Retire Statistical Significance"¹. The reaction on social media was considerable and it spawned much debate across and within various disciplines. This commentary aims to review this important debate, considers its relevance for dental research, and provides additional suggestions for the way forward to inform the debate about 'retiring statistical significance in dentistry'.

Firstly, let's consider what the *p-value* is and its function. The *p-value* is the probability that your result would occur, if the null hypothesis is true. It is worth remembering that a *p-value* calculation is not a test that proves one group is different from another. In practice, "a *p-value* helps you determine the significance of your results"; the *p-value* is used to weigh the strength of evidence (in the context of the population studied)². As a number between zero and one, the *p-value* 'can be' interpreted in the following ways:

- *p-values* very close to the cut-off (0.05) are considered to be marginal (could go either way). Always report the *p-value* so your readers can draw their own conclusions.
- A small *p-value* (typically <0.05) indicates strong evidence relating to the hypothesis and its value is widely interpreted as strength to reject the null hypothesis.
- A large *p-value* (>0.05) indicates weak evidence and it is widely interpreted as to why the null hypothesis is not rejected.

The recent 'kerfuffle' is that researchers have (for the most part) been "bucketing (*p-value*) results into 'statistically significant' and 'statistically non-significant'³. This has resulted in *p-value* results being used to categorically support or reject the null hypothesis/ hypothesis. This 'false belief' that crossing the *p-value* threshold ($p<0.05/p>0.05$) is being used to show that results are 'real'; to support or reject the null hypothesis/ hypothesis. This is not the case, and unfortunately, this practice has in turn, distorted the literature and ultimately is hampering evidence-based practice. One risk is that investigators can fairly easily select statistical tests or subsets of data that yield a crop of $p<0.05$ results when the reality is not so clear cut.⁴

THE PROBLEMS WITH P-VALUES

The 'Nature' commentary puts forward a number of reasons as to why this often is a gross oversimplification. Firstly, I am sure most of us have observed, and been perplexed, when we see a graph, plot or table that shows an actual difference and yet its difference is denied because the *p-value* is >0.05 . Misconceptions in interpreting results based on *p-value* threshold (of $p<0.05$) have "warped the literature with overstated claims and led to claims of conflicts between studies where none exists"⁵. Funding agencies, reviewers, journals, and even readers are complicit in this, expecting to see clear binary conclusions of whether a study 'worked' or not, with little interest in the nuance or variation seen in most natural systems.⁶

Coupled with *p-value* is the issue of 'confidence interval' that quantifies the level of confidence that the observation lies in the interval. It is not uncommon that, despite having a similar observed effect, one study is deemed 'statistically significant' and the other 'statistically non-significant'⁷. Thus, conclusions of conflicts in studies' findings are made when none exists. As⁸ point out "The observed effect (point estimate) is similar, so they are not in conflict, even if one is (deemed) 'significant' and the other is not". This concurs with the view of the American Statistician warning of the misuse of statistical significance⁸. A confidence interval that contains '0' ('the null') also (typically) contains non-null values of importance for decision-making. Random variations can lead to differences in *p-values* and confidence intervals.

THE SOLUTIONS WITH P-VALUES

It is worth pointing out that there has also been robust argument against the wholesale banishment of 'statistically significant'⁹. Though almost no one disagrees that *p-values* are grossly misused, there is less clarity on exactly what should replace the *p-value*. Statistical experts themselves cannot agree on the 'right' way to report research findings, which is not much consolation to the rest of the scientific community that struggles with the finer points¹⁰. There is also the fear that the absence of a 'litmus test' for significance will lead to more spurious claims that drugs or treatments are more effective and safe than they really are - if nothing is significant then everything is significant. There is the related observation that the quality of a study is usually more important than the statistical result and, as such, more focus should be on the methodology of clinical research¹¹.



Situating this discussion in larger ontological, epistemological and methodological considerations of research cultures, momentum is snowballing for a move against dichotomising quantitative-qualitative research¹² and privileging positivism over interpretivism to reposition qualitative health research as a “co-equal” partner¹³. The long-standing movement towards ‘mixed’ methods approaches has been useful but as with ‘confidence’ intervals’ the nomenclature may be getting in the way. Drawing on the movement in educational research to position this relationship as ‘complementary’ methods¹⁴ encourage “examining how different approaches are mutually supportive and synergistic within and across disciplines in studying social phenomena”¹⁵.

The notion of ‘complementary’ may be useful for public health researchers in supporting clarity as to the relationship between paradigms. Perhaps, it may help public health researchers move away from the fuzziness of a ‘mixed’ relationship to once with greater conceptual clarity and assist in reducing reductionist binaries and the potentially misleading inferences which are central to the concerns of Amrhein and colleagues. So, how can health researchers move towards a complementary mind set?

While considered rethinking of the relationship between paradigms may overcome the chicken-and-egg conundrum, the devil lies in detail. While positivists aim to control for contextual variables, interpretivists embrace them¹⁶. Guest editorial in *Qualitative Health Research* bemoans the limited “explanatory power” of statistical analysis and the “enormous gap in the use of theoretically informed qualitative methods alongside RCTs of complex interventions” (pp 623-624). For health research, anthropologically-informed, ethnographic fieldwork is essential to validity both in the development of trial protocols and survey instruments. Likewise, identification of statistical trends leads to in-depth qualitative unpacking of lived complexities and “webs of significance” (see¹⁷). What becomes a central concern is the clarity of reporting - both in terms of the logic-of-inquiry informing the design and the logic-in-use of its application and interpretation to build theoretical and practical inferences.

PRACTICAL STEPS WITH P-VALUES

So what’s the way forward? “Well, that depends on where you want to go, said the cat” (Alice in wonderland). Some paths can be found from¹ commentary and some additional paths for consideration we add:

- Pre-register studies as the proposed analyses will ensure a commitment to reporting all results of the analyses. i.e. *Clinical Trials Registry*.
- Stop categorising; stop dichotomising based on the threshold *p-value* of 0.05. Instead cite the actual *p-value* and use the discussion section to suggest interpretations of such¹⁸.
- Cite confidence intervals (it’s surprising how often they are not reported). Embrace uncertainty by renaming confidence intervals as ‘comparability intervals’ as this will avoid over-confidence, or over claiming study findings.

- Discuss the ‘point estimate’ or observed effect, while also acknowledging the uncertainty, to help prevent overconfident claims and false claims of no difference¹⁹.
- Think more about real world differences in results, such as ‘effect size’ or even ‘clinically significant effect’. If applied correctly, these will give readers a better understanding of the strength and practical significance of your results²⁰.
- Interpret in light of the study design – ‘statistical association’ in observational studies does not imply ‘causation’! There are various guidelines and statements that can help with ‘reporting’.
- Statistics are tests to aid our interpretation not the ‘end result’. State the assumptions made for statistical analyses conducted, and consider other statistical approaches/models (and report them). Interpret judiciously to help inform policy and practice.
- There is a need to consider the enormous value of qualitative research²¹: and not necessarily as an alternative approach – and I don’t mean a ‘mix-methods’ approach; but as a ‘complementary approach’²².
- And finally, for now, to quote Einstein “*If we knew what we were doing, it wouldn’t be called research*”. Be bold, think big, think out of the box.

