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Sports Medicine

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The Cover Shot

The bird has for centuries fascinated mankind for its ability to fly, as if serving as a messenger between earth and heaven. The phoenix was a royal emblem during the Shang and Zhou Dynasty. The Eagle is used by many countries as a national logo! Some birds possess amazing athletic abilities. For instance, the peregrine falcon can fly at a speed up to 270 miles/hour while swooping down on its prey.

The bird shown here is the Lilac Breasted Roller (Caracas Caudatus) which is the national bird of Botswana, although it is found in many African countries like Tanzania, Zambia, etc.

Despite its small size, weighing no more than 4 oz, this roller is considered one of the most beautiful birds in the world, owing to its pastel plumage, striking marks and long tail streamers. This bird is strikingly colourful with a total of 10 colours.

A tiny bird like this roller perching on a tree branch is not difficult to capture in a photo, but to 'freeze' it in flight showing its intricately colourful ventral side and fully spread wings requires the right moment, patience, quite a bit of luck, and of course, the right kind of camera and telephoto lens. To have the opportunity to see and to take photos of such wildlife in their natural habitat is the reason why many people are so fond of making trips to Africa, over and over again!

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Out of Your Comfort Zone in Sports Medicine: The Facts & Fictions


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Editor

WHAT IS SPORTS MEDICINE?

Sports Medicine is a subspecialty in medicine that deals with exercise & physical fitness, as well as treatment and prevention of injuries related to exercise and sports participation. The scope of service already highlights the characteristics of Sports Medicine, which is indeed involving skills and knowledge from multidiscipline to work for the best benefit of human beings in sports participation, and not just limited to dealing with sports injuries.

In some developed countries, Sports Medicine is a recognised medical specialty (with similar training and standards to other medical specialties), whereas, in many other countries/regions, including Hong Kong, it is a special interest area but not an actual specialty. It can broadly also refer to doctors and many other paramedical practitioners who very often work together as a team to ensure the best fitness, performance, injury prevention, treatment & recovery for those who participate in sports and exercise. Very often, for a well-established Sports Medicine team, members should include Sports Physicians, Orthopedic Surgeons, Certified Sports/Athletic Trainers, Sports Physiotherapists, Sports Scientist (e.g. Sports Dietitians, Psychologist, Physiologist, Bio-mechanists……). Usually, the medical doctor is the leader and chief coordinator to lead the team to excel for the athletes and patients.

DEVELOPMENT OF SPORTS MEDICINE IN HONG KONG & AROUND THE WORLD

Sports Medicine societies were first established in Switzerland (1922) followed by Germany (1924), France (1929) and Italy (1929).[1] Hong Kong Association of Sports Medicine & Sports Science (HKASMSS)[2] was established in 1988 and registered under the Sports Federation & Olympic Committee of Hong Kong as one of the National Sports Association. The Association is also a member of The International Federation of Sports Medicine (FIMS) and the Asian Federation of Sports Medicine (AFSM). HKASMSS aims to promote and advance the practice, education and research of medicine and science in relation to sports and exercise, and has undertaken much promotional work including organising conference, seminars and practical workshops to train more medical practitioners and to equip them with relevant knowledge and skills in different areas of Sports Medicine. HKASMSS also publishe its own journal and promote scientific research on Sports Medicine and provide medical service to the sporting, medical and scientific communities. It is important to note that Sports Medicine is not yet a medical specialty in Hong Kong; Sports Medicine has remained a special interest area with different medical professionals contributing their own strength and expertise in the development of this science.

Sports Medicine was first established as a medical specialty in Italy, the first country, in 1958. After more than 60 years of development, Sports Medicine is now a recognised medical specialty in over 30 countries worldwide and a recognised subspecialty in some other countries/cities.[1] The European Union of Medical Specialists has defined necessary training requirements for establishing the specialty of Sports Medicine in

specific European countries. It is a goal of the European Federation of Sports Medicine Associations (EFSMA) to eventually establish Sports Medicine as a specialty in all European countries.[1] For example, European templates for Sports Medicine specialisation generally involve four years of specialist training,[1] including internal medicine, with special emphasis on Cardiology, Emergency medicine and clinical nutrition, Orthopedics and Traumatology, as well as Physical and Rehabilitation medicine. Fellowship programmes were impletemented all over Europe in recognised Sports Medicine centres for training. Similarly, in Australia and New Zealand, Sport and Exercise Medicine is a standalone medical specialty, with the Australasian College of Sport and Exercise Physicians being one of Australia's 15 recognised medical specialty Colleges.[1]

However, not necessaily all the developed countries offer a recognised Sports Medicine Specialty. Such recognition has not yet occurred in some of the countries with very strong pedigrees in academic publication in the Sports Medicine field, including the U.K., Sweden, Norway, South Africa or even the U.S.A..[1] Sports Medicine indeed is only a subspecialty field rather than a standalone specialty in the U.S.A. and Canada, very much similar to Hong Kong. Taiwan, Singapore, Thailand, India and Iran have been working on the development of a distinct Sports Medicine specialty for years, but until now, there is no country in Asia with well established and standalone medical specialty in Sports Medicine, which largely functions as a subspecialty field. There are quite a number of Asian countries/cities (India, Taipei, Singapore, Tehran…) providing different postgraduate education programmes for the training of Sports Medicine practitioners, including the Master of Science programme in Sports Medicine & Health Science run by The Chinese University of Hong Kong (CUHK) since 2004. The CUHK programme is one of the oldest and most reputable post-graduate programmes in the world, having already nurtured over 800 graduates.

WALKING OUT OF THE COMFORT ZONE FOR MODERN DAY SPORTS MEDICINE DOCTORS!

As already pointed out earlier, in Hong Kong right now, Sports Medicine is not a medical specialty, but a special interest area with doctors mainly coming from Orthopaedics, Cardiology, Emergency medicine, family doctors or other specialties, along with a sizeable group of physiotherapists regularly contributing to this field. The majority of this group of experts have had in-depth training and knowledge acquisition in Musculoskeletal medicine, particularly in the treatment, rehabilitation, and prevention of sports injuries; they regularly take care of sports injuries of individual players or teams. Some other experts, a relative minority, are dealing with illnesses, such as cardiac disease, asthma or diabetes, that may affect the health and physical performance of individual players during sports participation.

