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MEDICAL DIARY

VOL.19 NO.7 July 2014

Frontiers in Laser Surgery



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References:
1. Inghat DA, Schwartz SL, Seward D and Murphy HL. Diabetes Educ 2000;24:105-108
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The Cover Shot



This shot was taken on a sunny day in Tibet. The high altitude of Tibet created a very special lighting condition not reproducible at lower altitudes. (60mm f3.5 Hasselblad lens at f8 ISO 25 1/125s Contax 645 22MP Leaf digital back)

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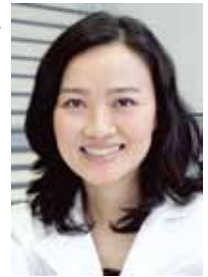
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Frontiers in Laser Surgery



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Editor

Dr Moniz MC WONG

The word *laser* started as an acronym for "Light Amplification by Stimulated Emission of Radiation". Since the first functioning laser was developed in 1960, laser design and technology have undergone rapid advances. Lasers have been used in medical practice for more than 30 years. The unique wave-length of each laser makes it powerful for a specific function and various lasers have been used by doctors in different specialties. In this current issue, we have renowned doctors from different specialties to talk about frontiers in laser surgery including the use of different lasers and energy-based devices. Dr Arthur CHENG will write an article on recent advances in LASIK surgery. Dr Kelvin CHONG will talk about the current status of laser use in oculoplastic surgery. Dr Nicola CHAN will share her experience in the use of transcutaneous focused ultrasound for non-invasive skin tightening and Dr Shiu Kee HUI and Dr Yung CHAN will bring us the new technology about fractional laser in skin resurfacing. Last but not least, Dr Siu Keung SETO will highlight us on the use of Erbium, Diode and Nd:YAG lasers in cosmetic dentistry.

Laser is a powerful tool but yet there are potential risks associated with its use. Standards in laser safety should be safeguarded in our medical profession. I hope the articles in this issue will update our readers with the latest knowledge and at the same time remind us of the importance of laser safety.

For the cover shot of the current issue of the Medical Diary, I have invited Dr Joseph WANG to share with us his masterpieces and write an article about photography of landscape. I hope our readers will enjoy the photos as much as I do.

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Current Status of Laser Use in Oculoplastic Surgery

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Dr Kelvin KL CHONG

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 31 July 2014.

Introduction

Different types of laser technologies have been reported in various types of eyelid, lacrimal and orbital surgeries (Table 1).¹ They include trichoablation (using argon, ruby, diode lasers), eyelid operations such as blepharoplasties, ptosis, ectropion and entropion corrections as well as eyelid mass excision or vaporisation (using CO₂ laser). It has also been used in isolation or during head and neck skin resurfacing (CO₂). Diode and KTP lasers have been used during laser dacryocystorhinostomy while CO₂ laser may also be an operative adjunct during orbitotomy for lymphangioma. In this article, we will elaborate on the benefits and limitations of laser use in trichoablation, endonasal dacryocystorhinostomy, blepharoplasties and periorcular skin resurfacing.

Table 1. Summary of common oculoplastic procedures involving laser use.

Procedures	Laser type	Wavelength nm
Trichoablation	Argon	488/514
Mucosal and bone removal (DCR)	Diode	810
	KTP	532
Eyelid incision and mass vaporisation	CO ₂	10,600
Skin-resurfacing	CO ₂	10,600
	Er:YAG	2,940

KTP= potassium-titanyl-phosphate
Er:Yag= Erbium:yttrium-aluminium-garnet

Laser trichoablation

Trichiasis (posteriorly misdirected eyelashes) can be managed by epilation, laser or radiofrequency trichoablation, electrolysis, cryotherapy, folliclectomies or surgeries to correct concomitant cicatricial entropion. In a recent article by Salour et al, the authors compared the use of argon laser (setting: spot size 50 µm, 760 mW, 930-nm wavelengths, continuous mode) with radiofrequency (2 watts, 2- to 3-mm depth, cut-coagulating mode) for trichoablation². The radiofrequency method was found to be superior in comparison to argon laser in the central regions of both upper and lower eyelids. For either group complications included recurrence and eyelid notching. In our experience electrolysis with intrafollicular mitomycin C injection is an alternative adjunct balancing local greyline tissue damage with regrowth of aberrant lashes.

Laser assisted dacryocystorhinostomy (DCR)

Nasolacrimal duct obstruction (NLDO) with symptomatic epiphora is a common disorder that presents to ophthalmologists. Dacryocystorhinostomy (DCR) is the definitive treatment, in which the patency of the blocked lacrimal outflow system is reestablished surgically through the creation of a fistula (stoma) that allows for direct communication between the nasolacrimal sac and the nasal cavity. As enthusiasm for the development of less invasive procedures with minimal collateral damage and faster recovery times increased in recent years, numerous studies have investigated variations in surgical methods, techniques utilising endoscopic approach³, and the use of various devices, such as lasers in DCR⁴.

CO₂, Hol: YAG, Nd: YAG, Erb: YAG, KTP, and diode have been used in DCR surgeries^{5,6}. Recent evidence suggests that endocanalicular laser DCR is a well-tolerated, viable treatment option for NLDO in selected patients with favourable results and shorter operative times. More recent studies seem to suggest improvements in success rates (ranging from 80 to 94%) compared with older studies, although additional, well designed, comparative studies are needed⁷. The endocanalicular technique allows for laser energy to be directed from within the canaliculus away from the globe for osteotomy creation, which may be preferable to the traditional endonasal laser technique, in which the laser is directed from within the nasal cavity⁸⁻¹¹.

Advantages of laser-assisted DCR include shorter operative times, avoidance of an external incision, and a relatively bloodless field afforded by the coagulative effects of the laser, which is especially useful in endoscopic surgeries in which the operative space is often limited. On the other hand, it is generally found to create a smaller osteotomy during laser assisted DCR which may be due to more mucosal fibrosis and scarring (heat & inflammation related) compared to mechanical (cold-steel) endonasal DCR. The adjunctive use with topical mitomycin C and/or bicanalicular stenting warrant further evaluation, in particular for revision DCR cases and patients with tight nasal space and on anticoagulants.



CO₂ laser in eyelid operations and periocular resurfacing

CO₂ laser is a colourless infrared light with a wavelength of 10,600 nm and is absorbed by biological tissues regardless of pigmentation or vascularity because its target of interaction is water. The CO₂ laser cuts tissue by flash boiling extracellular or intracellular water. Laser energy seals small nerve endings and therefore may be associated with less postoperative pain. It seals small lymphatic channels, causing less postoperative oedema and photocoagulates and seals off small blood vessels, causing a relatively bloodless surgical field. A focused beam in continuous mode is often used for cutting and a defocused beam for superficial vaporisation of lesions (e.g. papilloma, xanthelasma) and coagulation, while the (super/ultra) pulsed mode with or without the fractional technology (see below) are indicated for periocular skin resurfacing¹².

Advantages of CO₂ laser for incision, coagulation and lesions vaporisation

- Diminished intraoperative bleeding
- Less distortion of tissue anatomy,
- Decreased operative time,
- Decreased postoperative pain, swelling, and ecchymosis, quicker postoperative recovery.

However long-term outcomes of laser-assisted eyelid surgeries appeared to be similar to those of cold steel and/or radiofrequency assisted techniques¹³⁻¹⁵. Yu et al reported that both radiosurgery and CO₂ laser were equally safe and effective for upper lid blepharoplasty, yet CO₂ laser achieved a shorter operative time with superior intraoperative haemostasis¹⁶. Baker reported that CO₂ laser incisions healed more slowly than did scalpel incisions (likely related to impaired vascularity), the final scar produced by the laser incision was more prominent than was the scar from a steel knife (which may be energy dependent)¹².

Safety issues during laser use in periocular skin areas

- Protective goggles (pertaining to the respective wavelength used) for all medical personnel.
- Stainless steel scleral shell for corneal protection.
- Anodised (non-reflective coating) metal instruments.
- Fire precautions (no volatile agent e.g. alcohol or acetone) for skin prep.
- Moist gauze or towels may be used to protect the periorbital areas.
- Laser plume is the aerosolised material (the cellular debris and steam) generated by the laser as it boils the cellular water in tissue and must be appropriately evacuated¹⁷.

Complications related to periocular use of lasers

Serious ocular injuries may occur when laser passes through the target tissues and strikes the deeper tissues unintentionally (e.g., cornea or conjunctiva) leading to

- Corneal /scleral laceration¹⁸
- Pupil damage, mydriasis (dilated pupil),
- Symblepharon formation (conjunctival scarring)
- muscle imbalances (requiring strabismus surgery), and

- loss of corneal sensation during orbital lymphangioma removal¹⁹

Periocular Skin Resurfacing

Traditional ablative laser resurfacing was able to achieve significant improvement in periorbital skin tightening; however, the side effects significantly limited widespread application of this technology e.g. oedema, oozing, crusting and prolonged erythema. In particular, post inflammatory hyperpigmentation (PIH) is common in patients with darker (Asian) skin, even with preconditioning the skin and aggressive postoperative regimens of sun avoidance, sunscreen, topical retinoids and bleaching agents (e.g. topical hydroquinone). On the other hand, progressive anterior lamellar tightening may lead to cicatricial lower lid ectropion and lateral canthal dystopia which are hard to correct surgically. There were only a handful of published reports on traditional ablative periocular skin resurfacing.

Fractional photothermolysis (FP)

Fractional laser systems treat microscopic volumes of skin with each unique pulse, leaving the surrounding area intact for faster healing as compared with traditional CO₂ or Er:Yag laser resurfacing. These microscopic treatment zones (MTZs) penetrate to the precise height and width necessary, while sparing many of the stem cells and melanocytes in the papillary dermis. This promotes rapid epithelialisation and substantially improves safety (in particular the risk of PIH) and enhanced tissue contraction. Recent reports on fractional CO₂ laser for periocular resurfacing appear to be promising in terms of safety.

Combined laser blepharoplasties and periocular resurfacing

Carter et al randomised 44 subjects into one of two following groups: transconjunctival blepharoplasty immediately followed by CO₂ laser resurfacing or transconjunctival blepharoplasty alone with CO₂ laser resurfacing two months after the initial blepharoplasty. In their study, transconjunctival lower blepharoplasty was highly effective in improving lower lid bulging, but worsened lower lid wrinkling in 46% of patients. Furthermore, when lower lid resurfacing was performed either immediately after or 2 months after blepharoplasty, there was significant improvement of lower eyelid wrinkles. No subject in their study developed lower lid retraction, lateral canthal rounding, or hypopigmentation. The authors recommend combining the two procedures to improve periorbital wrinkles, to treat fat herniation and skin redundancy, and to decrease the risk of complications that can occur after traditional transcutaneous blepharoplasty²².