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Clear Aligner Therapy in Orthodontics

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INTRODUCTION

Clear Aligner Therapy (CAT) uses a series of clear thermoformed plastic that overlay the teeth, incremental changes being made to the plastic which helps to move teeth. There are many CAT companies in the market; the first and by far the largest is Invisalign. Some CAT companies are designed to treat minor tooth irregularities, while other companies with more sophisticated technology can manage complex malocclusions¹.

MANUFACTURING PROCESS

The process first involves the use of digital 3D scans or more traditionally rubber-based impressions taken and submitted to the aligner company. The aligner company formulates an interactive simulation of the process and the final simulation product. The clinician communicates with the technicians and modifies the digital setup until it is deemed ready for approval. The aligners are then shipped to the clinician and the responsibility of the treatment progress stays with the practitioner and the patient.

HISTORY

CAT is not a novel idea. In 1945, Kesling² used a rubber appliance fabricated on sequentially positioned tooth models to provide the finishing touches after fixed brace treatment.

Sheridan et al.³ then incorporated Kesling's idea and used clear Essix retainers that were thinner and more aesthetic to progressively align the teeth.

Invisalign advanced Sheridan's concept one step further by incorporating digital technology to design and manufacture the aligners. MBA students at Stanford without a dental background founded the company in 1997 and utilised revolutionary CAD technology and 3D printing offered on campus to manufacture the first prototypes. Heavy investment was acquired and a massive marketing campaign was launched in 2000, which The New York Times quoted as "the most aggressive consumer advertising plan the dental profession has ever seen"⁴. Today, the company has over seven million new patient starts and its impact on the dental profession is nothing short of a revolutionary one.

Today CAT is more than just an orthodontic product;

it is ingrained into a general dental practice's digital technology and workflow. The digital systems include; communication using the internet, 3D design, 3D printing, intra-oral digital scanning, data mining, complex algorithms, practice management and marketing to create a truly end-to-end digital process. Offering CAT in one's practice is therefore deemed essential to a modern day dental practice.



Fig. 1: CAT uses thermoformed plastic to mould around the visible surfaces of teeth (Personal collection)

CAT OPTIONS

Basic Systems

The basic systems offer a cheaper and faster option than the traditional braces or aligners in simpler cases. Companies include 3M Clarity Aligners, Clearguide and Simpli 5.

Comprehensive Systems

To aid in more complex tooth movements, computer-assessed and designed resin attachments, and dentist-planned 3D models to high levels of accuracy are used, such examples including Invisalign, ClearCorrect and K line. But Invisalign by far has invested more time and resources into research and development, resulting in particular advantages over other systems including button cut-outs and precision cuts for elastics, bite ramps for overbite correction, power ridges for torque control and subtle pressure points for improved uprighting of teeth.

According to The Align Corporate Fact Sheet in 2019⁵, some key Invisalign metrics are:

- 81,726 Active Invisalign Doctors
- 6.8 million patients
- 545 million aligners shipped
- 410K aligners made a day
- 894 patents issued

DIY Aligners

Dental offices or labs are able to manufacture their own aligners using 3D digital planning software and in-house 3D printers. This is more laborious for the dental office and is generally recommended for simpler cases, with advantages of faster and more cost-effective manufacturing. Examples include Suresmile and 3Shape.

Direct to Consumer

A convenient and cheaper option for customers is to have impression kits sent to customers such that the customers take their own impressions, followed by having digital scans and manufacturing of customised appliances in partnering clinics or their own scan centres. This model bypasses the dental practice completely or offers dentists remote digital overseeing. Companies include Smile Direct Club, Byte, Snapcorrect and Smilelove. Direct to consumer models are entering the market in Hong Kong and is likely to have an appreciable impact on local dental practice customer servicing, pricing and competition.

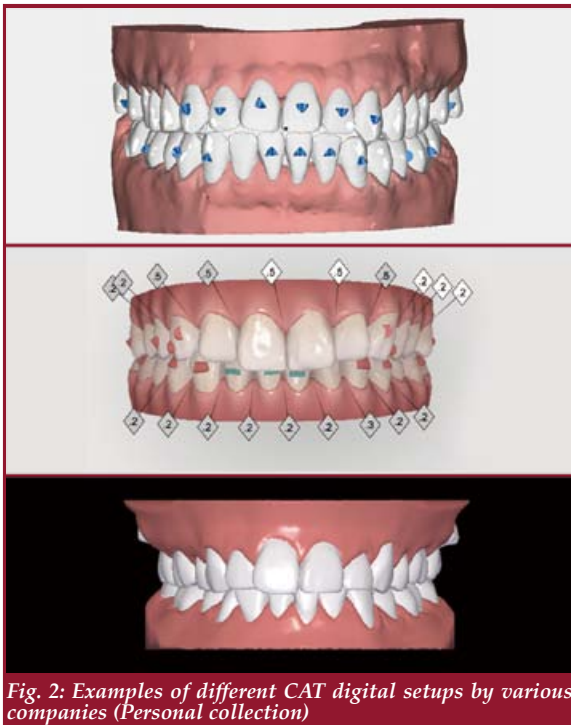


Fig. 2: Examples of different CAT digital setups by various companies (Personal collection)

ADVANTAGES OF CAT

Aesthetics: Is the primary reason for choosing CAT while common fixed appliances have been shown to be unattractive and unacceptable to adults⁶.

Comfort: Miller et al.⁷ compared the impact on quality of life in the first week of orthodontic treatment between fixed braces and CAT. CAT was found to have less negative impact on quality of life with fewer functional, psychosocial and pain-related reports. Fujiyama and coworkers in 2014⁸ compared fixed appliances with CAT at different time points of the orthodontic treatment and found significant difference in intensity and duration of pain. Interestingly, deformation of the aligners was the main source of discomfort in the CAT group.

Periodontal Health: Anecdotally and scientifically, patients undergoing CAT have significantly better gingival health condition⁹ and have been shown to have lower plaque scores¹⁰.

Shorter treatment time and fewer visits: Contrary to traditional belief, in a study comparing the efficiency of treatment between fixed appliances and CAT in similarly complex malocclusions treated by the same experienced orthodontist, CAT was shown to be 5.5 months faster, with four less visits, 93 minutes less chairtime and fewer emergencies¹⁰. Gu et al.¹¹ also concluded that CAT was 5.7 months faster with similar results in completed cases when compared to fixed braces.