As mentioned earlier, most of the doctors with interests in Sports Medicine in Hong Kong are focusing on dealing with musculoskeletal injuries, particularly those injuries involving common areas such as the knee, ankle, and shoulder. However, along the rapid development of "fashions" of different kinds of new sports activities in Hong Kong in recent years, there are more and more sports injuries involving those "No man's land" areas, such as the fingers, wrists, elbows, feet and toes. The increasing incidents of this new group of injuries have required our Sports Medicine practitioners to be equipped with the appropriate knowledge and skills to handle and to provide the best optimal and appropriate care. There is also an increasing trend in application of alternative therapies or application of biologics in tackling sports injuries; in particular, the different types of injection therapies have become one of the hottest topics in Sports Medicine in recent years. I do believe that there is a need to explore new science for tackling some difficult sports injuries. Nevertheless, we definitely need to understand and to be able to differentiate all the "Facts" from the "Fictions", demanding vigorous backing up with scientific evidence and evidence-based medicine, whenever we consider new treatment regimes.

In addition to managing sports injuries, modern-day Sports Medicine doctors should also work to improve the performance of the athlete, as well as ensuring their safety while performing the sports activity. The latter work includes assessment of medical fitness before participating in sports, injury risk assessment, implementation of sports-specific injury prevention programmes, as well as taking their practice from the consultation room on to the sports field. Moreover, Sports Medicine doctors should also very often promote the benefits of regular physical activities by delivering concepts of "Exercise is Medicine"[3] and physical activities interventions, including a healthy life style and diet, to prevent chronic illness such as hypertension & diabetes, minimising the burden of disease directly attributable to physical inactivity.

FUTURE DEVELOPMENT OF SPORTS MEDICINE IN HONG KONG

Sports Medicine, in itself as a specialty in medicine, is yet to be realised in Hong Kong. We have good models from other countries, particularly from Europe, to learn and take reference from. But to be able to do so in Hong Kong in response to to the increasing demands and needs, relevant training, accreditation, career prospect and most importantly, government policies are all very important elements to be established or enhanced. To prepare for the upcoming challenges and opportunities, Sports Medicine doctors in the modern era should also be multi-talented and prepared to walk out of their current comfort zone with focus mainly on taking care of sports injuries. They should ideally be all rounded, with comprehensive skills and knowledge in Sports Medicine and having very good communication skills. To steer the Sports Medicine team, they should also be well connected to others including doctors of other specialties, physiotherapists, sports dietitians and psychologists, and other sports scientists, so as to work out the best advice for their clients, inclusive of both professional sportsmen and amateur folks who are participating in sports just for wellness.

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Why is My Wrist Painful after Sports?

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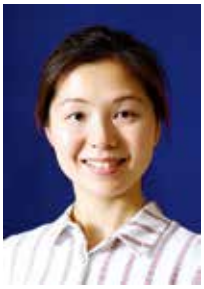

Dr Clara Wing-yee WONG

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 2021.

INTRODUCTION & EPIDEMIOLOGY

The wrist is a complex joint. It consists of 15 pieces of bone, more than 25 articulations, and more than 40 named ligaments. There are 24 tendons, two major blood vessels, two major nerves and numerous cutaneous nerves crossing and sophistically constituting the wrist. Injury to any of the above structures commonly happens in sports.

There are no epidemiological data on sports injuries related only to the wrist region. Previous studies revealed that approximately 25% of all sports-related injuries involve the hand and wrist[1,2]. The present incidence should be higher as a result of the increased activity level of the general population, and as wrist injuries are better understood and identified in recent years. Among all the sports-related wrist injuries, distal radius fracture is the most easily recognised disease. It accounts for 23% and 17% of all sports-related fractures in adolescents and adults, respectively.[3] Fall on an outstretched hand or high energy collisions in any sport explains the fractures. They are common with badminton, basketball, gymnastics and ice-skating, while soccer contributes to 20% to 50% of distal radius fractures sustained during the sport.[4-6] In Hong Kong, soccer has made up the majority of emergency attendance with sports injury.[7] Distal radius fracture produces acute pain, swelling, bruising and even deformity, which prompts the sports players to seek medical attention immediately. X-ray appearance is usually obvious. A delay in treatment from missed diagnosis is therefore rare.

However, many players are annoyed by various kinds of wrist pain for which the diagnosis is not as obvious. Many wrist problems are initially disregarded and result in a delay in treatment with consequential impacts and complications. Although the epidemiology of sports-related wrist injuries is lacking, the high prevalence rate of up to 73% for wrist pain and 28% for overuse wrist injury, and the incidence rate of up to 9% for wrist pain and 26% for overuse wrist injury in young athletes shown in a systemic review published in 2015 signify that wrist problem in sports should be a notable issue for the whole population.[8]

CAUSES OF WRIST PAIN AFTER SPORTS

Causes of wrist pain after sports are numerous, as shown in Table 1. Wrist pain that has happened after sports could have resulted from (1) a direct impact during an acute injury, e.g. fall, collision, sudden forceful twisting/rotation/extension/flexion/radial deviation/ulnar deviation, or from (2) an overuse injury, e.g. repetitive wrist loading in different directions. The following is an overview of the common causes of wrist pain (besides distal radius fracture) sustained in sports.

RADIAL WRIST PAIN

A. Scaphoid Fracture

Scaphoid fracture is the commonest carpal fracture, accounts for 60 - 90% of all carpal fractures.[9,10] It has been estimated that nearly 1% of college football players will sustain a scaphoid fracture per year.[11] Falling onto an outstretched hand, usually with the wrist in extension and radial deviation such that the scaphoid becomes more prominent and hits onto the floor, would result in a fracture. A direct blow to the wrist, such as being hit by a baseball, can also fracture the scaphoid.