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MCHK CME Programme Self-assessment Questions

Please read the article entitled "Current Status of Laser Use in Oculoplastic Surgery" by Dr Kelvin KL CHONG 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 31 July 2014. 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)

- CO₂ laser is commonly used in eyelid incisions and periocular resurfacing.
- Diode, KTP and Er:Yag lasers have been used in dacryocystorhinostomies.
- Argon laser was found to be less effective than radiofrequency in trichoablation in one study.
- During endocanalicular laser DCR, laser energy is directed from within the nasal cavity.
- During laser assisted DCR, a smaller ostium is created due to more mucosal fibrosis and scarring.
- Using CO₂ laser in eyelid operations has the following advantages: less bleeding, shorter operative time and less postoperative swelling.
- Protective goggles have to be worn by all medical personnel during laser use.
- Alcohol or acetone may be used for skin prep as usual during laser use.
- Laser plume generated does not need to be evacuated.
- Fractional CO₂ laser may have better safety in terms of postinflammatory hyperpigmentation in the periocular region.

ANSWER SHEET FOR JULY 2014

Please return the completed answer sheet to the Federation Secretariat on or before 31 July 2014 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

Current Status of Laser Use in Oculoplastic Surgery

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Answers to June 2014 Issue

Mesenchymal Stem Cell Approach for Maxillary Sinus Grafting

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

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9 Oct	Urinary Tract Infection in Children	Dr. Luk Chi Kong David 陸志剛醫生 Associate Consultant, United Christian Hospital
16 Oct	Haematuria and Proteinuria in Children	Dr. Ma Lap Tak Alison 馬立德醫生 Associate Consultant, Princess Margaret Hospital
23 Oct	Childhood Enuresis	Dr. Hui Wun Fung 許桓峰醫生 Associate Consultant, Queen Elizabeth Hospital
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Advances in the Use of Fractional Lasers

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Skin rejuvenation for photoageing skin (dermatoheliosis) has been getting more popular especially after the development of fractional lasers. First reported by R. Anderson and D. Manstein in 2004, lasers using fractional photothermolysis have provided a safe and effective way for skin rejuvenation. The concept of this modality of treatment is to generate targeted microscopic treatment zones (MTZs), columns of thermally induced skin lesions with controlled widths and depths over a controlled proportion of skin. After its launch, extensive studies have been done and FDA has approved fractional non-ablative lasers in various conditions like wrinkles, melasma and actinic keratosis.

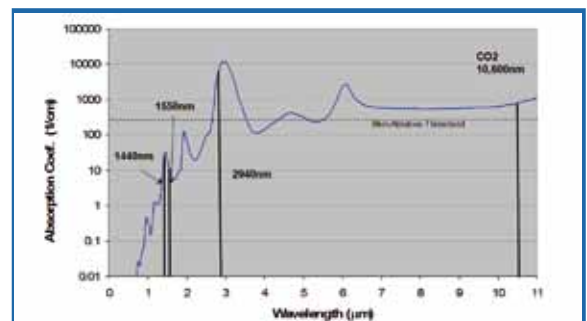
The traditional ablative laser was once considered as a standard laser treatment for scars and wrinkles, i. It removes the whole epidermis and induces wound healing with new collagen formation. However, the prolonged downtime and high risks of scarring can be a big concern. Some patients may prefer less aggressive light therapies including intense pulsed light (IPL), but its effects on collagen stimulation may not be sufficient. Until the development of fractional lasers, laser skin resurfacing has come to another level with efficacy close to traditional laser resurfacing and yet much safer for patients. The comparison between traditional and fractional lasers is tabulated in Table 1.

and part of the dermis as well, but the multiple tiny wounds will heal much quicker and thus with a shorter downtime.

Treatment with traditional ablative resurfacing lasers results in extensive epidermal damage and thus a long downtime and high risks of scarring. In contrast, treatment with fractional lasers will result in numerous MTZs. These microscopic wounds created are surrounded by healthy tissue resulting in a much quicker healing process when compared with traditional lasers. The healing of MTZ leads to new collagen formation and remodelling, which is translated into improvements in skin texture. Manstein described histologically, epidermal and dermal cell necrosis within a sharply defined column would be formed right after treatment.¹ The damaged dermal contents by fractional lasers would then be incorporated into columns of microscopic epidermal necrotic debris (MEND). This unique rapid epidermal repair mechanism is not seen in wounds after traditional lasers, the microscopic wounds heal with keratinocytes' lateral migration from the surrounding normal skin, the necrotic skin debris would be pushed up through the epidermis and extruded by transepidermal elimination.² Expulsion of MENDs usually takes 4 to 14 days. That unique healing mechanism allows the skin to heal faster with a shorter downtime.

Table 1: Comparison between traditional and fractional lasers

	Traditional laser	Fractional laser
Ablative (non-selective, vaporise skin, chromophore: water, wavelength 2940nm, 10600nm)	Was the gold standard for laser resurfacing Pros: Highly effective for most of the epidermal pigments Cons: Painful Long downtime; (redness, swelling, erosion, pain.) Highly risky (scarring; infection; PIH)	Pros: Less side effects including shorter downtime, less risk of scarring than its traditional counterpart Cons: Less effective than the traditional one
Pros: Less side effects including shorter downtime, less risk of scarring than its traditional counterpart Cons: Less effective than the traditional one	Pros: Relatively safe short downtime Less Pain Cons: Mildly effective, multiple treatment needed Narrow therapeutic window	Early and delayed therapeutic results -Superficial resurfacing for immediate results -Deeper dermal impact improves results over time Stratum corneum remains intact (non-ablative) i.e. makeup can be applied after treatment



Graph 1: Corresponding absorption coefficients of different wavelengths

Fractional lasers have been incorporated in the use of ablative lasers as well. They also provide a safer alternative with ablative functions than the traditional ones. Fractional ablative lasers remove the epidermis

In order to boost clinical use in fractional non-ablative lasers, there are systems in the market that employ two wavelengths in one system (e.g. 1550nm erbium/1927nm thulium, or 1320nm/1440nm Nd:YAG) to target both the superficial and deeper skin. Take fractional 1550nm erbium laser as an example, it targets the deeper dermal layer conditions including wrinkles and acne scars while 1927nm thulium targets superficial layer conditions like actinic keratosis and irregular texture. The clinical



use also differs according to different pulse energy, higher the energy, deeper the penetration and spot size of each MTZ would be, so the laser energy can be adjusted precisely for an individual's needs. Percentage of skin coverage can be adjusted to determine the aggressiveness of each treatment. Systems with low power 1440nm diode or 1927nm are also available for preventive or maintenance therapies for mild photoaging skins like fine lines, increased pore size and pigmentation. These less aggressive systems provide an affordable choice for anti-ageing patients with even less downtime. The corresponding absorption coefficient of different wavelengths is charted on Graph 1.

The fractional ablative laser devices on the market incorporate small and adjustable spot sizes, some down to 0.12mm for deeper ablation while bigger spot sizes for superficial or microablation to cover more clinical applications. They come with softwares to control the laser energy distribution to spread out the laser beam according to individual needs. Studies on devices with deep dermal ablation showed they allow a more prolonged wound healing process to provide better clinical outcomes than fractional non-ablative devices in skin resurfacing.³

There are different models using fractional lasers in the market with different mechanisms to deliver laser energy, namely optical tracking and stamping. The optical tracking system employs a single wheel design which delivers energy as the operator rolls the hand

piece on the treatment area. Energy can be delivered quickly and evenly regardless of the operator's hand movement speed. Stamping, on the other hand, requires the operator to apply the hand piece on different areas, which may carry risks of uneven treatment like overlapping or spacing between the stamps. Another Erbium glass fractional laser machine delivers randomised MTZs over the treatment area to decrease the risk of overlapping.

Fractional laser is an effective, comfortable and safe laser procedure with less downtime. Though at the expense of more treatment sessions needed as compared to traditional lasers, the risks of post inflammatory hyperpigmentation and scarring are kept very low in experienced hands. There are constantly new systems developed with new features, the clinical applications with this relatively recent technology will continue to evolve.

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The Hong Kong College of Paediatricians (HKCPaed) and the Royal College of Paediatrics and Child Health (RCPCH) will be holding a Joint Diploma in Child Health Clinical Examination in Hong Kong in October 2014, awarding DCH (HK) and DCH (International) to successful candidates.

The DCH Clinical Examination will be held on **30th October 2014 (Thursday)**.

The DCH Clinical Examination is open to registered medical practitioners in Hong Kong. Candidates who have already successfully passed the DCH written examination, namely Part IA since January 2004 or Foundation of Practice since February 2013, are eligible to apply. In addition, candidates who passed the Part IA examination in May 2005 or thereafter should have at least 6 months of Paediatric practice (resident medical officer or intern within 5 years prior to the date of the DCH Clinical Examination) in a recognized institution with acute hospital admissions. There are no exemptions from the Part IA or Foundation of Practice examination.

The DCH Syllabus, which has been introduced since November 2009, will serve as the basis for assessments for the DCH Clinical Examination to be held in Hong Kong in October 2014. The Syllabus is available for viewing at the following link on the RCPCH Website:

<http://www.rcpch.ac.uk/training-examinations-professional-development/assessment-and-examinations/examinations/clinical-e-3#DCHSyllabus>

Application:

Candidates who wish to sit the DCH Clinical Examination in Hong Kong **MUST** apply through the Hong Kong College of Paediatricians. Application form, details of application and the format of examination can be found on the HKCPaed website at http://www.paediatrician.org.hk/index.php?option=com_content&view=article&id=45&Itemid=46. Examination Fee is HK\$ 8,500. Available places are limited and will be allocated on a 'first come first served' basis.

Opening date: 23 June 2013

Closing date: 23 July 2014

Recent Advances in LASIK Surgery

Dr Arthur CK CHENG

MBBS (Syd), MRCS (Edin), FCOphth (HK), FHKAM (Ophthalmology), FRCOphth (UK)
Specialist in Ophthalmology



Dr Arthur CK CHENG

Refractive surgeries have undergone a lot of advancements recently particularly in the development of ablation profiles, making laser surgery more effective in achieving better visual outcomes.

Myopia is the most common type of refractive errors in Hong Kong and accounts for over 99.9% of all refractive corrections. Myopic correction can be achieved by changing the power of the existing refractive structure i.e. the cornea and lens or by inserting an extra refractive medium i.e. phakic intraocular lens.

Myopic Laser Corrections

The most popular type of laser myopic corrections is by LASIK. Laser myopic correction is achieved by central corneal ablation and thus reduces the refractive power of the anterior corneal surface. Myopic correction has shown to be effective in correcting low to moderate myopia.^{1,2} High myopia LASIK correction has been fought with quality issues until recently. Factors that enhanced outcomes over the years include increased effective optical zone, reduced tissue consumption and reductions in higher order aberrations especially spherical aberrations.