Better at correcting openbites: CAT offers a simple and more comfortable way of closing anterior openbites by intrusion of the posterior segments due to the posterior bite plane effect of CAT. Typically, an individual aligner thickness is 0.7 mm, which gives 1.4 mm thickness when incorporating both the upper and lower arches. Posterior teeth intrusion helps to rotate the mandible forward and mesialise the lower buccal segments^{12,13}.

Anecdotally, CAT also offers advantages for the patient including fewer restrictions on diet, being protective of occlusion from bruxism and less impact when playing contact sports and wind instruments. For the clinician, less root resorption is observed. The restriction in certain tooth movements are useful such as in cases with dental implants, which are ankylosed to the supporting alveolar bone. Choosing the speed of individual tooth movement is also advantageous in teeth with poor prognosis.

DISADVANTAGES OF CAT

The crux of any orthodontic appliance is to predictably and safely move teeth into the desired position. Unfortunately, CAT is limited by (i) the compliance of the patient and (ii) limitations of the plastic in moving teeth.

CAT typically requires the patient to wear the aligners 20-22 hours a day. Invisalign has developed compliance indicators in the aligners; these indicators are made of encapsulated food grade dye embedded usually near the upper molars. The dye dissolves from a dark blue colour to clear colour in a moist environment at a temperature greater than or equal to body temperature. Huge variations have been found in compliance between patients, which explains the considerable variation in the ultimate effectiveness and efficiency of CAT amongst patients¹⁴.



Unfortunately, there is a lack of good evidence to show the effectiveness in tooth movement with CAT. The majority of decisions made by clinicians on planning tooth movements in CAT are primarily based on expert opinions, personal experience and anecdotal evidence. The good paper by Buschang et al.¹⁵ attempts to understand the limits of CAT tooth movement. They summarised that CAT is generally predictable in aligning and levelling the arches. They are moderately effective in controlling the inclination of incisors and intruding anterior teeth less predictably in rotation of canines and premolars and extruding anterior teeth.

In an outcome assessment comparing CAT with fixed appliances, Djeu et al¹⁶ found CAT did not finish to as high a standard when compared to fixed appliances but found correcting anterior teeth rotations and space closure to be effective. It has also been cited that root parallelism during space closure and molar uprighting pose challenges for CAT¹⁷.

Table 1: Advantages and Disadvantages of CAT

| Advantages of Clear Aligners |
|----------------------------------------------------------------------|
| - Better aesthetics |
| - Improved comfort |
| - Better periodontal health |
| - Potentially shorter treatment time and fewer visits |
| - Better at correcting some malocclusions (e.g. anterior open bites) |
| - Less restriction on diet (e.g. hard and sticky foods) |
| - Less instrumentation |
| - Restricting certain tooth movements |
| - Easier to track progress of treatment |
| - Ideal for patients with severe dental hypoplasia |
| - Less root resorption |
| - Protective of occlusion from clenching and bruxism |
| - Less impact on sports and playing wind instruments |
| Disadvantages of Clear Aligners |
| - Patient compliance |
| - Posterior lateral open bites |
| - Root uprighting |
| - Extrusion |
| - Rotations |

CHALLENGES FOR THE PROFESSION

The development of CAT material, design and manufacture is so rapid it makes it extremely challenging for scientific studies to keep abreast of change. By the time quality research is carried out on the changes, it is often considered outdated by the time of publication¹⁸. Furthermore, the published clinical evidence that is available often falls short of high-level scientific evidence¹⁹. The paucity of evidence that is available paints a questionable picture on the efficacy of CAT²⁰.

Direct-to-consumer models (e.g. Smile Direct Club, Crystal Braces) pose an immense challenge for the orthodontic profession. The immediate concern for the profession is whether the users are dentally fit or clinically suitable to undergo unsupervised treatment.

These direct-to-consumer models are frightfully backed by millions in investment and are extremely adept at digital and social media marketing; individual practices stand little chance in matching up with their counterpart's commercial allure. Ultimately, the public are at risk of an uninformed decision.

CONCLUSION

The dental profession has well and truly entered the digital age. It is important for clinicians to stay abreast with the advances and to recognise the changes in the environment of the digital age. Nokia is a good example of a company which has perhaps underestimated this change. Digital technology was embraced and major technological advances were made; however, how digital technology has changed the commercial "environment" remains to be defined and understood. The dental environment is changing rapidly, with the CAT developments and consumer demand shifts being very much part of this change.

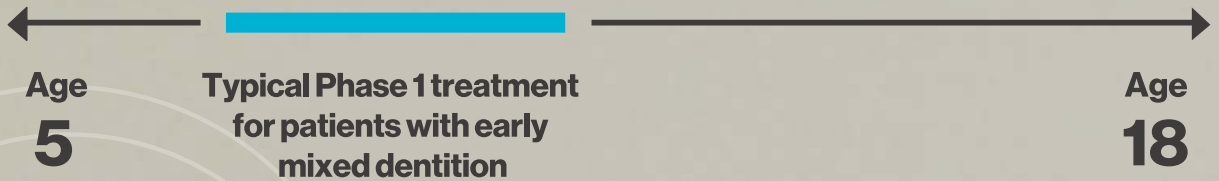
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Dermatology Quiz

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Specialist in Dermatology & Venereology



Dr Lai-yin CHONG



Fig.1: Patches of erythematous macules with telangiectasia over both arms and anterior chest



Fig.2: Similar lesions over the upper back

A 50-year-old Chinese presented with asymptomatic progressive erythematous macules and telangiectasia over both arms, upper back and anterior chest for two years (Fig.1 & 2). There was no systemic upset. Darier's sign was negative. He was a chronic drinker. Past health was otherwise good according to him.

Questions

1. What is your clinical diagnosis and differential diagnoses?
2. What are the systemic diseases that must be excluded before the diagnosis?
3. What are the possible associated systemic diseases?
4. What investigations should you perform?

(See P.32 for answers)

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An Overview of Special Care Dentistry

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INTRODUCTION

Three core aspects of any healthcare system are access to health care, the quality of the health care, and the cost. Persons with intellectual disability may also be associated with one or more of the following conditions, namely uncontrolled body movements, seizure disorders, balance-related abnormalities, sensory dysfunction and physical disabilities. The American Academy of Pediatric Dentistry (AAPD)¹ defines special needs as “any physical, developmental, mental, sensory, behavioural, cognitive, or emotional impairment or limiting condition that requires medical management, healthcare intervention, and/or use of specialised services or programmes. The condition may be developmental or acquired and may cause limitations in performing daily self-maintenance activities or substantial limitations in a major life activity”^{1,2}, such as patients with Autism Spectrum Disorder (ASD), Alzheimer’s disease, Down syndrome, or any clinical condition that makes dental procedures more difficult. These persons usually encounter difficulty in oral hygiene maintenance due to poor oro-facial and motor control. Some of them with mild disorders may need little or no assisted care on a daily basis. However, others who have moderate to severe forms of disabilities may require lifelong personal assisted care, similar to their dependence on wheelchair in moving from one place to another.