Approximately 75% of the surface of the scaphoid is covered with cartilage.[12,13] 70 - 80% of the scaphoid, and the whole proximal pole vascularity are supplied from branches of the radial artery entering through the distal dorsal ridge.[14] The large volume of bone dependent on a single intra-osseous vessel poses a high risk of avascular necrosis and fracture nonunion.[15] Since the vascularity of the scaphoid is tenuous, bruising and pain after the fracture may not be obvious enough to prompt the players to seek care. It is not uncommon to find a scaphoid fracture developed into nonunion with a remote history of a wrist sprain. An acute scaphoid fracture is sometimes not easily visualised on X-rays because of its peculiarly twisted peanut-like shape. Missing a diagnosis poses a devastating injury to athletes and even ends the sports career for the combat sports players.[16]

Exquisite tenderness in the anatomical snuffbox or in axial loading of the thumb should raise the suspicion of a scaphoid fracture. X-rays of the wrist include

Table 1: Examples of the causes of wrist pain from sports. (Developed by author)

REGION OF WRIST PAIN	Structure	Type of Injury	Examples of Related Sports
RADIAL	Bone	Distal radius fracture	- Fall/Direct collision/Axial loading in any sports - Combat sports
		Scaphoid fracture	
		Metacarpal base fracture/Subluxation	
		Bennett's fracture, Rolando fracture	- Fall/Direct collision/Axial loading in any sports - Combat sports - Handlebar injury
		Trapezium fracture, Trapezoid fracture	
	Joint/ Ligament	Radiocarpal ligament tear (usually with ganglia at the volar radial wrist)	- Gymnastics, Yoga, Pilates
		Radial styloid Impingement Syndrome	- Golf, Gymnastics
	Tendon	DeQuervain's disease	- Bowling, Golf, Rowing, Racket sports, Rope skipping
		Intersection syndrome (Oarsman's wrist)	- Rowing, Weight lifting, Weight pulling, Rope skipping
		Flexor Carpi radialis tendonitis	- Golf, Tennis, Volleyball, Water polo
	Nerve	Wartenberg's syndrome	- Direct contusion just proximal to the protective gloves in Hockey, Lacrosse, American football - Rowing, Table tennis
ULNAR	Bone	Triquetral fracture	- Fall in any sports
		Ulnar styloid fracture	
		Hook of hamate fracture	- Golf, Squash, Gymnastics, Under-water rugby, other racket sports
		Pisiform fracture	- Fall in any sports, in-line skating, Racket sports, Volleyball
	Ligament	TFCC (Triangular Fibrocartilage Complex)	- Racket sports, Golf, Baseball, Gymnastics, Yoga, Karate, Kendo, Kickboxing, Martial arts and other combat sports
		Lunotriquetral instability	- Fall in any sports
	Joint	Ulnar impaction syndrome	- Weight lifting, Push-up, Gymnastics, Racket sports
		Ulnar styloid impaction syndrome	- Hockey, Ice-hockey, Gymnastics
		DRUJ (Distal Radioulnar Joint) Arthritis	- Gymnastics, Tennis, Golf, Combat sports, Weight lifting
		Pisotriquetral arthritis	- Golf, Tennis, Volleyball, Racket sports
		Tirquetrohamate impingement	- American football, Hockey, Gymnastics, Weight lifting, Racket sports, Yoga
		Lunohamate impingement	
	Tendon	ECU (extensor carpi ulnaris) tendonitis	- Tennis, Golf, Rugby, Hockey
		FCU (flexor carpi ulnaris) tendonitis	- Rugby, Squash, Badminton, Golf
	Nerve	Guyon's canal syndrome	- Cycling, Weight Lifting, Hockey, Rock-climbing, Rowing, Swimming, Wheelchair athletics
	Artery	Hypothenar hammer syndrome	- Tennis, Golf, Badminton, Hockey
CENTRAL	Bone	Capitate fracture	- Fall in any sports
		Lunate fracture	
		Kienbock's disease	- Gymnastics, Handball, American football, Push-ups
	Ligament	Scapholunate dissociation	- Fall in any sports, American Football, Rugby, Kickboxing, Karate, other combat sports
		DCSS (dorsal capsule scapholunate septum) injury	- Weight lifting, Gymnastics, Yoga, Pilates, Push-ups
	Nerve	Carpal tunnel syndrome	- Cycling, Weight lifting, Hockey, Rock-climbing, Rowing, Swimming, Wheelchair athletics
		Distal posterior interosseous nerve impingement syndrome	- Gymnastics, Weight lifting, American football, Yoga

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GIST=gastrointestinal stromal tumor
*Advanced GIST can be locally advanced or metastatic[3]

Reference: 1. QINLOCK Abbreviated Prescribing information. Jun 2020 **2.** NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Gastrointestinal Stromal Tumors (GISTs) V.1.2021. ©National Comprehensive Cancer Network, Inc. 2020. Accessed October 30, 2020. **3.** Understanding Advanced and Metastatic Cancer. American Cancer Society. https://www.cancer.org/treatment/understanding-your-diagnosis/advanced-cancer/what-is.html. Accessed on May 5, 2021.

Abbreviated Prescribing Information

INDICATIONS
Qinlock is indicated for the treatment of adult patients with advanced gastrointestinal stromal tumor (GIST) who have received prior treatment with imatinib, sunitinib, and regorafenib.

DOSAGE AND ADMINISTRATION
150mg (three 50mg tablets) taken orally once daily. Dosage reduction for adverse reaction is 100mg orally once daily. Permanently discontinue QINLOCK in patients who are unable to tolerate 100 mg orally once daily. Please refer to the full prescribing information for recommended dosage modifications for adverse reactions and missed dose.
Qinlock is not indicated in pediatrics (<18 years old). No dose adjustment is required for geriatrics (≥65 years old).
Renal impairment – No dose adjustment is recommended for patients with mild and moderate renal impairment [creatinine clearance (CrCl) 30 to 89 mL/min estimated by Cockcroft-Gault]. The pharmacokinetics and safety of Qinlock in patients with end-stage renal disease (CrCl <15mL/min estimated by Cockcroft-Gault or requiring dialysis) or severe renal impairment (CrCl 15 to 29 mL/min) have not been studied.
Hepatic impairment – No dose adjustment is recommended in patients with mild hepatic impairment (total bilirubin ≤1 x ULN and AST >1 x ULN, or total bilirubin 1.0 to 1.5 x ULN). The pharmacokinetics and safety of Qinlock in patients with moderate or severe hepatic impairment have not been studied.

CONTRAINDICATIONS
Hypersensitivity to ripretinib or to any ingredient in the formulation, including any non-medicinal ingredient, or component of the container.