Before myopic laser correction, the cornea is prolate in shape which means that the central corneal power is higher than the periphery. A prolate cornea reduces spherical aberrations. In myopic corrections, the central cornea is ablated resulting in a flatter anterior corneal surface. There are a few things in previous generations of lasers that result in an oblate cornea after myopic corrections. Firstly, there is a loss of laser energy power when the laser is fired at the peripheral area even though it is still within the optical zone. This is partly because this area is slightly out of focus relative to the centre of the cornea and partly because of the increase in the angle of incidence and the ovalisation of the laser spot resulting in a larger spot size. Part of the laser energy is also reflected and the actual power delivered to the periphery of the cornea is less than the intended, causing underablation.

Because of underablation relative to the central area, this portion of the cornea is not as flat. The end result is a flatter corneal centre and a not so flat periphery even though it is still within the optical zone. In other words, the resultant cornea is an oblate cornea and having a smaller effective optical zone. This is also the reason for night myopia experienced by many highly myopic patients after LASIK corrections in the past. As the pupil gets larger at night time, more light passes through the

periphery of the optical zone and gets focused more anterior to the retina as this is the area having higher K values and this results in night myopia. This is also part of the reason why patients get glares and halos at night time.



Figure 1.

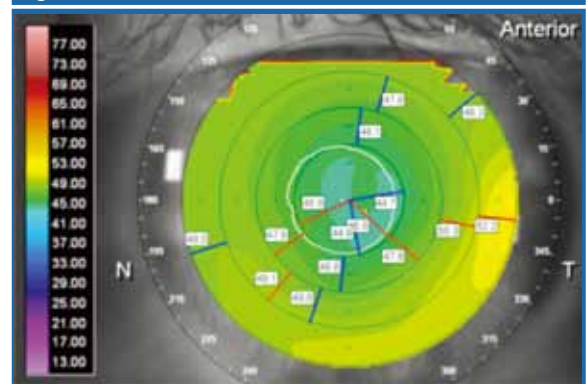


Figure 2a. A patient with -2D correction with 6.5 mm optical zone using Planoscan programme of the Bausch & Lomb platform in 2003. Note the K values in the central cornea (first black ring, represents the central 3mm zone) is lower than the area between the first and second black rings (denotes the 3-5mm zone), which, in turn is also lower than the 5-7mm zone

In order to solve this problem, a wavefront optimised ablation profile is being developed.³ This optimised ablation profile aims to maintain one pre-LASIK spherical aberration and this is achieved by making the ablation to the periphery region to compensate for the effects mentioned above. Figure 2a shows a patient with -2D myopia and had LASIK in 1997. Figure 2b shows the corneal topography of a patient who had -10D and had LASIK in 2010. You can clearly see the oblate cornea with even low myopic correction and the prolate cornea with even high correction, due to the effect of wavefront optimised ablation profile.

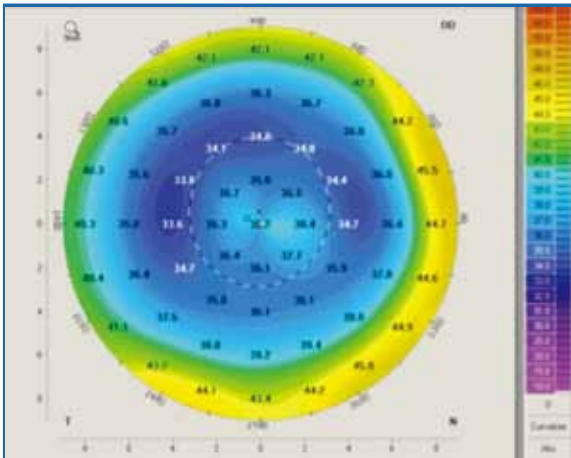


Figure 2b. A patient with -10D correction with 6.00Z using Wavelight Allegretto wavefront optimised programme in 2010. Note the higher K value in the centre compared to the periphery within the optical zone.

(approximately 0.3 μm root mean square [RMS] HOA for a 6-mm treatment zone), there is practically no difference between the two techniques. However, if the optical errors are larger, in the range of 0.6 or 0.7 μm for a 6-mm treatment zone, outcomes are better after wavefront guided treatments. Therefore, the wavefront guided treatment is preferable when a significant amount of HOAs are present, but for the majority of the population with less severe visual disturbances, wavefront optimised treatments are the better choice. When LASIK is used to treat a high myopic patient, the aberration generated during the procedure is far more than the pre-existing aberrations and a wavefront optimised approach will be a better choice.

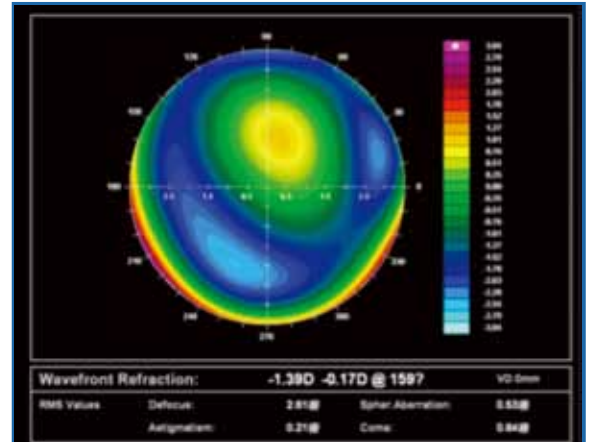


Figure 4. A patient with wavefront guided treatment with postoperative high spherical aberration 0.53um

Clinical Data (Figure3.)

In a recent review⁴ with 280 eyes from 140 patients with preoperative myopia up to -10D undergoing myopia LASIK, all treatments were performed with the wavefront optimised ablation profile using an Alcon wavelight Allegretto platform with 6.5mm optical zone. At 6 months follow-up, over 97% are 20/25 or better and over 71% were 20/16 or better. There was no change in corneal spherical aberrations after the operation in 4mm, 5mm and 6mm zones. The predictability slope for refraction was 1.02 and for the intercept value was 0.00D.

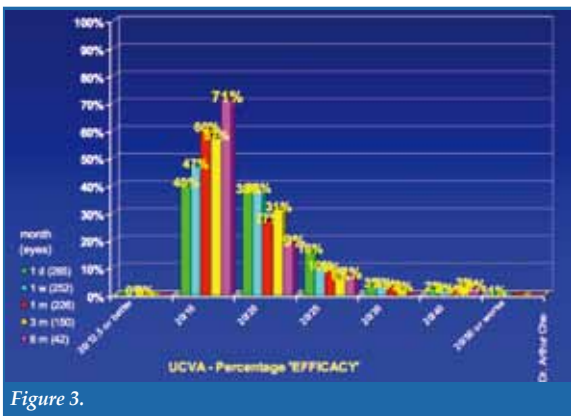


Figure 3.

Limitations of corneal thickness

Other than the optical side effects that limits the amount of myopic correction, the available corneal thickness is another limiting factor. The current generation of lasers using sub 1mm spot size has already reduced the amount of tissue required per dioptre of treatment. However, in patients with thin corneas or those with large pupil sizes where a large optical zone is required, the limitation of corneal thickness is still an issue. The use of femtosecond technology in making consistently thin flaps (sub Bowman's keratomileusis) allows more tissue available for treatment. Studies show that this allows consistent outcomes with low complication rates.⁶ In patients with very thin corneas or when a high correction is needed, surface ablation provides another alternative. Studies have shown that it provides comparable outcomes with LASIK.⁷ However, mitomycin C is required to minimise postoperative haze. In my practice, I use 0.02% MMC for 1 minute for all myopic corrections over -3D. From our internal data, there is no difference between the outcomes of LASIK and surface ablation at 3 months follow up in terms of visual acuities and regression. But patients with surface ablation take longer to achieve their best corrected vision.

Wavefront guided Vs wavefront optimised treatment

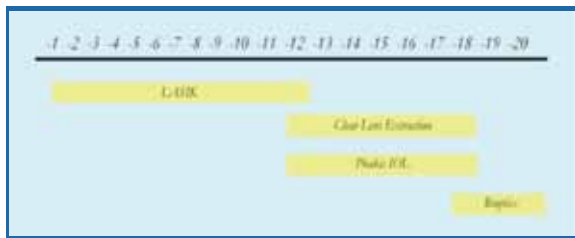
There is a fundamental difference between the two treatment algorithms. The wavefront guided treatment aims at correcting the higher order aberrations that exist before LASIK. It does not attempt to correct or compensate for the aberrations generated during the procedure. On the contrary, the wavefront optimised treatment does not look at the preoperative higher order aberration, but compensates for the higher order aberrations (HOA) generated during the procedures. Studies⁵ have shown that below a certain level

Phakic intraocular lenses

In patients with extremely thin corneas or in those with very high myopia, phakic intraocular lenses may be the only option. The visual outcomes with phakic

intraocular lenses have been proven. In particular, in one study⁸ where the contrast sensitivity, the modulation transfer function and point spread function are compared between patients with LASIK and those with phakic intraocular lenses, both Phakic intraocular lens (ICL) and LASIK procedures provide good optical and visual quality, although the ICL provides better outcomes, especially for large refractive errors and pupil sizes. These outcomes are due to the LASIK procedure inducing higher higher-order aberrations than ICL implantation. In patients with extreme myopia (more than -16D) bioptics can be considered with the majority of the refractive errors corrected by some form of intraocular lens and the remaining corrected by corneal laser ablation.

In summary, both the corneal and lens approaches are effective in reducing the patients' spectacle dependence on glasses with equally good refractive outcomes and minimal side effects on well selected patients.



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24 Sep	Clinical application of radiological imaging in respiratory diseases and interpretation of lung function tests	Dr. Hoi-nam TSE Associate Consultant (Medicine) Kwong Wah Hospital
8 Oct	Fighting pneumonia: issues and challenges	Dr. Man-po LEE Consultant (Medicine) Queen Elizabeth Hospital
15 Oct	Update on the management of COPD Collaborating self-management in COPD	Dr. Yiu-cheong YEUNG Associate Consultant (Medicine and Geriatrics) Princess Margaret Hospital Ms. Aileen CHU Occupational Therapist (Occupational Therapy Department) Princess Margaret Hospital
22 Oct	Diagnosis and treatment of obstructive sleep apnea in adults Hook-up and acquisition in polysomnography	Dr. Jane Chun-fong CHEUNG Associate Consultant (Medicine and Geriatrics) Pok Oi Hospital Ms. Agnes LAI Senior Technical Officer (Medicine) The University of Hong Kong
29 Oct	What is interventional pulmonology?	Dr. Wai-lam LAW Associate Consultant (Medicine) Queen Elizabeth Hospital

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Transcutaneous Intense Focused Ultrasound for Non-invasive Skin Tightening

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Dr Nicola PY CHAN

Introduction

Facial and neck skin laxity is one of the major features of skin ageing, which is caused by the decrease in collagen of the skin, the redistribution of subcutaneous fat, and the remodelling of underlying bone and cartilaginous structures. These features are secondary to chronological ageing and chronic ultraviolet light exposure. Although surgical face and neck-lifts remain the gold standard correction for skin laxity, many patients nowadays are prepared to trade the greater clinical improvements obtained from surgery for the relatively lower risks and shorter recovery time associated with non-invasive treatments.