Special needs dentistry is defined by the Royal Australasian College of Dental Surgeons as a type of dentistry that focuses attention on oral health care for disabled patients who require special methods and techniques to treat their oral health conditions³. According to Gallagher and Fiske⁴, special care dentistry extends beyond health management to the improvement of oral health outcomes in patients with special needs who often have a combination of different disabling conditions.

PREVALENCE OF PEOPLE WITH SPECIAL NEEDS IN HONG KONG

In Hong Kong, 320,500 persons reported in Hong Kong Monthly Digest of Statistics (2015)⁵ that they were with restrictions in body movement (giving rise a prevalence rate of 4.5%); 174,800 persons with visual impairment (2.4%), 155,200 persons with hearing impairment (2.2%), 49,300 persons with speech difficulty (0.7%), 147,300 persons with mental illness/mood disorder (2.1%), 10,200 were autistic persons (0.1%), 17,700 persons with Special Learning Difficulties (SpLD) (0.2%) and 12,800

persons with Attention Deficits and Hyperactivity Disorders (ADHD) (0.2%). As oral health care is typically relatively inexpensive, it becomes costly when the above special needs patients are being neglected due to the lack of timely access to dental care services.

Oral manifestations from these persons with intellectual disability include dental caries, periodontal diseases, tooth wear, delayed tooth eruption, malocclusion and missing teeth/tooth loss during their adulthood. From the dental literatures, there is strong correlation between special needs and unequal opportunity in accessing to dental care, poor oral health and inadequate deployment of dental services, particularly for children with special care needs⁶.

CLINICAL MANAGEMENT

When patients with special needs have limited access to dental care as a result of the lack of preparedness of dental care providers, such limited access will lead to more oral complications in these patients, which in turn incurs more cost to the government and patients. Dentists should be integral members of the interdisciplinary team with good rapport with the patients and care-givers involved in optimising the health of patients with physical and/or intellectual disabilities. Dental care providers should be better educated, trained, and prepared to effectively manage patients with special needs in an effort to minimise oral health disparities within our population. Furthermore, all patients with special needs must have equal access and high-quality treatment that focuses on patient safety, patient-centred care, and treatment of all dental needs.

Dental Outreach Service can make a positive contribution to and impact on oral health care of this disadvantaged group, thus curtailing the healthcare burden to the public. A dental team may comprise of 1 registered dental surgeon and 2 supporting staff, together with mobile dental equipment and materials; the team visits, different special needs schools, residential care centres or other chronic care institutions in turn according to an agreeable schedule. Oral examination and preventive and basic dental treatments (such as scaling, simple restoration and extraction) can be performed entirely within the premises.

Without leaving their familiar premises, the patients may be psychologically more at ease and more receptive of the dental service, thus enhancing the level of cooperation and attaining a higher success rate. More difficult cases may be referred to the better-equipped

Dental Clinics with sedation facilities. The dental team is also responsible for presenting oral health seminars to caregivers and family members of these patients at the special schools or residing in the institutions. Teaching should be focused on the modified methods for oral care, with or without special tailor-made cleaning aids, so that the oral hygiene for these patients can be monitored and improved.

For patients with specific oral diseases and dental anomalies, with or without other medical conditions that need specific care in a hospital setting, they may be timely referred to the Dental Clinics with sedation facilities and support or Oral & Maxillofacial Surgery & Dental Units of regional hospitals.

In the long run, when the dental diseases are intervened early, treatment needs will be curtailed; the quality of life for these patients with intellectual and/or physical disability will be improved. As a result, the burden on the caregivers and their family members will be lessened. The eventual cost in dental treatment using public funding for them will be much reduced. Given that there are more than 320 thousand people with various degrees of disabilities, there is a pressing demand for special needs dentistry to be further explored in Hong Kong. More studies including a full review of the perception of dental care providers in caring for this population of patients, may lay the foundation for understanding the factors that may impact the access to dental health services by people with special needs. Provision of knowledge and practical training for undergraduate dental students in the dental management of patients with special needs should be included in the curriculum.

CONCLUSION

Equitable and timely health care are two of the six domains of quality health care identified by the Institute

of Medicine⁷. Patients with special needs and lack of routine oral care are likely to experience poor oral health and to have limited access to dental care services. This leads to an increase in oral health diseases in patients with special needs, and if it is not managed timely, it will be costly and burdensome to the government, patients and their families. Last but not the least, more data in Hong Kong dental literature should be collected for describing the effectiveness of dental care providers' training and willingness regarding treating individuals with special needs.



Fig 1. A special need kindergarten pupil under scaling treatment (Personal collection)

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The Joy of Sailing

Dr Tony TO

BDS (HKU), PDipGDS (HKU), MOrth (HKU), MOrth RCS (Edinburgh),
FCDSHK (Orthodontics), FHKAM (Dental Surgery)

Specialist in Orthodontics

Honorary Clinical Assistant Professor, Faculty of Dentistry, HKU

Dental Consultant, the Hong Kong Tuberculosis Association Rusy M. Shroff Oral Health Services Ltd.

Executive Committee Member, the Federation of Medical Societies of Hong Kong



Dr Tony TO

The history of sailing dated back to about 3,500 BC, with wind power serving as an alternative to muscle power applied to oars for thousands of years. Sailing has promoted trade and development of civilisations across long-distance travel on great rivers, lakes, seas and oceans. With the subsequent invention of steam-powered and internal combustion engines, sailing vessels were gradually displaced from their historic role in commercial trade.

Sailing has long been part of recreation and sports, having been a competitive sport of the Olympic Games since 1896. There are many famous regattas hosted by yacht clubs, sailing associations and sailing schools all over the world, such as the Volvo Ocean Race or the Rolex Sydney Hobart Yacht Race.

Beginners in sailing should first attend sailing classes. There are various courses for beginners as well as for racers covering the whole spectrum of the sailing experience. The most important principle is naturally safety: water is a potentially hostile environment, and safety guidelines should be strictly followed to avoid accidents. The first thing to learn as a beginner is the anatomy of a sailboat: the mast, boom, sail, centreboard, rudder, etc. The next step is to understand the principles of sailing physics: sail control, ropework, weather knowledge, rigging, navigating, sailing manoeuvres and so forth. The learning curve is steep, and it is never-ending.

Hong Kong, known as the "Pearl of the Orient", is a beautiful city surrounded by waters and 263 islands. Not only is the Victoria Harbour one of the major attractions for tourists, it is also one of the largest and busiest ports in the world. Sailing has been a popular sport in Hong Kong, the first recorded yacht racing being in 1849. There are many competitive sailing races at the Victoria Harbour, Sai Kung and Lamma Island. The race I enjoy the most is the annual Royal Hong Kong Yacht Club "Around the Island Race", one of the biggest sailing events in Hong Kong. It is a race around the Hong Kong Island involving a fleet of more than 200 local and international sailing yachts and more than 1,500 crews from all corners of the globe. Regattas are exciting as the races are very competitive. Good teamwork, strategy and techniques are the keys to winning.