WARNINGS AND PRECAUTIONS
The following are clinically significant adverse events: 1) Cardiac dysfunction. Cardiac failure and Grade 3 decreased ejection fraction has occurred in clinical study. Cardiac dysfunction has led to dose discontinuation. An assessment of the ejection fraction by echocardiogram or MUGA scan is recommended prior to initiation and during treatment, as clinically indicated. Permanently discontinue Qinlock for Grade 3 or 4 left ventricular systolic dysfunction; 2) Hypertension. Higher incidence of hypertension in patients treated with Qinlock than in placebo-treated patients in clinical study. Do not initiate Qinlock in patients with uncontrolled hypertension. Adequately control blood pressure prior to initiating Qinlock; 3) New primary cutaneous malignancies. Squamous cell carcinoma (SCC) of the skin and melanoma, actinic keratosis, keratoacanthoma and melanoma were reported in patients who received Qinlock in clinical study. Dermatological assessment should be performed when initiating Qinlock and patients should receive dermatological examinations routinely.
Other warnings and precautions include cardiac ischaemic events, hypersensitivity, wound healing, reproduction, fertility, palmar-plantar erythrodysesthesia syndrome (PPES) and photosensitivity.

PREGNANCY AND BREAST-FEEDING
Pregnancy - Qinlock should not be administered to pregnant women. Advise females of reproductive potential and males with female partners of reproductive potential to use effective contraception to commence 2 weeks prior to treatment, during treatment and for at least one complete uterine cycle after the final dose of Qinlock.
Breast-feeding - Advise women not to breastfeed during treatment and for at least 2 weeks after the final dose.

ADVERSE REACTIONS
The most common adverse events (≥20%) observed in clinical study were alopecia, fatigue, nausea, abdominal pain, constipation, myalgia, diarrhea, decreased appetite, palmar-plantar erythrodysesthesia syndrome, and vomiting. Serious adverse events occurred in 31% of patients who received Qinlock. Serious adverse reactions that occurred in >2% of patients were abdominal pain (4.7%), anemia (3.5%), nausea (2.4%), vomiting (2.4%).
Dosage interruptions due to an adverse event occurred in 23.5% of patients who received Qinlock. Adverse events requiring dosage interruption in >2% of patients included nausea (3.5%), increased blood bilirubin (2.4%), and PPES (2.4%).
Dose reductions due to an adverse event occurred in 7.1% of patients who received Qinlock. Adverse events resulting in a dose reduction in ≥1.2% of patients were abdominal pain, agitation, alopecia, arthritis, dermatosis, gastrointestinal disorder, hyperesthesia, myalgia, PPES, and decreased weight.
Permanent discontinuation due to an adverse event occurred in 8.2% of patients who received Qinlock. Adverse events resulting in permanent discontinuation in ≥1% of patients included general physical health deterioration (2.4%), anemia (1.2%), cardiac failure (1.2%), PPES (1.2%), and vomiting (1.2%).

DRUG INTERACTIONS
In vitro data suggested that CYP3A4/5 is the major metabolizer of ripretinib. Potential interactions may occur with drugs/foods/herbs that are inhibitors or inducers of this enzyme system. Monitor patients more frequently for adverse reactions if Qinlock is given concurrently with a strong CYP3A inhibitor. Avoid concomitant use of Qinlock with strong CYP3A inducers. Monitor patients who ingest grapefruit juiced while taking Qinlock. Avoid concomitant use with St. John's wort.
Please refer to the full prescribing information before prescribing.
Ref. HKPI Nov 2020 (Canadian PM 19 Jun 2020)

HK-QIN-202104-03

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posteroanterior (PA), lateral, scaphoid long profile views, semi-supination and semi-pronation views. A high-resolution CT scan should be arranged for fracture identification or alignment in suspicious cases where fracture cannot be visualised on X-rays. MRI may be needed sometimes to confirm an occult fracture.

B. Radial Sided Tendinopathies

1. DeQuervain's Disease

It is the commonest wrist tendinopathy in sports. Repetitive thumb extension and abduction, or repeating gripping, grasping, pinching or wring actions irritate the sheath (first extensor compartment retinaculum) around the two tendons (abductor pollicis longus (APL) and extensor pollicis brevis (EPB)), causing thickening and swelling that restricts their motion. Swelling and tenderness localised at the first extensor compartment (Fig. 1), limited thumb abduction and extension action, pain at resisted thumb abduction, marked pain when the wrist is bent ulnar-wards while the player is grabbing the thumb within a fist (modified Eichoff's test) (Fig. 1), and pain when the thumb is grasped and being pulled ulnar-wards (Finkelstein's test) make the diagnosis.

Fig. 1: Modified Eichoff's test
(Photo from personal collection)

Fig. 2. Painful area in intersection syndrome
(Photo from personal collection)

2. Intersection Syndrome (Oarsman's Wrist)

It is tenosynovitis at the crossing point between the first (APL and EPB) and second (extensor carpi radialis longus and brevis) extensor compartment tendons, resulted from repetitive resisted wrist extension. Players typically experience tenderness at around 4 - 8 cm proximal to the Lister's tubercle (Fig. 2) and pain at resisted wrist extension and radial deviation. MRI of the wrist and distal forearm is useful to confirm the diagnosis.

3. Flexor Carpi Radialis (FCR) Tendonitis

FCR travels from the medial elbow across the radial wrist through a fibro-osseous tunnel adjacent to the trapezium towards its insertion on the second metacarpal. This deviated course predisposes the tendon to irritation by repetitive wrist flexion or acute over-stretching. Radial wrist pain courses from the radial palmar wrist crease towards the base of the second metacarpal, and is aggravated on resisted wrist flexion and radial deviation.

ULNAR WRIST PAIN

A. Triquetral Fracture

Fracture of the dorsal cortex of triquetrum is the second most common carpal fracture resulting from impaction, avulsion or shear force. A fall with the wrist extended and ulnar deviated, causing impaction of the ulnar styloid on the dorsum of the triquetrum, is the commonest mechanism. There is swelling and pain at the dorsal ulnar wrist. Tenderness is localised on the dorsum of triquetrum (Fig. 3). Because of overlapping carpal bone shadows, this fracture may be missed on a PA or lateral X-ray. A semi-pronation view makes the fracture fragment more apparent.