The demand for non-invasive skin tightening procedures continues to increase in recent years. Numerous devices are currently available in the market. They mostly make use of the different forms of energy to generate heat, which subsequently leads to controlled thermal injury of the dermis. Radiofrequency (RF) alone or in combination with laser and infra-red light sources can cause thermal heating of up to 2-4mm deep within the dermis.¹⁻³ RF currents generate heat energy as a result of tissue resistance to the movement of electrons; whereas laser and infra-red light sources target water and lead to heat generation. These energies penetrate the dermis at different depths, but their common mechanism which leads to skin tightening is thought to be volumetric heating causing immediate collagen contraction, followed by a robust wound healing response with collagen production and remodelling. As increasing experiences accumulate with these non-invasive devices, it becomes clear that the degree of clinical improvement in skin tightening can be modest and inconsistent with a variable duration of benefit among patients.⁴ Newer forms of energy delivery systems have therefore emerged with the aim of achieving better clinical efficacy and consistency.

Intense focused ultrasound (IFUS) : mechanism of action for skin tightening

The ultrasound which is used in diagnostic imaging produces very little thermal energy. In contrast, when ultrasound waves are delivered in an intense and focused manner, the vibration and friction between tissue molecules generated at the site of the beam focus can produce substantial thermal energy. If the ultrasonic beam is brought into a tight focus, local temperature rise will occur only within the focus area, producing small focal thermal injury zones (TIZs) within a precise

depth in the skin. Selective coagulative necrosis in these TIZs occurs when the heat causes a temperature rise of up to 60-70°C at the focal point, which exceeds the temperature threshold level for protein denaturation. This microcoagulation is thought to cause skin tightening through a wound healing response with collagen contraction, remodelling and neocollagenesis.⁵

In IFUS used for skin tightening, ultrasound energy is deposited in short, millisecond pulses with a frequency in the megahertz (MHz) domain, using significantly lower energies compared with high-intensity focused ultrasound for the treatment of solid organ tumours.⁶ TIZs can be produced at a very precise depth within the skin by adjusting the frequency of the ultrasound. Previous histological studies on cadaveric and porcine skin have shown that higher frequency waves produce more shallow focal injury zones, whereas lower frequency waves have a greater depth of penetration. One important feature is that the tissues surrounding the TIZs and the skin layers above and below the targeted depth are essentially unaffected. Thermal injury is very much confined due to the short pulse duration, and the epidermal surface remains intact.⁷⁻⁹

A distinguishing feature of IFUS, compared with previous energy systems used for non-invasive skin tightening, is its unique ability to selectively penetrate to optimal depths and be focused to a small and precise volume deep within the different cutaneous tissue planes, potentially as deep down as to the superficial musculoaponeurotic system (SMAS) layer. The SMAS is a continuous fibromuscular layer which is deep to the subcutaneous fat. It extends superficially to connect with the dermis, and covers the facial expression muscles. Targeting this layer with IFUS would give superior and longer-lasting skin tightening results clinically compared to treating up to just the dermal layer. Also, ultrasound energy lacks chromophore specificity and is not absorbed by melanin, unlike laser and light energies. This makes it a safe energy treatment modality to be used for tanned and darker skin types.

The IFUS device with the most peer-reviewed preclinical and clinical data is the Ulthera device (Ulthera, Inc, Meza, Arizona, US). The transducers of this device are capable of providing real-time ultrasound images of the different skin layers, as well as delivering precise and confined discrete TIZs to their preselected focal depths of 1.5mm, 3.0mm or 4.5mm to reach the intended tissue planes. This allows the superficial dermis, the deep dermis and the SMAS layers to be comprehensively treated under direct ultrasound visualisation. Individual



TIZs (~1mm³) are 0.5-5.0 mm apart, deposited next to one another along the 2.5 cm treatment lines. The ultrasound energy employed in this system is in the range of 0.4-1.2 J.

Clinical applications of IFUS for skin tightening

In 2009, the IFUS device obtained Food and Drug Administration (FDA) approval for eyebrow lifting based on the early preclinical and clinical studies. Subsequent studies of the lower facial and neck regions demonstrated consistent clinical improvement, which led to its additional FDA approval for 'non-invasive lift of lax tissue of the neck and submentum' in 2012. Since then, the device has been widely and safely used off-label for skin lifting and tightening of the full face and several off-face regions.

The first prospective clinical study was by Alam et al in 2010.¹⁰ Thirty five patients each received a single full-face treatment and were assessed specifically for eyebrow lift. They demonstrated clinically significant improvement in 86% of subjects at 90 days post treatment as measured by blinded physician assessment. Photographic measurements showed a mean brow lift of 1.7mm at 90 days.

A safety clinical study on the IFUS device was published by our group in 2011.¹¹ We evaluated 49 Chinese patients, each receiving one to three monthly full-face treatments. A total of 68 treatment sessions were performed without oral or topical anaesthesia. Transient erythema and oedema were seen in the majority of subjects, all of which resolved spontaneously. Two patients had a tiny focus of transient post-inflammatory hyperpigmentation confined to the forehead region, which was likely to have been due to ultrasound energy reflecting off the bone leading to focal cutaneous inflammation. No other significant or persistent adverse effects were seen.

The efficacy of the IFUS device was further studied by Suh and colleagues, who delivered a single treatment to the full face and submental regions in 22 Korean patients using the dual-plane protocol.¹² This refers to delivering TIZs at two different depths of 3.0 mm and 4.5 mm over the entire treatment area for each patient. By allowing the two tissue planes to be treated in a single session, the dual-plane protocol is expected to further enhance the clinical outcome. In Suh's study, objective assessment showed improvement in score values in 100% of subjects for nasolabial fold and jawline laxity. Subjectively, 73% and 77% of patients reported much improvement in the nasolabial fold and jawline respectively. Skin biopsies obtained from 11 patients at baseline and 2 months post treatment demonstrated a 23.7% increase in the average area fraction of collagen in the reticular dermis and dermal thickening. In a separate study, the same group treated just the infraorbital region for lower eyelid skin laxity at a single depth of 3.0 mm.¹³ A total of 15 patients underwent one to two treatments and were assessed at 6 months. Objective improvement was seen in 86% of subjects, while subjective improvement was shown for all patients.

Lee and colleagues extended the evaluation of the IFUS treatment to not only the face, but also the neck region.¹⁴ Ten subjects were treated with both the 3.0mm and 4.5mm transducers for the lower facial and neck regions. The total estimated treatment density was 20-25% for each tissue plane. The investigators showed an 80% improvement by blinded physician assessment of the clinical photos, and 90% reported subjective improvement at 90 days post treatment. Transient erythema and oedema were seen in all subjects, and there were no persistent adverse events.

Other research groups have since looked into using the IFUS device in treating skin laxity on various body regions. Alster and Tanzi first studied the skin tightening treatment on the upper arms, extensor surfaces of knees and medial thighs, comparing the single-plane approach with just using the 4.5mm transducer against the dual-plane protocol with both the 3.0mm and 4.5mm transducers.¹⁵ The baseline and 6 months post treatment clinical photos were assessed by two blinded physicians using a quartile grading scale. At 6 months, statistically significant improvement was seen in all areas treated. The dual-plane treatment had better clinical scores than the single-plane protocol for all three sites, which is likely to be due to both superficial and deep dermal collagen remodelling. 81% of patients were subjectively 'highly satisfied' with the treatment outcome. Transient mild erythema and skin tenderness were noted post treatment, and focal bruising was seen in 2 patients treated in the upper arms, which all resolved after one week.

The 1.5mm depth transducer later became available, and is aimed to target the superficial dermis for the improvement in skin texture and fine lines. It can be used in combination with the 3.0mm and 4.5mm transducers to treat the three different cutaneous tissue planes in a single treatment session. In a large clinical study using a combination of the three transducers to treat multiple anatomical regions, Sasaki and Tevez demonstrated 1-2mm brow elevation and moderate skin tightening around the peri-orbital region at 3 and 6 months post treatment using both the 1.5mm and 3.0mm transducers in a single treatment.¹⁶ They also studied the IFUS device for skin tightening in the décolletage, brachium, peri-umbilicus, inner thighs, knees, hands and buttocks. The treatment protocols varied depending on the skin thickness at the different target sites. Blinded physician assessment scores showed moderate improvement in the brachium, peri-umbilicus and knees. Results were less consistent in the inner thighs, décolletage, hands and buttock region. In a separate clinical study, the group treated 197 patients and concluded that placement of the treatment line along vertical vectors produced more significant lifting compared to lines placed horizontally.¹⁷ Furthermore, a greater number of lines deposited per treatment and employing higher joule energy were also associated with greater lifting clinically.

In one of the latest clinical studies, the more superficial penetrating transducers of 1.5mm and 3.0mm were studied for the improvement of pore size in Asian skin.¹⁸ Lee et al recruited 22 Korean patients and they were randomised to receive a single treatment with the IFUS device using the 1.5mm transducer on one side of

the face, and the 3.0mm transducer on the other side. Objective assessments were made by blinded evaluation of baseline and up to 6 weeks post treatment clinical photos. Pore size improvement was seen in 86% and 91% of the treated sites using the 1.5mm and 3.0mm transducer respectively. The mean improvement scores were not statistically significantly different between the two groups. Cutometer measurements demonstrated significant improvement in skin elasticity. It is postulated that the positive effect of IFUS on enlarged pores may be due to the dermal remodelling at the perifollicular area in the superficial dermal layer, which also leads to an increase in skin elasticity (Figure 1).

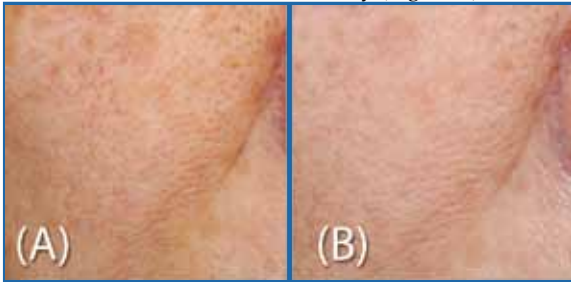


Figure 1. Improvement in pore sizes at 2 months post treatment (B) compared to baseline (A).

Treatment protocol

Proper patient selection is crucial in ensuring a satisfactory clinical outcome in any cosmetic procedure. An ideal candidate for IFUS skin tightening is someone with mild to moderate skin and soft tissue laxity who desires non-invasive, non-surgical treatment. Smokers, obese patients or patients with advanced photoageing, extreme skin redundancy or excessive subcutaneous fat with no actual skin laxity may not benefit from such a treatment, as their ability to generate new collagen in response to thermal injury is likely to be suboptimal. Prior to treatment, it should also be emphasised to patients that the degree of clinical improvement can show individual variations, and the ultimate result cannot be compared to surgical face-lifts. Patients with unrealistic expectations will fail to appreciate any degree of improvement offered by such non-invasive treatments.