Leisure cruising is relaxing. The mixture of the sound of wind and waves works in harmony as the boat is gliding on water. As the wind provides the power, there is no noisy engine and no fossil fuel is required; hence it is truly environmentally friendly. Sailors can

enjoy the calm moment while having a drink with good friends. It is also interesting to discover and explore small islands in Hong Kong. Both mental and physical workouts can be done on water while enjoying fresh air and the feeling of being free.

Sailing is an enjoyable hobby: it is joyful, adventurous, and exciting.



Fig 1. Leisure sailing at the beautiful Victoria Harbour (Personal collection)



Fig 2. Winning team with our trophies (Personal collection)



Fig. 4. Strong team spirit (Personal collection)



Fig. 5. Annual Dinner (Personal collection)



Fig. 6. Time for celebration with a big bottle of champagne (Personal collection)

Certificate Course for Doctors, Midwives, Nurses, Radiographers & Other Healthcare Professionals who preferably have a basic knowledge of obstetric ultrasound

Course No. C339

CME/CNE Course

Certificate Course on

Practical Obstetric Ultrasonography 2019

Jointly organised by



The Federation of Medical Societies of Hong Kong



Hong Kong Society for Ultrasound in Medicine

| Date | Topics | Speakers |
|--------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 17 Oct | New algorithms in prenatal diagnosis | Dr. Wing-cheong LEUNG Consultant Obstetrician & Chief-of-service, Department of O&G, Kwong Wah Hospital |
| 24 Oct | Ultrasonography of early pregnancy complications including scar pregnancy | Dr. Vincent Yuk-tong CHEUNG Clinical Associate Professor in Obstetrics & Gynaecology The University of Hong Kong |
| 31 Oct | Ultrasonography of placenta, liquor, membranes and cervix | Dr. Tak-yuen FUNG Chief of Service, Obstetrics & Gynaecology Hong Kong Baptist Hospital |
| 7 Nov | Commonly missed abnormalities in routine scan | Dr. Meliza Choi-wah KONG Consultant, Obstetrics & Gynaecology United Christian Hospital |
| 14 Nov | Tips in performing fetal echocardiography | Dr. Wan-pang CHAN Honorary Consultant in Obstetrics & Gynaecology Hong Kong Sanatorium and Hospital |
| 28 Nov | Ultrasonography of craniofacial abnormalities | Dr. Kwok-yin LEUNG President, Hong Kong Society for Ultrasound in Medicine |

Date : 17, 24, 31 October and 7, 14, 28 November 2019 (Thursday, skip 21 Nov)

Time : 7:00 p.m. – 8:30 p.m.

Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong

Course Fee : HK\$750 (6 sessions)

Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong

Tel.: 2527 8898 Fax: 2865 0345 Email: info@fmskhk.org

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Certificate Course on Difficult Communications in Healthcare 2019

Jointly organised by



The Federation of Medical
Societies of Hong Kong



Hong Kong Society for
Healthcare Mediation

Objectives:

- Recognise and acknowledge the features of a difficult communication.
- Identify some of the skills and strategies that we can use when confronted with some difficult ploys, which may come into play during such communications.
- Understand how you manage the circumstances that led to the conversation being difficult in the first place.

| Date | Topics | Speakers |
|--------|---------------------------------------------|---------------------------------------------------------------|
| 23 Oct | Interprofessional Communications | Dr Danny LEE 李偉雄醫生 Specialist in General Surgery |
| 30 Oct | Open Disclosure & Dealing with Angry Public | Dr Kai Ming CHOW 周啟明醫生 Specialist in Nephrology |
| 6 Nov | Patient Complaints | Dr Ludwig TSOI 蔡振興醫生 Specialist in Emergency Medicine |
| 13 Nov | Presentation in Disciplinary Hearing | Dr Robert LAW 羅致廉醫生 Specialist in Obstetrics & Gynaecology |
| 20 Nov | Communication Problems | Dr Sandy CHAN 陳潔瑩博士 Registered Nurse |
| 27 Nov | Breaking Bad News | Dr Kah-lin CHOO 俞佳琳醫生 Specialist in Respiratory Medicine |

Dates : 23, 30 October & 6, 13, 20, 27 November, 2019 (Every Wednesday)

Time : 7:00 pm – 8:30 pm

Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong

Language Media : Cantonese (Supplemented with English)

Course Fee : HK\$750 (6 sessions)

Certificate : Awarded to participants with a minimum attendance of 70%

Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong
Tel: 2527 8898 Fax: 2865 0345 Email: info@fmshk.org

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• Course No. C343 • CME/CNE Course

Certificate Course on

Palliative Medicine for Health Care Workers 2019

Jointly organised by



The Federation of Medical Societies of Hong Kong



Hong Kong Society of Palliative Medicine

Objectives:

With an ageing population and an increasing number of patients suffering from advanced life-limiting illnesses, palliative care is essential in improving their quality of life. This course aims to equip health care workers with the core knowledge and relevant skills including principles in palliative care, symptom management, palliative anti-cancer treatments, effective communication and care in the last days of life. Apart from theory, practical skills and tips will be shared.

| Date | Topics | Speakers |
|--------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18 Oct | Principles in Palliative Care and the Local Services | Dr. Tracy Wai Tsan CHEN Associate Consultant Physician Haven of Hope Sister Annie Skau Holistic Care Centre |
| 25 Oct | Pain Management in Palliative Care | Dr. Yin POON Associate Consultant Department of Medicine & Geriatrics Caritas Medical Centre |
| 1 Nov | Symptom Management in Palliative Care Other Than Pain | Dr. Alice Ka Wai MOK Associate Consultant Hospice & Palliative Care Unit Shatin Hospital |
| 8 Nov | Palliative Radiotherapy, Chemotherapy and Targeted Therapy | Dr. Kam Hung WONG Consultant Department of Clinical Oncology Queen Elizabeth Hospital |
| 15 Nov | Communication in Palliative Care | Dr. Rico KY LIU Associate Director Comprehensive Oncology Centre Hong Kong Sanatorium & Hospital |
| 22 Nov | Care in the Last Days of Life in General Setting | Dr. Chung On CHAN Associate Consultant Wong Tai Sin Hospital, and Ms. Tsui Chi NG Advanced Practice Nurse Haven of Hope Hospital |

Date : 18, 25 October & 1, 8, 15, 22 November, 2019 (Friday)

Time : 7:00 p.m. – 8:30 p.m.

Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong

Language Media : Cantonese (Supplemented with English)

Course Fee : HK\$750 (6 sessions)

Certificate : Awarded to participants with a minimum attendance of 70%

Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong

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| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------|-----------|----------|--------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |



| Date / Time | Function | Enquiry / Remarks |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 2 MON 8:00 PM | FMSHK Officers' Meeting Organiser: The Federation of Medical Societies of Hong Kong; Venue: Gallop, 2/F, Hong Kong Jockey Club Club House, Shan Kwong Road, Happy Valley, Hong Kong | Ms. Nancy CHAN Tel: 2527 8898 |
| 3 TUE 9:00 PM | HKMA Council Meeting Organiser: The Hong Kong Medical Association; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, HK | Ms. Christine WONG Tel: 2527 8285 |
| 4 WED 1:00 PM | HKMA & Hong Kong Society of Biological Psychiatry - Certificate Course in Psychiatry for Community Primary Care Doctors (Session 6) - Medication II Organiser: Hong Kong Medical Association, Hong Kong Society of Biological Psychiatry; Speaker: Dr. LO Chun Wai, Dr. LO Tak Lam & Prof. TANG Siu Wa; Venue: Tang Room, 3/F, Sheraton Hong Kong Hotel & Towers, 20 Nathan Road, Kowloon | Ms. Candice TONG Tel: 2527 8285 2 CME Point |
| 7:00 PM | Certificate Course on Respiratory Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 5 THU 1:00 PM | HKMA Kowloon East Community Network - Brain Tumours Organiser: HKMA Kowloon East Community Network; Speaker: Dr. KAN Yiu Ting; Venue: Lei Garden Restaurant, Shop no. L5-8, apm, Kwun Tong, No. 418 Kwun Tong Road, Kwun Tong | Ms. Candice TONG Tel: 2527 8285 1 CME Point |
| 1:00 PM | HKMA New Territories West Community Network - An Update on Management of Rosacea Organiser: HKMA New Territories West Community Network; Speaker: Dr. LAM Yuk Keung; Venue: Pak Loh Chiu Chow Restaurant, Shop A316, 3/F, Yoho Mall II, Yuen Long | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 7:00 PM | Certificate Course on Renal Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 6 FRI 6:30 PM | MPS Workshop - Mastering Professional Interactions Organiser: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. John MARWICK; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, HK | HKMA CME Dept Tel: 2527 8285 3 CME Point |
| 7 SAT 1:00 PM | Hong Kong College of Health Service Executives (HKCHSE) Annual Conference cum Annual Dinner 2019 Organiser: Hong Kong College of Health Service Executives; Venue: Cordis Hong Kong, 555 Shanghai Street, Mongkok, Kowloon, Hong Kong; Registration: https://forms.gle/yHkzbgKjxbkG294T7 | Conference Secretariat Ms. Gloria CHEUNG Tel: 2527 8898 |
| 10 TUE 1:00 PM | HKMA Yau Tsim Mong Community Network - Personalised DAPT: for Whom and for How Long Organiser: HKMA Yau Tsim Mong Community Network; Speaker: Dr. LI Cho Shan, Eric; Venue: Crystal Ballroom, 2/F, The Cityview Hong Kong, 23 Waterloo Road, Kowloon | Ms. Candice TONG Tel: 2527 8285 1 CME Point |
| 1:00 PM | HKMA Kowloon West Community Network - Advancing the Angina Treatment Paradigm Organiser: HKMA Kowloon West Community Network; Speaker: Dr. YEUNG Kwok Kit, Lawrence; Venue: Fulum Palace, Shop C, G/F, 85 Broadway Street, Mei Foo Sun Chuen | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 6:30 PM | MPS Workshop - Mastering Adverse Outcomes Organiser: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. CHENG Ngai Shing, Justin; Venue: The Cityview, 23 Waterloo Road, Kowloon, Hong Kong | HKMA CME Dept Tel: 2527 8285 3 CME Point |
| 11 WED 7:30 AM | The Hong Kong Neurosurgical Society Monthly Academic Meeting - To be confirmed Organiser: Hong Kong Neurosurgical Society; Speaker(s): Dr. CHAN Shing Kit, Robert; Chairman: Dr. NG Yuen Ting, Rebecca; Venue: Seminar Room, G/F, Block A, Queen Elizabeth Hospital | Dr. WONG Sui To Tel: 2595 6456 Fax. No.: 2965 4061 1.5 points College of Surgeons of Hong Kong |
| 1:00 PM | HKMA Shatin Community Network - Improving Dyslipidaemia Management: an Update on International Guideline and More Organiser: HKMA Shatin Community Network; Speaker: Dr. CHUNG Yat Kiu; Venue: Park Galleria, Level 1, Royal Park Hotel, 8 Pak Hok Ting Street, Shatin | Ms. Candice TONG Tel: 2527 8285 1 CME Point |
| 1:00 PM | HKMA New Territories West Community Network - Safe Upfront Management of Common Urological Conditions in Primary Care Setting Organiser: HKMA-New Territories West Community Network, HA-NT West Cluster - Dept. of Family Medicine & Primary Health Care; Speaker: Dr. LO Ting Kit; Venue: SB1036, Tuen Mun Hospital, Tsing Chung Koon Road, Tuen Mun | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 1:00 PM | HKMA Central, Western & Southern Community Network - Certificate Course - I) Clinical Management of Chronic Spontaneous Urticaria (CSU) Organiser: HKMA Central, Western & Southern Community Network; Speaker: Dr. CHAN Hau Ngai, Kingsley; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, HK | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 7:00 PM | Certificate Course on Respiratory Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 12 THU 1:00 PM | HKMA Kowloon East Community Network & UCH & FP (Cert Course for GP 2019) - Assessment of Mental Competency Organiser: HKMA-KLN East Community Network, HA-United Christian Hospital & HK College of Family Physicians; Speaker: Dr. YIU Gar Chung Michael; Venue: Lecture Theatre, G/F, Block K, United Christian Hospital | Ms. Polly TAI Tel: 3513 3430 1 CME Point |
| 7:00 PM | Certificate Course on Renal Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 13 FRI 1:00 PM | HKMA Kowloon City Community Network - Facial Dermatoses cum Annual Meeting Organiser: HKMA Kowloon City Community Network; Speaker: Dr. LEE Tze Yuen; Venue: President's Room, Spotlight Recreation Club, 4/F, Screen World, Site 8, Whampoa Garden, Hunghom, Kowloon | Ms. Candice TONG Tel: 2527 8285 1 CME Point |