Fig. 3. Triquetrum is located by palpating the pisiform where triquetrum is situated directly dorsal to it
(Photo from personal collection)

B. TFCC (Triangular Fibrocartilage Complex) Tear

TFCC is a ligament-fibrocartilage complex that consists of the triangular fibrocartilage, surrounding ligamentous tissues, including the radioulnar ligament, and the sheath floor of the extensor carpi ulnaris (ECU) (Fig. 4). It stabilises the ulnocarpal and distal radioulnar joints (DRUJ), distributes load between the ulna and

ulnar carpus and introduces smooth forearm rotation. TFCC is torn following a fall or excessive loading onto the pronated hyperextended wrist, hyper-rotational injuries to the forearm, or repetitive forceful forearm rotation and wrist ulnar deviation. Players experience ulnar wrist pain with forearm rotation, gripping, wrist ulnar deviation, and feeling slacking at the ulnar wrist in carrying heavyweights, twisting doorknob or wringing towel. There is tenderness at the volar base of the ulnar styloid (foveal sign), pain on passive forearm rotation and ulnocarpal grinding, and DRUJ laxity in the ballottement test. Gradient echo sequence T2-weighted image and fat suppression T1-weighted MRI images help delineating detailed TFCC structure and the tear.

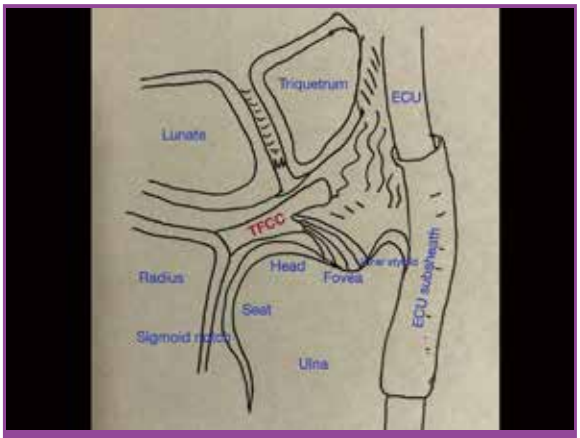

Fig. 4. Anatomy of TFCC and ECU
(Photo from personal collection)

C. ECU Tendonitis and Instability

ECU travels from the lateral elbow across the ulnar wrist through a fibro-osseous tunnel embraced by the ECU subsheath for about 1.5 cm within the ECU groove (Fig. 4), and attaches on the dorsal aspect of the base of the fifth metacarpal. With the wrist in supination, the tendon exits the subsheath at around 30°. Increased ulnar-negative variance (ulna is shorter than the radius at the level of the articular surface), and shallower and shorter ECU groove have been shown to be associated with ECU pathologies. With hyper-supination, ulnar deviation and wrist flexion forces, the tension on the ECU and subsheath is greatest, which leads to ECU tendonitis, subluxation, dislocation and even traumatic or attritional rupture. Athletes involved in racket or stick-handling sports are often affected, and ECU injuries accounted for 76% of wrist injuries in male tennis players.[17] They experience pain and sometimes snapping over the course of the ECU tendon at forceful gripping, supination, wrist flexion/extension, or ulnar deviation, such as the non-dominant hand in double-handed backhand in tennis, or leading hand in the downward phase of a golf stroke. There are tenderness and swelling along the ECU tendon, pain with resisted wrist extension and ulnar deviation, and weakness of ECU action. ECU tendon subluxation or dislocation may be found with wrist extension, ulnar deviation and supination. ECU synergy test (Fig. 5) is positive - painful in the resisted thumb and middle finger abduction with the forearm in full supination. Ultrasound gives a dynamic evaluation to compare the stability of ECU with the contralateral side. MRI is sensitive to identify ECU pathologies.

Fig. 5. ECU synergy test
(Photo from personal collection)

CENTRAL WRIST PAIN

A. Scapholunate Ligament (SLL) & Dorsal Capsulo-Scapholunate Septum (DCSS) Injury

SLL is the most important ligament maintaining the strength and stability of the wrist. The dorsal part of the SLL is the most important part for the stability of the scapholunate joint. Its insertion into the dorsal capsule and dorsal intercarpal ligament creates the DCSS (Fig. 6). DCSS injury represents the earliest (pre-dynamic) stage of the scapholunate instability and usually arises from a sudden or repetitive wrist hyperextension or hyper-flexion loading force. It is common to encounter players complaining of dorsal central wrist pain during push-ups and power grips without X-ray or MRI evidence. It is sometimes misdiagnosed for a long time.

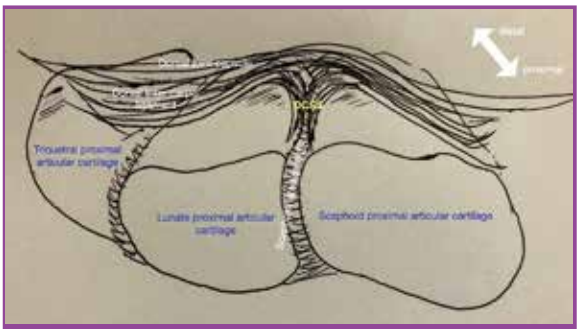

Fig. 6. Diagram of a transverse section showing DCSS
(Photo from personal collection)

Complete SLL tear creates scapholunate widening when stress is applied (dynamic stage). Additional injury to the surrounding secondary stabilisers results in static widening of the scapholunate joint (static stage). SLL tear is the commonest cause of carpal instability and most commonly following a fall onto an extended, ulnar deviated wrist. Contact or combat sports which place the athlete in a position of impact with hyperextension, ulnar deviation and supination of the wrist can also lead to SLL tear.

Players experience pain, and mild swelling over the dorsal central wrist aggravated by heavy use, weak grip strength, and sometimes reduced mobility. Tenderness is easily found distal to the Lister's tubercle with the wrist at mild flexion. Pain is elicited at extreme passive wrist flexion or extension. Watson's test is positive in SLL complete tear. It is performed with the examiner's thumb pressed onto the scaphoid tuberosity to prevent the scaphoid from flexing while the wrist is moved passively from ulnar to radial deviation. Dorsoradial wrist pain is induced as the proximal pole of the scaphoid is subluxed dorsally. Clunking is produced when the thumb pressure is released. Standard X-rays may appear normal, only showing increased flexion of the scaphoid. Anteroposterior clenched fist view may show scapholunate widening. MRI is helpful, and arthroscopy is the gold standard in the diagnosis.