There are a few contraindications to the IFUS procedure. These include pregnancy or lactation; active systemic or local skin infection; open wound and scarring over the treatment area; cystic acne; metal stents or implants in the treatment area; and medical conditions and medications which alter or impair wound healing.

Pre-treatment preparations include an informed consent, capturing baseline photos and the discussion of pain control. As with any treatment which generates thermal energy causing a rise in tissue temperature, some discomfort is to be expected. In our safety study which used no anaesthesia, 54.4% of treatment sessions reported pain of a severe degree.¹¹ Other published studies have since shown that at least mild to moderate discomfort is often experienced, even with the use of analgesics.¹⁹ Increasing the treatment energy and focal depths seems to be associated with more pain. The pain perceived also appears to be more significant over the décolletage, brachium, knees and peri-umbilical sites.

The different forms of analgesia which have been used include high-dose non-steroidal anti-inflammatory drugs; oral, intravenous or intramuscular narcotics; oral anti-anxiolytics; topical anaesthetic cream; local anaesthetic injections or nerve blocks. All these modalities can be used in combination. Ultimately, the specific type of pain control will depend on the individual physician's preference based on his clinical experience and the potential risks from the different pharmacological interventions.

Before treatment, the skin is cleansed of any skin care products, makeup or sunscreen. The treatment region is outlined to determine the number of treatment columns. A layer of ultrasound gel is applied to the skin, and the selected transducer with the chosen focal depth is then placed firmly on the skin. Prior to the delivery of the ultrasound pulses, the real-time ultrasound images can help to ensure correct placement of the TIZs at the targeted focal depths. The total number of treatment lines will depend on the size of the treatment area, the degree of skin laxity, as well as the number of tissue planes treated. After treatment, the ultrasound gel is removed from the skin and a layer of mild moisturiser is applied. Since the procedure has no recovery time, patients can return immediately to their daily activities. The current experience suggests that continuous clinical improvement is usually noticed at around 2-3 months and even up to 6 months after a single treatment. Most patients only need one treatment every 1-2 years to maintain the skin tightening result.

Safety profile/ complications

Overall, IFUS treatment has a favourable safety profile. The side effects reported to date are mostly mild and transient. Nearly all patients will experience a variable degree of erythema and swelling over the treatment sites, which typically resolve in a few hours to days. Any purpura seen post treatment is usually focal which resolves spontaneously over a few weeks. If the contact between the skin and the superficial transducer is poor, white linear wheal-like striations can appear as a result of the ultrasound energy being deposited more superficial than the intended focal depth. These striations will resolve spontaneously, but topical steroids can be applied to hasten the recovery.

The most concerned potential complication with IFUS treatment is the involvement of sensory or motor nerves. This is likely to be due to the focused ultrasound energy hitting the nerves, causing transient inflammation.¹⁹ Temporary focal numbness, especially on the brow or perioral region, has been reported which resolves without intervention after several weeks.¹⁷ A number of case reports have described transient motor nerve paresis. The areas with the greatest risk of injury are the temporal branch of the trigeminal nerve and the marginal mandibular nerve, where the course of these nerves becomes superficial in the skin. Affected patients present with the transient inability to contract the frontalis muscle or perioral asymmetry, which usually occurs within the first twelve hours post treatment. Nerve inflammation will spontaneously recover, and resolution of any neurological symptom will occur in 2-6 weeks. No permanent nerve injury has been



reported to date. This complication can be avoided by not treating the areas where these nerves take a more superficial course, and by asking the patient to report any facial muscle twitching or sensory disturbance during treatment. With good treatment techniques, the risk of this transient neurological side effect can largely be minimised.

Summary

The unique physical properties of intense focused ultrasound and the versatility of the device make this technology a promising tool for non-invasive skin tightening. Its ability to treat as deep down as the SMAS sets it apart from other pre-existing technologies. Further clinical studies to optimise treatment parameters will enhance the efficacy and consistency of the clinical outcome for both facial and non-facial regions.

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Dermatological Quiz

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Private dermatologist



Dr Ka-ho LAU



Fig. 1: Lesions at the face

This 30-years-old woman had a history of itchy skin at her face for a few months. She bought a topical cream for her itchy face which she had been using for the last three months. Every time when she stopped using the topical cream, she developed these painful lesions at her cheeks and around her mouth (Fig.1).

Questions:

1. What is your clinical diagnosis or possible differential diagnoses?
2. How will you manage her skin disease?

(See P.33 for answers)

DCH (Diploma in Child Health Examination) Written Examination (MRCPC Foundation of Practice) 2014

The Hong Kong College of Paediatricians (HKCPaed) and the Royal College of Paediatrics and Child Health (RCPCH) will hold a Joint Diploma in Child Health Examination in Hong Kong in 2014 awarding DCH (HK) and DCH (International) to successful candidates.

The DCH Examination is divided into two parts, written (MRCPC Foundation of Practice (formerly known as Part IA) and clinical. The written examination is the same as the MRCPC Foundation of Practice Examination, which is held three times a year in Hong Kong. The next DCH written examination will be held on **Tuesday, 7 October 2014**. The examination fee is **HK\$4,500** for Foundation of Practice. Candidates who wish to enter the examination must hold a recognized medical qualification in Hong Kong.

Application: Candidates **must apply online** using the RCPCH website via the **member sign in** area <https://www.rcpch.ac.uk/user>. In order to access the online application form, you need to be a registered user. If you do not have an RCPCH online account, you will be required to create one using the following link: <https://www.rcpch.ac.uk/user/signup>. Applications for all exams will open at 9.00am UK local time on the first day of the advertised application period and close at 4.30pm UK local time on the last day.

Please note that application is **NOT confirmed** until payment of examination fees is received in **Hong Kong**.

Candidates who wish to sit the examination in Hong Kong **MUST ALSO** apply through the Hong Kong College of Paediatricians (HKCPaed) by completing Form B (Application for entry to the MRCPC Foundation of Practice & Theory and Science Examinations-Overseas Centres). For application details, please visit the HKCPaed website at http://www.paediatrician.org.hk/index.php?option=com_content&view=article&id=45&Itemid=46 or call the College Secretariat at 28718871.

Application Period: 21 July 2014 (Monday) - 8 August 2014 (Friday)

Important Notice

Clinical Examination format for DCH from April 2011

Details of the DCH Clinical examination format and other relevant information can be viewed on the RCPCH website at:

<http://www.rcpch.ac.uk/training-examinations-professional-development/assessment-and-examinations/examinations/clinical-e-3>



Cosmetic Dentistry

Dr Siu-keung SETO

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Private practice



Dr Siu-keung SETO

With advancements in technology, the use of lasers in dentistry is getting more popular nowadays. It not only enhances the clinical results of conventional treatments, both in terms of clinical outcome, patients' comfort and satisfaction, but also it makes some procedures, where conventional treatment methods found extremely difficult, becoming easy. It broadens the scope of services that a general dentist can provide to his patient, but on the other hand, gives less stress but more satisfaction to the operator. Cosmetic dentistry, which involves a spectrum of procedures, is a field which lasers of different wavelengths can contribute.

Generally speaking, cosmetic dentistry includes those treatments that can improve the shade, shape and position of the teeth, gum and even the lips. This paper tries to share some procedures in such aspects and see how are their clinical outcomes. The most commonly used laser wavelengths in dentistry for soft tissue nowadays are the diode laser (810 and 980nm) and Nd:YAG laser (1064nm). For Er:YAG laser (2940nm), based on its mechanism of laser-tissue-interaction, it can also be used in both soft and hard tissues.

Tooth whitening

Tooth whitening is made possible by the oxidation reaction of chemical agents which break down the colour pigments within the dental hard tissue. Commonly used chemical agents are those hydrogen peroxide and carbamide peroxide groups, of different concentrations. Traditionally, diode laser and Nd:YAG laser are used only to speed up the oxidation process. However the drawback is the post-op sensitivity and pain due to the penetrating effects of the laser light which stimulates the dental pulp. A new constituent, TiO₂, is now employed and added to the peroxide. It provides the best absorption of the diode and Nd:YAG laser, preventing further penetration into the pulp and causing the pain and sensitivity but on the other hand without jeopardising the maximal effect of the oxidation process.

The latest wavelength that is employed for bleaching is the Er:YAG laser. Similar concepts as in the addition of TiO₂ into the bleaching agent to provide the best laser light absorption and preventing penetration, Er:YAG laser is best absorbed by the water content of the bleaching agent. The light energy maximises the oxidation process but poses no stimulation to the pulp and thus minimising post-op pain and sensitivity. Research found that, with the use of a long pulse duration and low average power, the surface

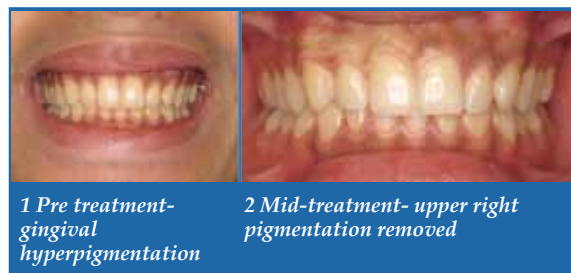
temperature of the enamel can be increased to 70 degree C but the pulpal increase is only 2-3 degree C. The energy setting is critical as this should be far beneath the ablative threshold of the enamel or scratches or cuttings will be noticed on the surface enamel layer.

Gum whitening (Depigmentation)

Melanin pigments in the gingival or mucosal area, which appear black in colour, are sometimes quite unaesthetic when the patient smiles, especially for those having a high lip line. Different laser wavelengths can be used to improve the situation by ablating the surface epithelium and melanin pigments. The following case demonstrates the use of the Er:YAG laser (2940nm) for such depigmentation procedure on the upper right anterior maxilla area, whereas on the right side, Nd:YAG laser (1064nm) was employed.

Er:YAG laser, which is best absorbed by water molecules, can ablate the epithelium layer by layer and in terms of microns of layer thickness. This wavelength is safe to the underlying tissues, such as the periosteum, alveolar bone, tooth and even the pulp as it exerts no penetrating effects. However, energy parameters are important as it may easily over-ablate into the deeper layers and the mechanism of interaction tends to open up the capillaries or blood vessels and causing bleeding. Longer pulse durations should be selected to exert maximal thermal effects to prevent bleeding.

Diode laser (810 and 980nm) and Nd:YAG (1064nm) can obtain similar outcomes by coagulating or evaporating the epithelial tissue. Different concepts of energy settings should be considered as maximal peak power and low duty cycle are essential to maximise cutting efficiency and minimise thermal damage to adjacent tissues. Also, the penetrative characteristics of these wavelengths should be borne in mind that underlying and adjacent tissues can be endangered if energy settings and application techniques are improper.