| Date / Time | Function | Enquiry / Remarks |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| 14 SAT 10:00 AM (15) | Health Exhibition on Sepsis 敗血病知多 D 健康展覽 Organiser: The Hong Kong Society of Critical Care Medicine (HKSCCM); Venue: Lok Fu Place Zone A Podium | Secretariat Ms. Gloria CHEUNG Tel: 2527 8898 |
| 17 TUE 1:00 PM | HKMA Tai Po Community Network & Suicide Prevention Services - 1) How to Achieve Effective Treatment in Depression? 2) Treatment of Depression in the Elderly Organiser: HKMA Tai Po Community Network & Suicide Prevention Services; Speaker: Dr. DONG Yuet Sun, Jimmy & Dr. WONG Yee Him, John; Venue: Jade Garden, Shop 302, 3/F, Tai Wo Plaza Phase 1, 12 Tai Wo Road, Tai Wo | Ms. Candice TONG Tel: 2527 8285 2 CME Point |
| 18 WED 1:00 PM | HKMA Shatin Community Network - Diagnosis and Treatment of Swallowing and Feeding Problems: What can a Speech Therapist Do? Organiser: HKMA Shatin Community Network; Speaker: Ms. NG Wing Yee, Cymie; Venue: Diamond Room, 2/F, Royal Park Hotel, 8 Pak Hok Ting Street, Shatin | Ms. Candice TONG Tel: 2527 8285 1 CME Point |
| 18 WED 7:00 PM | Certificate Course on Respiratory Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 19 THU 1:00 PM | HKMA Kowloon East Community Network - 4-Component Vaccine Against Meningococcal Serogroup B Organiser: HKMA Kowloon East Community Network; Speaker: Dr. LAU Wei Sze, Vercia; Venue: V Cuisine, 6/F, Holiday Inn Express Hong Kong Kowloon East, 3 Tong Tak Street, Tseung Kwan O | Ms. Candice TONG Tel: 2527 8285 1 CME Point |
| 19 THU 7:00 PM | Certificate Course on Renal Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 20 FRI 7:00 PM | FMSHK Executive Committee Meeting Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Nancy CHAN Tel: 2527 8898 |
| 22 SUN | FMSHK ASM 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Sheraton Hong Kong Hotel | Ms. Cordelia WU Tel: 2527 8898 |
| 24 TUE 1:00 PM | HKMA Kowloon West Community Network - Neonatology from Community to Hospital Organiser: HKMA Kowloon West Community Network; Speaker: Dr. SO King Woon, Alan; Venue: Fulum Palace, Shop C, G/F, 85 Broadway Street, Mei Foo Sun Chuen | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 25 WED 1:00 PM | HKMA Central, Western & Southern Community Network - Certificate Course - 2) Differential Diagnosis of Rosacea and Management Update Organiser: HKMA Central, Western & Southern Community Network; Speaker: Dr. WU Wai Fuk; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, HK | Miss Antonia LEE Tel: 2527 8285 1 CME Point |
| 25 WED 6:30 PM | MPS Workshop - Mastering Your Risk Organiser: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. LEE Wai Hung, Danny; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, HK | HKMA CME Dept Tel: 2527 8285 3 CME Point |
| 25 WED 7:00 PM | Certificate Course on Respiratory Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 26 THU 1:00 PM | HKMA Kowloon East Community Network & UCH & FP (Cert Course for GP 2019): Interpretation of Common Haematological Investigations & Management of Common Haematological Problems in Primary Care Settings Organiser: HKMA Kowloon East Community Network; Speaker: Dr. LIN Shek Ying; Venue: Lecture Theatre, G/F, Block K, United Christian Hospital | Ms. Polly TAI Tel: 3513 3430 1 CME Point |
| 26 THU 7:00 PM | Certificate Course on Renal Medicine 2019 Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong | Ms. Vienna LAM Tel: 2527 8898 |
| 27 FRI 1:00 PM | HKMA and Hong Kong Society of Biological Psychiatry - Certificate Course in Psychiatry for Community Primary Care Doctors (Session 7) - Side Effect & Adverse Effect, Drug Drug Interactions, Evaluation and Management Organiser: Hong Kong Medical Association, Hong Kong Society of Biological Psychiatry; Speaker: Dr. LO Chun Wai, Dr. WONG Ming Cheuk & Prof. TANG Siu Wa; Venue: Tang Room, 3/F, Sheraton Hong Kong Hotel & Towers, 20 Nathan Road, Kowloon | Ms. Candice TONG Tel: 2527 8285 2 CME Point |
| 27 FRI 1:00 PM | HKMA Shatin Community Network - Biological Therapy for Moderate to Severe Atopic Dermatitis Organiser: HKMA Shatin Community Network; Speaker: Dr. CHIU Lai Shan, Mona; Venue: Diamond Room, 2/F, Royal Park Hotel, 8 Pak Hok Ting Street, Shatin | Ms. Candice TONG Tel: 2527 8285 1 CME Point |

Upcoming Event

26-27 Oct
9:00AM

Endocrinology, Diabetes & Metabolism Hong Kong (EDM HK) 2nd Annual Meeting
Organizers: Department of Medicine, University of Hong Kong; Queen Mary Hospital; Venue: S421-430, Hong Kong Convention & Exhibition Centre, Wanchai, HK

Ms Daisy SO
Tel: 9073 7301



Answers to Dermatology Quiz

Answers:

- Telangiectasia macularis multiplex acquisita (TMMA)**
The differential diagnoses include telangiectasia macularis eruptive perstans (TMEP), essential telangiectasia, poikiloderma and acquired brachial cutaneous dyschromatosis.

TMMA is a clinical entity primarily reported in Asians especially the Chinese. Most patients are middle-aged adults presented with telangiectasia superimposed on erythematous macules, distributed symmetrically on upper arms, shoulders, V-shape area of anterior chest and upper back.
- Autoimmune diseases (such as lupus erythematosus, dermatomyositis or systemic scleroderma) that may induce cutaneous telangiectasia; and hereditary haemorrhagic telangiectasia must be excluded before the diagnosis of this clinical entity.
- TMMA may be associated with chronic liver diseases, diabetes or cardiovascular diseases. Among these, viral hepatitis accounted for more than 50% of cases. Like spider naevi and palmar erythema, it belongs to the spectrum of vascular changes of chronic liver diseases such as hepatitis or alcoholic disease.
- Blood tests for liver function, viral hepatitis markers, autoimmune markers and glucose profile should be performed. In this patient, there were elevated hepatic enzymes, but the hepatitis markers were all negative. Other blood tests were normal. It was concluded that TMMA in this patient was mostly likely due to alcoholic liver disease. Skin biopsy had also been done and excluded the possibility of TMEP, which is one form of cutaneous mastocytosis.