CONCLUSION

Sports injuries in the wrist can be a complex issue. Good knowledge of these entities minimises the incidence of missing a diagnosis and delaying proper treatment, and helps the players to prevent further damage while returning to sports in a smart manner.

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Dermatology Quiz

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Dr Chi-keung KWAN

Fig.1: Thick and scaly dandruff on the scalp.

This 48-year-old lady complained of increasing dandruff, which was thick and sticky on the scalp, especially at the vertex region. The onset was insidious and the condition had been increasing in severity over several months. There was a mild itch on the scalp, but not painful. Physical examination revealed multiple thick and sticky scaling and dandruff on the scalp, especially over the vertex region. The underlying scalp was erythematous; however, no other area of skin was involved (Fig. 1).

Questions

1. What is the diagnosis of her skin lesion?
2. What investigations are you going to order?
3. How do you treat this patient?

(See P.32 for answers)

Certificate Course for Nurses and Allied Health Professionals

- Course No. C369
- CME/CNE Course

Certificate Course on

Respiratory Medicine 2021

(Video Lectures)

Jointly organised by

The Federation of Medical Societies of Hong Kong
香港醫學組織聯會

Hong Kong Thoracic Society Limited
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Objectives:

To enhance understanding and provide recent updates in various aspects of Respiratory medicine

Date	Topics	Speakers
1 Sept 2021	Airway diseases	Dr. Maureen Wong COS (MG/ICU)/CMC
8 Sept 2021	Radiological investigation for Pulmonary disease	Dr. CM Wong AC (Med)/ NDH
15 Sept 2021	Lung cancer - Pulmonologist's prospective	Dr. HC Fan Consultant (M&G)/ RTSKH
	Lung cancer - Oncologist's prospective	Dr. YK Lam Consultant (M&G) / UCH
29 Sept 2021	Management of Pleural Diseases	Dr. CF Choy AC (MED)/ TKOH
6 Oct 2021	Indication, monitoring and troubleshooting for CPAP therapy	Ms. Maggie Lit KCC NC(Respiratory) / QEH NC(Respiratory)

Date : 1, 8, 15, 29 September & 6 October 2021 (Wednesday, skip 22 September, public holiday)
Time : 7:00 p.m. – 9:00 p.m. (2 hours per session)
Course Feature: Video lectures (with Q&A platform for participants to post the questions)
Quiz for doctors: To tie in with the CME requirements for video lectures, DOCTORS are required to complete a quiz after the completion of each lecture
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MCHK CME Programme Self-assessment Questions

Please read the article entitled "Why is My Wrist Painful after Sports?" by Dr Clara Wing-yee WONG 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 2021. Answers to questions will be provided in the next issue of The Hong Kong Medical Diary.

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

1. Distal ulnar fracture is the most easily recognised condition among all sports-related wrist injuries.
2. If a complete scaphoid fracture was initially not noticed five weeks ago, it could usually heal easily with subsequent casting for four weeks.
3. Scaphoid fracture is a rare carpal fracture its diagnosis is easily recognised at presentation.
4. In some cases, CT scan or MRI should be arranged for particular fracture identification or alignment in suspicious cases where fracture cannot be visualised in X-rays.
5. DeQuervain's disease is the commonest wrist tendinopathy in sports.
6. DeQuervain's disease, Intersection syndrome and triquetral fracture can cause radial wrist pain.
7. MRI of the wrist and distal forearm is not useful to confirm the diagnosis of Intersection syndrome.
8. If a patient has ulnar wrist pain with wrist ulnar deviation and forearm supination, TFCC (triangular fibrocartilage complex) injury or ECU (extensor carpi ulnaris) tendon problem can be the diagnosis.
9. In triquetral fracture, tenderness is localised on the dorsum of triquetrum.
10. TFCC (triangular fibrocartilage complex) stabilises the ulnocarpal and distal radioulnar joints (DRUJ), distributes load between the ulna and ulnar carpus, and introduces smooth forearm rotation.

ANSWER SHEET FOR JULY 2021

Please return the completed answer sheet to the Federation Secretariat on or before 31 July 2021 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

Why is My Wrist Painful after Sports?

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1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐

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

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

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

Answers to June 2021 Issue

The Use of Integrative Medicine for Treatment of COVID-19

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

Dance Injuries in the Foot and Ankle

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Dr Samuel KK LING

INTRODUCTION

Dance involves graceful artistry coupled with powerful physicality. In fact, "Dance" has been rated as the most physically demanding job by the Occupational Information Network. Dance-related injuries are quite prevalent, with the foot and ankle region being the most common, followed by knee and spine problems.[1]

ANKLE INSTABILITY

Ankle sprains are definitely one of the most common injuries.[2] When we speak of ankle sprains, we refer to an injury to the lateral ankle ligament complex most of the time. This complex consists of the anterior talofibular ligament, calcaneal-fibular ligament and the posterior talofibular ligament. They act as static stabilisers of the ankle joint and are important for daily and recreational activities. Around 30% of patients suffering from an ankle sprain will develop chronic ankle instability with symptoms of recurrent sprains, impingement and pain. Contrary to the hips and knees, the ankle is relatively resistant to primary osteoarthritis, and evidence suggests that ankle osteoarthritis may be a late-stage sequela of maltreated ankle instability.[3,4] Secondary arthritis, especially post-traumatic arthritis, makes up 70 - 80% of all ankle arthritis, with inflammatory arthritis making up most of the remaining cases.[5] Clinically, we can perform stress tests on physical examination or x-ray/ultrasound to make a diagnosis.[6,7] The acronym of PEACE and LOVE can guide the treatment of soft tissue injuries; it stands for protection, elevation, avoidance of NSAIDS, compression, education, loading, optimism, vascularisation and exercise.[8] If conservative treatment fails, surgical repair has well documented outcomes.[9] This is typically performed in conjunction with an ankle arthroscopy for the management of intra-articular pathologies. Some papers report that even in ankle instability patients already complicated with early osteoarthritis, they would still benefit from ligamentous repair/reconstruction.[10] However, when the diseases progress into end-stage arthritis, ankle arthrodesis and total ankle replacement may be the only options.[5]