1 Pre treatment-
gingival
hyperpigmentation

2 Mid-treatment- upper right
pigmentation removed



3 One week post-treatment with pigment removed by Er:YAG laser

Similar procedures can be done if the melanin pigments appear on the lip. If the affected area is not extensive, it can be done without local anaesthesia if proper energy settings are used.



4 Pre-treatment- lip pigmentation



5 Immediately after treatment- pigment removed with Er:YAG laser



6 One week post treatment- lip pigment

Gingival re-contouring & crown lengthening

The shape and contour of the gingival tissue will indirectly affect the shape of tooth. Simply speaking, the more the gum, the shorter the crown of the tooth. And sometimes the grin appears asymmetrical with the gingival levels different on the left and right side. This will be more obvious if it appears in the central incisors where the gingival level can be compared directly.



7 Pre-treatment uneven gingival level of central incisors



8 Pre-treatment of uneven gingival levels of central incisors



9 One week post-treatment- gingival levels of central incisors make even with Er:YAG laser

However, the rule of a biological width of 2-3mm should be followed. If the gingival overgrowth is associated with a supporting alveolar bone level, osseous reduction should be done or the cut gingival margin will be relapsed eventually. The conventional method involves raising a flap surgically, where the alveolar bone is exposed and trimmed. The operation site is more extensive and thus the surgical trauma. With laser, only those involved teeth will be within the surgical site and the adjacent teeth and their gingivae are kept untouched. Firstly, the designated gum margin is prepared with Er:YAG laser with a long pulse duration for maximal thermal effects. Osseous reduction is performed with again the Er:YAG laser. However, short pulse and a higher energy setting should be employed as the water content of bone is far less than that of soft tissues and any thermal damage to bone may induce necrosis. The end cutting sapphire laser tip is inserted into the periodontal pocket with the longitudinal axis parallel to the root surface. Bone removal should be done to a depth with reference to the gingival margin until a biological width of 2-3mm is attained. Bleeding in such a condition is unavoidable. Minimal gingival resorption should be expected and this is common in soft tissue ablation with lasers. This 'closed' technique, though technique sensitive for the operator, imposes minimal surgical trauma and post-operative discomfort to the patients.



10 Uneven crown and gingival levels of upper right central incisors



11 Post-operative view immediate after osseous reduction



12 One month post treatment with right central incisor crowned



13 General short clinical crown height

14 Immediate post-operative view after gingival and osseous reduction



20 2nd case of gummy smile

21 Post treatment view after upper lip repositioning



15 One week post treatment

The following case involves several procedures. A simple orthodontic treatment was done to move the upper central incisors together. This was then followed by frenectomy, crown lengthening and veneer placement on the two lateral incisors.



22 Pre-treatment

23 Immediately after frenectomy and crown lengthening of left & right lateral incisors (minor orthodontic treatment done before to move the central incisors together)



24 Post treatment with veneer on left and right lateral incisors

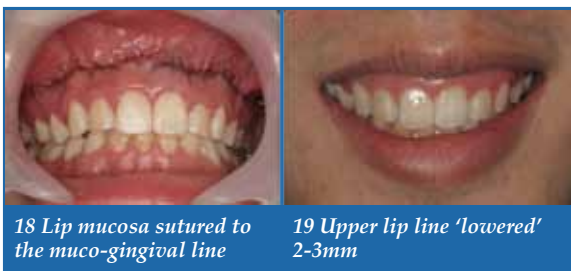
3 Upper Lip Repositioning

Excessive gingival display is another common cause of patient dissatisfaction. 'Short' upper anterior teeth or 'gummy smile' is the main point of complaint. Upper lip repositioning procedure is a surgical method to manage such excessive gingival display. Such procedure involves removing a strip of mucosa from the maxillary buccal vestibule, which is then followed by suturing the lip mucosa to the muco-gingival line. This results in a narrow vestibule and restricted muscle pull, thus less gingival area is shown during smiling. With the use of Er:YAG laser, the strip of mucosa is removed easily by ablation instead of a surgical blade.. Er:YAG is the laser of choice as the soft tissue can be ablated layer by layer with minimal risks of thermal damage to the underlying and adjacent tissues.



16 Pre-treatment showing a high lip line and gummy smile

17 Strip of mucosa from the maxillary buccal vestibule ablated



18 Lip mucosa sutured to the muco-gingival line

19 Upper lip line 'lowered' 2-3mm

Basically, the cases shown above only involved soft tissue and hard tissue ablation by different wavelengths of lasers. Compared with conventional methods, lasers make such procedures more easy and convenient to operators. And most important, patients can obtain similar or even better clinical outcomes but with minimal risks of post operative complications and discomfort.

Large Format Photography by Stitching

Dr Joseph WANG

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Private practice

In here the photography of landscape is being expressed as an art. It begins with the search of the right scene at the right time. Travelling for long distances is essential but local areas should not be excluded as potential sites. For landscapes, the higher is the level of the shots being taken, the further one can see and very often produces great shots. Luck affects photography in many ways and the weather is the most important determinant. Nature is the best provider of light as opposed to artificial sources. Sunlight going in horizontal directions is much preferred as opposed to vertical. Sunlight coming from the back gives a flat and monotonous look on the scene whereas other directions render the image more dimensional. If the shots are taken with the sun directly in front, it gives a nice enhancement on the margins.

All these factors determine how wonderful the shots could be. However, the aesthetic sense of the photographer bears the most value in the creation of the art. Whether a photographer is successful depends on the aesthetic sense. Photography will never be successful without this virtue.

The making of shots depends very much on the tools and discussions in photography do not depart from gears. Most people nowadays choose interchangeable lens cameras with frame size 24X36. I use a digital back with frame size 40X53. Although my gears are physically heavier and larger, they are the best tools in the creation of the shots I want. I stitch my photos from two to ten. The more I stitch the larger is the format. If I stitch more than three, the frame size exceeds 6X9 and it reaches the territory of large formats.

People very often ask me one question. Taking one photo is 40X53 frame size with 80 million pixels, what is the point of stitching any further? What I found is the more I stitch, the better it become in the expression of the photograph as an art. They become more dimensional with a higher degree of realism. It creates the sensation of virtual reality.

I like the natural look in film photography. However, I cannot include this in my workflow as it gives me too much to do. I used to use 24X36 frame size for the stitching but the result is not as good. It has less chances to reach the point I want.

The creation of landscape images is very much dependent on my senses. Most photographers are very much dependent on the use of viewfinders but I deliberately omit a this on my camera. I create my own mental images and in doing so my mind becomes more sensitive in the positioning of the camera at different places and heights. Good cameras for landscapes allow shifting of the sensor in multiple directions. In order to ensure an excellent

image quality, the design of the camera is such that the lens has a minimal distance from the sensor. They are so close that it does not allow to have a mirror system for the making of the viewfinder images. I do review all shots on the screen in order to adjust the framing of each photograph. I can only see the complete picture after processing all the images I have stitched together.

I do not carry an exposure meter. I review the exposure on the screen of my digital back. However, I do carry a laser distance meter for accurately checking the distance.

There are plenty of good sites for photos to be taken in Hong Kong. Opportunities for shooting become more extensive with travelling. It is very often during long trips that good shots are made.



This shot was taken in Yunnan. I used the Alpa MAX with Rodenstock 70mm Digaron lens with sensor shifted upwards for 12mm. This lens behaves best at f8 so I used f8. 10 photos were taken and being stitched as a row with the final image 400 million pixels. As the whole image cannot be shown I cut half of it. This image is only half of the original. (ISO50, 80MP Leaf back)



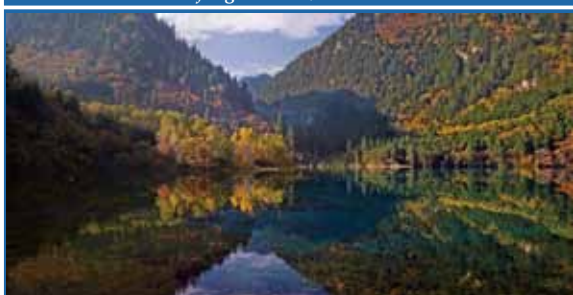
During the shooting of this tree in Xinjiang, suddenly there was a strong wind blew across and created this pattern of cloud. I very much doubt if this pattern can be reproduced again. (32mm Rodenstock f4 Digaron lens at f8, ISO 50, Alpa MAX camera, Leaf 80MP digital back two photos being taken stitched together)



This shot was taken on a sunny day in Tibet. The high altitude of Tibet created a very special lighting condition not reproducible at lower altitudes. (60mm f3.5 Hasselblad lens at f8 ISO 25 1/125s Contax 645 22MP Leaf digital back)



75mm Kinoptik f2 lens at f2 ISO50 Contax 645 Leaf 80MP digital back



This photograph was taken at 9:30 in the morning. It is quite late for sunrise but this place is surrounded by mountains. It took six shots on my Alpa MAX to create this photo as a whole.(70mm Rodenstock f5.6 Digaron lens at f8 ISO25 Alpa MAX camera 22MP Leaf digital back 6 photos sticking together to give the final 90MP)



This is a cropped version after stitching seven photographs together. The camera is Alpa MAX using Rodenstock 5.6/90mm 80MP Leaf Aptus 12. The place is Stanley peninsula in June 2014.



Rental Fees of Meeting Room and Facilities at The Federation of Medical Societies of Hong Kong

(Effective from October 2009)

Venue or Meeting Facilities	Member Society (Hourly Rate HK\$)			Non-Member Society (Hourly Rate HK\$)		
	Peak Hour	Non-Peak Hour	All day Sats, Suns & Public Holidays	Peak Hour	Non-Peak Hour	All day Sats, Suns & Public Holidays
Multifunction Room I (Max 15 persons)	150.00	105.00	225.00	250.00	175.00	375.00
Council Chamber (Max 20 persons)	240.00	168.00	360.00	400.00	280.00	600.00
Lecture Hall (Max 100 persons)	300.00	210.00	450.00	500.00	350.00	750.00
Non-Peak Hour: 9:30am - 5:30pm Peak Hour: 5:30pm - 10:30pm						
LCD Projector	500.00 per session					
Microphone System	50.00 per hour, minimum 2 hours					

The CLP CEO Cup Fun Day 2014

The CLP CEO Cup Fun Day 2014 was held on 11 May 2014 at the Kowloon Bay Sports Ground. The Federation Invitation Mixed Team participated in the CLP 2014 Fun Day Friendship Cup.

The results of the tournament are as follows,
Champion : Federation Invitation Mixed Team
1st Runner-Up : CLP Team
2nd Runner-up : HKIED Team

The Federation Team looks forward to participating in more charity and inter- company sports events. Welcome to join us and show your talents!



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Please contact the Federation Secretariat at 2527 8898 for placement of classified advertisement.