Dr Lai-yin CHONG

MBBS(HK), FRCP(Lond, Edin, Glasg), FHKCP, FHKAM(Med)
Specialist in Dermatology & Venereology

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Annual Scientific Meeting 2019
Innovative Medical Technologies

22 September 2019 (Sunday)

9:30am - 4:55pm (Registration at 9:00am)

3/F, Sheraton Hong Kong Hotel & Towers, 20 Nathan Road, Tsim Sha Tsui, Kowloon

REGISTRATION FORM

Surname: Prof. / Dr. / Mr. / Ms. / Mrs. First name: _____
Tel no.: _____ *Email Address: _____
Occupation: _____ Organisation: _____
Member of: _____ (FMSHK Member Society)

※ Please when appropriate

1. I would like to attend the Annual Scientific Meeting 2019

- Morning Sessions** *Time: 9:30am - 12:10pm (Registration: 9:00am)*
- **Session I - Practice of Health Service Management** (Ballroom C)
 - **Session II A - Respiratory Health** (Ballroom C)
 - **Session II C - Urology** (Tang Room)
- Lunch Symposium - Updates on Management of Depression (First 100 applicants)** (Ballroom AB)
Time: 12:15pm - 1:00pm
- For Vegetarian Meal, please "✓" in the box
- Afternoon Sessions** *Time: 1:15pm - 4:55pm*
- **Session III A - Dermatology** (Ballroom C)
 - **Session III C - Care for Advanced Diseases (I): Innovative Approach for Advanced Cancer Pain** (Tang Room)
 - **Session IV A - Cardiovascular Diseases** (Ballroom C)
 - **Session IV B - Child Health** (Ballroom AB)
 - **Session IV C - Care for Advanced Diseases (II): Care for Dementia Across the Full Trajectory** (Tang Room)
 - **Session V A - Diabetes Mellitus & Renal Health** (Ballroom C)
 - **Session V B - Neurosurgery** (Ballroom AB)
 - **Session V C - Rheumatology & Immunology** (Tang Room)

2. Registration Fee: Member: \$100 / Non-member: \$400 / Medical Student: \$50

Fee enclosed: \$100 \$400 \$50 Cheque No.: _____

3. Certificate of Attendance required (with CNE points awarded) Yes No

Signature

Date

Remarks:

1. Confirmation will be sent by **EMAIL***
2. Please **send the registration form with cheque** made payable to "The Federation of Medical Societies of Hong Kong" to 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong **on or before 13th September 2019 (Friday)**.
3. No refund will be made if you have to cancel your registration afterwards
4. CME/CPD/CNE/ accreditation is pending

20190820



Annual Scientific Meeting 2019

Innovative Medical Technologies

Date : 22 September 2019 (Sunday) Time : 9:00 – 17:00
 Venue : Ballroom, 3/F, Sheraton Hong Kong Hotel & Towers,
 20 Nathan Road, Tsim Sha Tsui, Kowloon



Opening Ceremony

Session I - Practice of Health Service Management

- **Opportunities and Challenges in Greater Bay Area**
 Prof Geoffrey LIEU
Advisor, The Hong Kong College of Health Service Executives
- **101 of Innovative Healthcare - the Role of Medical Entrepreneurs**
 Dr LIU Shao-haei
President, The Hong Kong College of Health Service Executives

Session II A - Respiratory Health

- **Small Lung Nodule - What Should Be Done?**
 Dr CHU Chung-ming
Honorary Consultant, Department of Medicine & Geriatrics, United Christian Hospital
- **Update in Airway Diseases Management: COPD and Asthma**
 Dr David CL LAM
Clinical Associate Professor, Department of Medicine, Queen Mary Hospital

Session II C - Urology

- **Erectile Dysfunction – The Quest for the Optimal PDE5-I**
 Dr Andrew WC YIP
Specialist in Urology
- **MRI USG Fusion Biopsy of Prostate**
 Dr Peter KF CHIU
Associate Consultant, Urology Team, Department of Surgery, Prince of Wales Hospital

Luncheon Symposium

- **Updates on Management of Depression**
 Dr TSANG Fan-kwong
Private Psychiatrist

Session III A - Dermatology

- **Steroid Phobia in Atopic Dermatitis**
 Prof Ellis KL HON
Professor, Department of Paediatrics, The Chinese University of Hong Kong
- **The Future of Atopic Dermatitis Treatment: Children in Focus**
 Prof Ellis KL HON
Professor, Department of Paediatrics, The Chinese University of Hong Kong

**Session III C - Care for Advanced Diseases (I) :
 Innovative Approach for Advanced Cancer Pain**

- **Drug Management for Difficult and Refractory Cancer Pain**
 Dr YUEN Kwok-keung
Consultant, Department of Clinical Oncology, Queen Mary Hospital
- **Novel Treatment on Interventional Pain Relief**
 Dr Timmy CHAN
Pain Physician and Anaesthetic Consultant, Department of Anaesthesiology, Queen Mary Hospital

Session IV A - Cardiovascular Diseases

- **Lipid Management**
 Dr Steve SL LI
Honorary Clinical Assistant Professor, Department of Medicine and Therapeutics, Chinese University of Hong Kong
- **Antiplatelet Therapy After PCI**
 Dr Michael PH CHAN
Clinical Assistant Professor, Gleneagles Hong Kong Hospital, The University of Hong Kong

Session IV B - Child Health

- **Precision Medicine in Epilepsy**
 Dr Mario WK CHAK
President, The Federation of Medical Societies of Hong Kong
- **Common Paediatric Behavioural and Psychiatric Disorders**
 Dr Venus FL TAM
Specialist in Psychiatry

**Session IV C - Care for Advanced Diseases (II):
 Care for Dementia Across the Full Trajectory**

- **Screening, Diagnosis and Treatment of Early Dementia**
 Prof Timothy CY KWOK
Professor, Department of Medicine and Therapeutics, The Chinese University of Hong Kong
- **Supportive and Palliative Care for Dementia: From the Beginning Not The End**
 Dr Raymond SK LO
Hon. Clinical Professor, The Chinese University of Hong Kong

Session V A - Diabetes Mellitus and Renal Health

- **Complications of Phosphate in Cardiovascular Morbidities - Challenges to Chronic Kidney Patients and Doctors**
 Dr Samuel KS FUNG
Chief of Nephrology, Consultant Nephrology & Physician of the Department of Medicine and Geriatrics, Princess of Margaret Hospital
- **Diabetic Kidney Disease - A Growing Threat in Asia; Counter-measures**
 Dr CHENG Yuk-lun
Chairman, Hong Kong Society of Nephrology

Session V B - Neurosurgery

- **Frameless Stereotactic Radiosurgery from Brain Metastasis to AVM, What Next?**
 Dr YAM Kwong-yui
Chief of Service, Department of Neurosurgery, Tuen Mun Hospital
- **Epilepsy Surgery: Progress with Technology Advancement**
 Dr WONG Sui-to
Consultant, Department of Neurosurgery, Tuen Mun Hospital

Session V C - Rheumatology & Immunology

- **Allergic Rhinitis**
 Dr LO Pui-ye
ENT Specialist in ENT Department of Yan Chai Hospital
- **Advances in the Management of Axial Spondyloarthritis**
 Dr Tommy CHEUNG
Specialist in Rheumatology

Registration form

Registration Fee

HK\$100 Members of Member Societies of FMSHK
 HK\$400 Non-members
 HK\$50 Medical Student

Registration

Application form can be downloaded from website <https://www.fmshk.org>
 CME / CNE Accreditation is pending
 Enquiry: 2527 8898



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