TALUS OSTEOCHONDRAL DEFECTS

Talar osteochondral defects can be present, even in the absence of instability. X-rays and MRI are often sufficient, but diagnostic arthroscopy is still the gold standard.[11] Treatment starts with physiotherapy and intraarticular injections. Intra-articular steroids, hyaluronic acid and platelet-rich plasma have all been reported with positive outcomes; some trials suggest that platelet-rich plasma is most superior; however, that is still debated.[12,13] Chondroplasty surgery with various marrow stimulation techniques such as micro-fractures/nano-drilling all have encouraging results and are options when conservative treatment fails.[14] Biological augmentation during arthroscopy is currently a hotly researched topic with surgeons using platelet-rich plasma, bone marrow aspirate, 3D scaffolds, etc. However, there is hitherto no clear superiority shown.[15] Osteochondral grafting is also an option, and studies have shown autograft from the knee vs fresh cadaveric allograft yield comparable results; nonetheless, these procedures are less often performed.[16]

ANKLE IMPINGEMENT

Impingement of the ankle is another commonly encountered problem; it is categorised into anterior and posterior impingement.[17] Anterior ankle impingement happens in end-range dorsiflexion, commonly seen in contemporary styles of dance. Different osseous and soft-tissue structures can be the culprit of this impingement, and arthroscopic debridement with cheilectomy are decent measures if physiotherapy is ineffective.[18] Posterior ankle impingement typically presents with deep posterior ankle pain, frequently seen in ballet dancers when they go en-pointe. An os trigonum or an elongated posterior talar tubercle (Steida process) can be culprits of the impingement, in addition to soft tissues such as post-traumatic fibrosis. Endoscopic/arthroscopic excision of the impinging structures is an effective solution and yields better outcomes than open surgery.[19]

ACHILLES TENDINOPATHY

Achilles tendon pathology is another important differential diagnosis of posterior ankle/heel pain.[20] It is useful to classify Achilles tendinopathy into insertional or pre-insertional aetiologies since the treatment can be significantly different.[21] In general, the term tendinopathy is very broad and non-specific; some believe in an element of degeneration in tendinosis while others feel the role of inflammation, such as in tendonitis is more important.[22] Prescribing heel lifts have been shown to reduce Achilles strain and are often a simple and effective treatment modality.[23] Physiotherapy, specifically eccentric training, has also been shown to improve tendinopathy.[21] Injections such as high volume distension therapy and platelet-rich plasma are popular treatments, but the published

papers only show equivocal results.[24] A formal surgical debridement is an option that often requires concomitant reattachment of the Achilles using suture anchors. The diseased tendon segment is often quite extensive, and a tendon transfer (e.g. harvesting the flexor hallucis longus) is also frequently necessary. Neglect of Achilles tendinopathy sometimes ends with an acute-on-chronic Achilles tendon rupture after a trivial injury. It is best managed surgically but is more complicated than a simple repair following traumatic ruptures of healthy tendons. Most Achilles tendon surgery are now done via minimally-invasive techniques which reduce wound-related complications.[25] Most patients are usually able to resume dancing recreationally, but it is often a career-ending injury for professional dancers.

METATARSAL STRESS FRACTURE

In dancers presenting with unexplained foot pain, especially if there is a history of recent changes in training regime and rehearsal schedules, always consider the possibility of a stress fracture.[26-28] One can imagine that a teenage girl who dances multiple hours in front of a mirror is prone to be very body-conscious and may embark on various dieting regimes. They are at risk of developing the "female athletic triad" of amenorrhoea with low energy (with or without an eating disorder) and low bone mineral density, predisposing them to stress fractures. Treatment is activity modification, psychological intervention and the education of a healthy balanced diet; full resumption of dancing can only be expected after 12 weeks.

CONCLUSION

Dance is an art form requiring tremendous physicality; as a result, the injury prevalence is very similar to those in sports. Foot and ankle problems are the predominant pathology, and dancers should be considered with the same scale as athletes; their physical needs are much greater than the average person, and treatment should be tailored to help meet those demands. Dance medicine is still in its infancy, but significant amounts of research have been going into this area within the past decade, allowing us more insight into how to properly help this special group of patients.

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Certificate Course on

Renal Medicine 2021

(Video Lectures)

Jointly organised by

The Federation of Medical Societies of Hong Kong

Hong Kong Society of Nephrology

Objectives:

To update the participants on new advances in renal medicine and clinical practice of common renal problems, and to help the participants to interpret results of common renal investigations.

Date	Topics	Speakers
2 Sept 2021	Common Investigation Tests for Renal Disease Including Approach to Proteinuria and Haematuria	Dr. Sze-kit YUEN Associate Consultant Department of Medicine & Geriatrics Caritas Medical Centre
	Update and Management of Acute Kidney Injury	Dr. Chun-hay TAM Clinical Associate Professor (Honorary) Department of Medicine & Therapeutics The Chinese University of Hong Kong Honorary Clinical Assistant Professor Department of Medicine, University of Hong Kong
9 Sept 2021	ABC of Hemodialysis Therapy	Dr. Gensy Mei-wa TONG Director Renal Care Hong Kong Baptist Hospital Nephrologist-in-charge Kai Tak Haemodialysis Center
	Update and Management of Glomerular Disease	Dr. Elaine Tsz-ling HO Associate Consultant Department of Medicine Tseung Kwan O Hospital
16 Sept 2021	Nutritional Management in Kidney Diseases	Ms. Cherry Pui-yee LAW Dietitian Pamela Youde Nethersole Eastern Hospital
	Kidney Involvement in Multi-System Disorders	Dr. Desmond Yat-hin YAP Clinical Associate Professor Department of Medicine University of Hong Kong
23 Sept 2021	Drug Prescribing in Renal Failure	Dr. Anthony Kai-ching HAU Associate Consultant Department of Medicine & Geriatrics Tuen Mun Hospital
	ABC of Peritoneal Dialysis Therapy	Dr Joseph Ho-sing WONG Associate Consultant Department of Medicine Queen Elizabeth Hospital
30 Sept 2021	Update on Diabetic Nephropathy	Dr. Maggie Kam-man MA Associate Consultant Department of Medicine Queen Mary Hospital
	Update and Management of Chronic Kidney Disease	Dr. Wing-fai PANG Associate Consultant Department of Medicine & Therapeutics Prince of Wales Hospital
7 Oct 2021	Update and Management of Hypertension	Dr. Wai-yan LAU Associate Consultant Department of Medicine Alice Ho Miu Ling Nethersole Hospital
	ABC of Renal Transplantation	Dr. Ka-fai YIM Associate Consultant Department of Medicine & Geriatrics Princess Margaret Hospital