鑑於香港人口老化問題日益引起社會關注，本會早前委託香港中文大學傳播與民意調查中心進行一項有關人口老化的電話調查，訪問香港市民對有關長者的醫療服務、院舍安老、醫療融資及社會參與的認知及意見，藉此希望提高社會各界對長者的關注。

是次調查以電話訪問515位18歲或以上市民，其中60%以上受訪者是40歲或以上；近80%受訪者有中學教育程度或以上；35%受訪者有與60歲或以上的長者同住；每月家庭收入10,000元或以下的受訪者佔13%；每月家庭收入10,000至40,000元的受訪者佔50.6%；每月家庭收入40,000元或以上的受訪者佔28.2%。

問卷調查結果的重點，摘錄如下：

1 長者醫療服務及末期照顧不足，要求興建長者專科醫院

- 1.1 只有8.8%受訪者認為長者末期照顧足夠，有46%受訪者認為私營老人服務不足夠
- 1.2 有九成受訪者回應需要設立老人專科醫院

2 建議政府盡快制定長遠的長者醫療計劃

- 2.1 有八成受訪者認為政府沒有制定長遠的醫療計劃
- 2.2 有77% 受訪者願意購買醫療保險，並有七成受訪者認為長者能負擔的醫療保險並不足夠

3 要求政府需要加強規管私營院舍，並鼓勵投資者設立私營退休長者邨

- 3.1 有超過九成受訪者認為政府需要加強規管私營院舍的服務質素
- 3.2 有六成半受訪者認為需要設立私營長者邨，以應付長者安老及醫療需求
- 3.3 有78.3%受訪者認為最理想安老的地方是香港

4 長者的意見在社會上未被重視；長者表達渠道並不足夠

- 4.1 只有約一成半人認為長者的意見在社會上被重視
- 4.2 只有14%受訪者認為給予長者表達意見的渠道足夠

歡迎讀者就調查結果提出建議或意見，歡迎與本會秘書處曾小姐聯絡。

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Annual Scientific Meeting 2014 - Care for Our Older Population



On 1 June 2014, the Federation of Medical Societies of Hong Kong successfully held the Annual Scientific Meeting 2014 at the Sheraton Hotel with the theme of Care for Our Older Population. Topics covered a broad spectrum of common diseases in older patients and ageing issues, involving different specialties and disciplines. This year, we are delighted to have speakers and representatives from 中華人民共和國國家衛生和計劃生育委員會, 中華人民共和國民政部, 中國疾病預防控制中心慢性非傳染性疾病預防控制中心老年病室 and 中華醫學會. In addition, welcome dinner and office visit were arranged for our overseas guests on 31 May, 2014. We are pleased to announce that we have attracted over 200 attendances from medical, nursing, pharmaceutical and allied health professionals to join the meeting.

To promote our concern on older people, a Round Table Discussion has been held on the topic “Future Development on Elderly Services and Residential Care Homes in Hong Kong”, to discuss the policies and developments in aged care. Meanwhile, to celebrate the 20th anniversary of the College of Ophthalmologists of Hong Kong and the 60th anniversary of the Hong Kong Ophthalmological Society, a Joint Dinner Symposium has been held on the topic “Visual Impairment and Falls in Older People” in the evening. Dr Raymond LO, President of FMSHK, Dr CHOW Pak Chin, JP, President of the College of Ophthalmologists of Hong Kong and Dr Nancy YUEN, Vice-president of the College of Ophthalmologists of Hong Kong delivered informative talks to our attendances.

Finally, we would like to express our sincere gratitude to all our officiating and distinguished guests, chairmen and speakers. Our gratitude also extends to our various supporting organisations and sponsors. We look forward to collaborating with various partners and organising more academic activities for our members in the near future.



Annual Scientific Meeting 2014 - Care for Our Older Population



Annual Scientific Meeting 2014 - Care for Our Older Population





Annual Scientific Meeting 2014 - Care for Our Older Population





Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		<ul style="list-style-type: none"> HKMA Yau Tsim Mong Community Network – The New Frontiers in the Management of Dyslipidaemia HKMA Tai Po Community Network – Understanding Acid Reflux 2: Clinical Features, Pathogenesis and Efficacy of Flurpiripfen 87mg Lozenges in Sore Throat Management FMSHK Officers' Meeting HKMA Council Meeting 	<ul style="list-style-type: none"> Hong Kong Neurosurgical Society Monthly Academic Meeting – Unlocking the Diving Bell HKMA Central, Western & Southern Community Network – The Role of the Incretin Axis in Type 2 Diabetes Management 	<ul style="list-style-type: none"> HKMA Hong Kong East Community Network – Andropause HKMA Kowloon East Community Network – The Impact of Dietary Protein on Development of Infants HKMA New Territories West Community Network – Update on Certificate Course on Dementia for Primary Care Doctors (Session 3): Medical and Community Collaboration – Case Management in Community HKMA Structured CME Programme with Hong Kong Hospital Year 2014 – Update on Diabetic Eye Disease 	<ul style="list-style-type: none"> Joint Surgical Symposium - Partial Nephrectomy for Kidney Cancer HKMA Kowloon City Community Network – Recent Updates in Eczema and Allergy 	<ul style="list-style-type: none"> Lunch Symposium on Diabetes and Hypertension – What Primary Care Doctors Should Know
6	7	8	9	10	11	12
<ul style="list-style-type: none"> Tseung Kwan O Dragon Boat Race 2014 						
13	14	15	16	17	18	19
		<ul style="list-style-type: none"> HKMA Yau Tsim Mong Community Network – Certificate Course on Surgery (Session 3) HKMA Tai Po Community Network – Diagnosis and Management of Benign Prostatic Hyperplasia (BPH) 		<ul style="list-style-type: none"> KECN/UCH – Certificate Course for GPs 2014 – Management of LUTS / Prostate Cancer HKMA New Territories West Community Network – 1st Series Certificate Course on Dementia for Primary Care Doctors (Session 4): Case Demonstration FMSHK Executive Committee Meeting 		<ul style="list-style-type: none"> HKMA Yau Tsim Mong Community Network – Certificate Course on Bringing Better Health to Our Community (Session 3)
20	21	22	23	24	25	26
<ul style="list-style-type: none"> 2014 Paediatric Update No.2 – Paediatric Dermatology HKMACF Charity Concert for AFPB 		<ul style="list-style-type: none"> HKMA Yau Tsim Mong Community Network – Certificate Course on Surgery (Session 4) HKMA Annual General Meeting 	<ul style="list-style-type: none"> HKMA Central, Western & Southern Community Network – Latest Development in Hormonal Contraception & Gynecological Therapies 	<ul style="list-style-type: none"> HKMA New Territories West Community Network – New Update on Hypertension Guideline – The Combo Therapy and More FMSHK Foundation Meeting 	<ul style="list-style-type: none"> HKMA Yau Tsim Mong Community Network - Update Management of Knee Pain 	
27	28	29	30	31		
		<ul style="list-style-type: none"> HKMA Kowloon West Community Network - Diagnosis and Treatment of Axial-Spondyloarthritis (Axial-SpA) 				



Date / Time	Function	Enquiry / Remarks
4 FRI	8:00 am Joint Surgical Symposium - Partial Nephrectomy for Kidney Cancer Organiser: Department of Surgery, The University of Hong Kong & Hong Kong Sanatorium & Hospital, Chairman: Dr. Steve CHAN, Speakers: Dr. WONG Wai Sang & Dr. James TSU, Venue: Hong Kong Sanatorium & Hospital	Department of Surgery, Hong Kong Sanatorium & Hospital Tel: 2835 8698 1 CME point (Active)
	1:00 pm HKMA Kowloon City Community Network - Recent Updates in Eczema and Allergy Organiser: HKMA Kowloon City Community Network, Chairman: Dr. CHIN Chu Wah, Speaker: Dr. CHAN Wai Ming, Alison, Venue: Sportful Garden Restaurant (陶源酒家), 2/F, Site 6, Whampoa Garden, Wonderful Worlds of Whampoa, 8 Shung King Street, Hung Hom	Miss Hana YEUNG Tel: 2527 8285 1 CME point
8 TUE	1:00 pm HKMA Yau Tsim Mong Community Network - The New Frontiers in the Management of Dyslipidemia Organiser: HKMA Yau Tsim Mong Community Network, Chairman: Dr. CHOI Siu Tong, Speaker: Dr. CHEUNG Fu Keung, Venue: Jade Ballroom, Level 2, Eaton, Hong Kong	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	1:45 pm HKMA Tai Po Community Network - 1. Understanding Acid Pocket 2. Clinical Evidence of the Safety and Efficacy of Flurbiprofen 8.75mg Lozenges in Sore Throat Management Organiser: HKMA Tai Po Community Network, Speakers: Dr. YU Man Ching & Dr. WONG Han Qian, Venue: Chiuchow Garden Restaurant (潮江春) (Shop 001-003, 1/F, Uptown Plaza (新達廣場), No.9 Nam Wan Road, Tai Po)	Ms. Florence LAM Tel: 5596 0981 1 CME point
	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
	8:00 pm HKMA Council Meeting Organiser: The Hong Kong Medical Association, Chairman: Dr. TSE Hung Hing, Venue: HKMA Head Office (5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong)	Ms. Christine WONG Tel: 2527 8285
9 WED	7:30 am Hong Kong Neurosurgical Society Monthly Academic Meeting - Unlocking the Diving Bell Organiser: Hong Kong Neurosurgical Society; Chairman: Dr. Gilberto LEUNG, Speaker: Dr. TSANG Chun On, Anderson, Venue: Seminar Room, Ground Floor, Block A, Queen Elizabeth Hospital	Dr. LEE Wing Yan, Michael Tel: 2595 6456 1.5 CME points
	1:00 pm HKMA Central, Western & Southern Community Network - The Role of the Incretin Axis in Type 2 Diabetes Management Organiser: HKMA Central, Western & Southern Community Network, Chairman: Dr. YIK Ping Yin, Speaker: Dr. IP Tai Pang, Venue: HKMA Central Premises (Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, HK)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
10 THU	1:00 pm HKMA Hong Kong East Community Network - Andropause Organiser: HKMA Hong Kong East Community Network, Chairman: Dr. LI Keung, Speaker: Dr. YIP Wai Chun, Andrew, Venue: HKMA Head Office (5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	1:00 pm HKMA Kowloon East Community Network - The Impact of Dietary Protein on Development of Infants Organiser: HKMA Kowloon East Community Network, Chairman: Dr. AU Ka Kui, Gary, Speaker: Dr. YIP Mung Sze, Cynthia, Venue: Lei Garden Restaurant Shop no. L5-8, apm, No. 418 Kwun Tong Road, Kwun Tong	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	1:00 pm HKMA New Territories West Community Network - 1st Series Certificate Course on Dementia for Primary Care Doctors (Session 3): Medical and Community Collaboration - Case Management in Community Organiser: HKMA New Territories West Community Network, Chairman: Dr. CHUNG Siu Kwan, Ivan, Speaker: Dr. Stanley TAM, Venue: Plentiful Delight Banquet (元朗喜尚嘉喜酒家) (1/F Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	2:00 pm HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2014 - Update on Diabetic Eye Disease Organiser: HK Medical Association & HK Sanatorium & Hospital, Speaker: Dr. Chen Ngan, Ivan, Venue: Function Room A, HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 1 CME point
12 SAT	1:00 pm Lunch Symposium on Diabetes and Hypertension - What Primary Care Doctors Should Know Organiser: The HK College of Family Physicians and Primary Care Office, Department of Health, Chairman: Dr. CHAN Chi Wai, Speakers: Dr. TSANG Man Wo, Prof. WONG Chi Sang Martin & Prof. LAM Lo Kuen Cindy, Venue: Victoria Room 1, 3/F, HK Regal Hotel, Causeway Bay	Ms. Windy LAU Tel: 2528 6618 2 CME points
13 SUN	8:00 pm Tseung Kwan O Dragon Boat Race 2014 Organiser: Tseung Kwan O Dragon Boat Association Company Limited, Chairman: Dr. YAM Chun Yin, Abraham, Venue: 新界將軍澳東水道	Mr. Andie HO Tel: 2527 8285
15 TUE	1:00 pm HKMA Yau Tsim Mong Community Network - Certificate Course on Surgery (Session 3) Organiser: HKMA Yau Tsim Mong Community Network, Chairman: Dr. WONG Kam Ho, Speakers: Dr. TSE Cheuk Wa, Chad & Dr. KWOK Ka Fai, Venue: Lecture Theatre, 10/F, Yu Chun Keung Memorial Medical Centre, Kwong Wah Hospital, 25 Waterloo Road, Kowloon	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	1:00 pm HKMA Tai Po Community Network - Diagnosis and Management of Benign Prostatic Hyperplasia (BPH) Organiser: HKMA Tai Po Community Network, Speaker: Dr. FU Kam Fung, Kenneth, Venue: Chiuchow Garden Restaurant (潮江春) Shop 001-003, 1/F, Uptown Plaza (新達廣場), No.9 Nam Wan Road, Tai Po	Ms. Silvy PUN Tel: 3189 8759 1 CME point
17 THU	1:00 pm KECN/UCH - Certificate Course for GPs 2014 - Management of LUTS / Prostate Cancer Organiser: HKMA Kowloon East Community Network, United Christian Hospital, Chairman: Dr. SHIU Ka Lok, Ivan, Speaker: Dr. SO Hing Shing, Venue: East Ocean Seafood Restaurant, (Shop 137, 1/F, metro City Plaza 3, 8 Mau Yip Road, Tseung Kwan O, Kowloon)	Ms. Polly TAI Tel: 3513 3430 Ms. Cordy WONG Tel: 3513 3087 1 CME point
	1:00 pm HKMA New Territories West Community Network - 1st Series Certificate Course on Dementia for Primary Care Doctors (Session 4): Case Demonstration Organiser: HKMA New Territories West Community Network, Chairman: Dr. TSUI Fung, Speaker: Dr. Jess LEUNG, Venue: Plentiful Delight Banquet (元朗喜尚嘉喜酒家) (1/F Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	8:00 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
19 SAT	1:00 pm HKMA Yau Tsim Mong Community Network - Certificate Course on Bringing Better Health to Our Community (Session 3) Organiser: HKMA Yau Tsim Mong Community Network, Speakers: Dr. CHOY Pui Sang & Dr. HUI Lung Kit, Venue: Block M, Lecture Theatre, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon	Ms. Noel AU YEUNG Tel: 2958 8608 Ms. Mandy LEUNG Tel: 2958 8613 Miss Hana YEUNG Tel: 2527 8285



Date / Time	Function	Enquiry / Remarks
20 SUN	2:00 pm 2014 Paediatric Update No.2 – Paediatric Dermatology Organiser: HK College of Paediatricians and HK Paediatric & Adolescent Dermatology Society; Chairmen: Prof. YL LAU & Dr. David CK LUK, Venue: M-Ground, Lecture Theatre, Queen Elizabeth Hospital, Kowloon	Ms. Lily LIN Tel: 2871 8752 3 CME points
	8:00 pm HKMACF Charity Concert for AFPB Organiser: Hong Kong Medical Association Charitable Foundation, Chairman: Dr. CHOW Pak Chin, JP, Venue: Academic Community Hall, Hong Kong Baptist University (224 Waterloo Road, Kowloon)	Ms. Candy YUEN Tel: 2527 8285
22 TUE	1:00 pm HKMA Yau Tsim Mong Community Network – Certificate Course on Surgery (Session 4) Organiser: HKMA Yau Tsim Mong Community Network, Chairman: Dr. CHAN Wai Keung, Ricky, Speakers: Dr. LI Kam Hop, George & Dr. CHAN Ho Yan, Yolanda, Venue: Lecture Theatre, 10/F, Yu Chun Keung Memorial Medical Centre, Kwong Wah Hospital, 25 Waterloo Road, Kowloon	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	9:00 pm HKMA Annual General Meeting Organiser: The Hong Kong Medical Association, Chairman: Dr. TSE Hung Hing, Venue: HKMA Head Office (5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong)	Ms. Christine WONG Tel: 2527 8285
23 WED	1:00 pm HKMA Central, Western & Southern Community Network – Latest Development in Hormonal Contraception & Gynecological Therapies Organiser: HKMA Central, Western & Southern Community Network, Chairman: Dr. TSANG Chun Au, Speaker: Dr. KUN Ka Yan, Venue: HKMA Central Premises (Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
24 THU	1:00 pm HKMA New Territories West Community Network – New Update on Hypertension Guideline – The Combo Therapy and More Organiser: HKMA New Territories West Community Network, Speaker: Dr. LAW Tin Chu, Venue: Plentiful Delight Banquet (元朗喜尚嘉喜酒家), 1/F., Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long	Miss Hana YEUNG Tel: 2527 8285 1 CME point
	8:00 pm FMSHK Foundation 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
25 FRI	1:00 pm HKMA Yau Tsim Mong Community Network - Update Management of Knee Pain Organiser: HKMA Yau Tsim Mong Community Network, Chairman: Dr. LAM Yick Wang, Clement, Speaker: Dr. CHAK Hing Chung, Eric, Venue: Jade Ballroom, Level 2, Eaton, Hong Kong (380 Nathan Road, Kowloon)	Miss Hana YEUNG Tel: 2527 8285 1 CME point
29 TUE	1:00 pm HKMA Kowloon West Community Network - Diagnosis and Treatment of Axial-Spondyloarthritis (Axial-SpA) Organiser: HKMA Kowloon West Community Network, Chairman: Dr. WONG Wai Hong, Bruce, Speaker: Dr. LEE Tsz Yan, Samson, Venue: Crystal Room I-III, 30/F, Panda Hotel, 3 Tsuen Wah Street, Tsuen Wan	Miss Hana YEUNG Tel: 2527 8285 1 CME point

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Answers to Dermatological Quiz

- The discrete and grouped erythematous inflammatory excoriated papules and pustules symmetrically affecting the perioral area of this young woman who has been using a topical cream, possibly steroid, are most compatible with the clinical diagnosis of perioral dermatitis. In fact, she has been using an ultra-potent topical steroid of clobetasol propionate (dermovate) cream on her itchy face for three months. Perioral dermatitis is characterised by small discrete papules and pustules in a periorifacial distribution, predominantly around the mouth. The relationship of perioral dermatitis to the misuse of potent topical steroid has been well established. Patients often reveal a history of an acute steroid-responsive eruption around the mouth, nose and/or eyes that worsens when the over-potent topical corticosteroid is discontinued. The differential diagnoses should include acne vulgaris, rosacea, seborrhoeic dermatitis, allergic contact dermatitis and Gram-negative folliculitis.
- The topical steroid used by our patient should be discontinued immediately. Initial substitution with a low potency hydrocortisone cream may minimise a flare of dermatitis. In most cases, treatment includes oral tetracycline, doxycycline, or minocycline for a course of 8 to 10 weeks, including a taper over the last 2 to 4 weeks. Topical antibiotic therapy such as topical metronidazole should be initiated concurrently with the systemic antibiotic. Patients should be educated about the link between the abuse of topical corticosteroids and exacerbation of the perioral dermatitis.

Dr Ka-ho LAU

MBBS(HK), FRCP(Glasg, Edin), FHKCP, FHKAM(Med)
Private dermatologist

The Federation of Medical Societies of Hong Kong
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Course No. C246

CME/CNE Course

Certificate Course on Sports Medicine and Emergencies

Sports Medicine Files: Perspective from Emergency Physicians 運動醫學急症檔案

Jointly organised by



The Federation of Medical
Societies of Hong Kong



Hong Kong Society for Emergency
Medicine and Surgery

Objectives:

Sport Injury is a common presentation to the Emergency Department. Different sports have their own patterns of injury. In "Emergency Sport Medicine Files", injuries and emergency conditions from six popular sports will be discussed from the Emergency Physicians' perspective. You will learn specific sports related emergency situations, preventive measures and their emergency management in this course. This knowledge is essential for anyone engaged in these sports.

因運動損傷而到急症室求診是非常普遍。不同的運動會有自己獨特的受傷模式。在“急症運動醫學檔案”中，將從急診醫生的角度，來討論六種時下流行運動的受傷及緊急情況。在這課程中您將學習具體與該運動相關的緊急情況，預防措施和應急處理。這方面的知識是從事這些運動的人所必需的。

Date	Topics	Speakers
1 Aug	File 1: A distance runner- Nutrition preparation, Load up and Recovery 跑得冇營	Dr. Chung-Hang HO, FHKCEM 何頌恒醫生 香港急症科醫學院院士
8 Aug	File 2: A contact sport player 短兵相接	Dr. Kenneth Wing-Cheung WU, FHKCEM 胡永祥醫生 香港急症科醫學院院士
15 Aug	File 3: A swimmer and scuba diver 活在水世界	Dr. Kwan-Leong AU YEUNG, FHKCEM 歐陽君亮醫生 香港急症科醫學院院士
22 Aug	File 4: A sudden collapsed field player 球場上的最後戰士	Dr. Willis Wing-Hong KWOK, FHKCEM 郭永康醫生 香港急症科醫學院院士
29 Aug	File 5: A trail walker and marathon runner 千里走單騎	Dr. Kam-Leung LAW, FHKCEM 羅金亮醫生 香港急症科醫學院院士
5 Sep	File 6: A skier and snowboarder 雪嶺雄峰	Dr. Elvis Ying-Leung MAK, FHKCEM 麥應良醫生 香港急症科醫學院院士

Dates : 1 August 2014 – 5 September 2014 (Every Friday)

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

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