Date : 2, 9, 16, 23, 30 September & 7 October, 2021 (Every Thursday)
Duration of session: 1.5 hours (6 sessions)
Time : 7:00 pm – 8:30 pm
Course Feature: Video lectures (with Q&A platform for participants to post the questions)
Quiz for doctors: To tie in with the CME requirements for video lectures, DOCTORS are required to complete a quiz after the completion of each lecture
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Injection Therapy in Sports Injuries, Where Are We? Where Are We Headed?

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Dr George YK LAW

INTRODUCTION

Injection therapies are one of the popular non-operative treatment modalities in Sports medicine for conditions including tendon injuries, ligament injuries, cartilage injuries and osteoarthritis (OA). Intra-articular hyaluronic acid (IAHA) has been the recommended treatment of choice for OA of the knee for more than 20 years; there has also been increasing interest in the use of biological products, including platelet-rich plasma (PRP) and stem cells, in treating many musculoskeletal conditions.

HYALURONIC ACID

What is Hyaluronic Acid?

Hyaluronic acid (HA) is a glycosaminoglycan, which is naturally present in synovial fluid and provides viscoelastic properties for the fluid. There is a decrease in the quantity of HA in synovial fluid during the progression of OA,[1] which correlates clinically with joint pain and functional deficit.[2]

Mechanism of Action

In the early 1990s, Balazs hypothesised the use of IAHA to replenish the viscoelasticity of the degenerated synovial fluid. This hypothesis forms the foundation for the evolving "viscosupplementation" concept;[3,4] the latter proposes that IAHA can improve the lubrication in the joint. At the cellular level, IAHA helps to lessen pain mediator formation, enhance endogenous HA production, decrease HA degradation and protect against chondrocyte loss. The regimen of IAHA differs in different products, ranging from a single shot to multiple sequential injections each at one-week intervals.

Clinical Efficacy

Various meta-analyses[5,6,7,8] have shown the clinical efficacy of IAHA in OA of the knee. The effect size of IAHA in treating OA of the knee is at least comparable to or even better than common oral analgesics[9] in terms of pain relief and functional improvement.

However, there is no evidence to support the generalised use of IAHA injection in other major joints, including shoulder, hip and ankle joints.

Safety

A systemic review and network meta-analysis[10] involving 18 HA products and 13,042 patients aged 45 to 75 years found a low rate of adverse events from IAHA. Transient local reactions such as pain, erythema and swelling were the most common adverse events, being reported in 8.5% of the cohort. In 37 studies involving 13 products and 5,550 patients, the incidence of patients withdrawn due to adverse events was low, ranging from 0 to 4.4%.

Controversies

Even though the use of IAHA has been recommended by various professional organisations all over the world[11-14], the American Academy of Orthopaedic Surgeons (AAOS) does not recommend the use of IAHA in patients with symptomatic OA of the knee.[15] This stand of the AAOS arises from possible publication bias in the available literature such that the overall effect of IAHA could not achieve the minimum clinically significant improvement in patients.

Conflicting clinical findings could likely result from variations in concentration, molecular weight, and injection protocol in different HA products.

Further high-quality study is needed to determine the patient phenotype and disease subgroup that would best benefit from IAHA. Future research direction in IAHA should target potential disease-modifying and joint-replacement-sparing properties of IAHA, long term effects of repeating injections and efficacy of combination treatment using different injection agents.

PLATELET-RICH PLASMA

Platelet- rich plasma (PRP) in the literature refers to a group of biological products including autologous conditioned plasma, platelet-enriched plasma, platelet-rich concentrate, autogenous platelet gel, platelet releasate, platelet rich in growth factors (GFs) etc.[16]

PRP contains an abundant amount of growth factors and cytokines that can stimulate cell migration, cell proliferation, angiogenesis and matrix synthesis.[17] It helps to initiate and promote healing in various kinds of musculoskeletal injuries, including tendon, ligament and cartilage injuries.

Mechanism

PRP is usually prepared by using commercial kits and a centrifuge machine on autologous blood. After withdrawing and centrifuging the blood sample, the middle thin layer, which is the PRP, will be taken. Once the liquid form of activated PRP is injected, it forms a

transient fibrin scaffold and gradually releases growth factors at the site of infiltration. Growth factors will then stimulate various cellular cascades leading to tissue remodelling.

Clinical Efficacy

With its property of arousing tissue healing, PRP injection is potentially a promising treatment for osteoarthritis, tendon injury and ligament injury.

Osteoarthritis

Several randomised controlled trials (RCT) showed a positive effect of intra-articular PRP injection, in terms of pain control and improving joint stiffness and physical function, when compared with IAHA or placebo for the management of OA of the knee[20,21,22]. More recent studies support the use of leucocyte-poor PRP (LP-PRP) in the place of leucocyte-rich PRP (LR-PRP) in the treatment of OA of the knee.[18,19,20] Conceivably, the higher leucocyte concentration induces a more inflammatory response, which in turn promotes tissue healing, but such an inflammatory response may not necessarily be desirable in the context of managing OA of the knee.

Tendon Injury

Various growth factors in PRP may help in tendon healing by interacting with the tenocyte and extracellular matrix.

Lateral epicondylitis, also known as tennis elbow, is chronic overuse tendinopathy of the lateral elbow extensor tendons. There have been various studies comparing the effect of PRP with placebo, or with corticosteroid injection, or with other forms of conservative management in patients with lateral epicondylitis. Johal et al.[23] published a systematic review and meta-analysis of 78 RCTs on the use of PRP in musculoskeletal injuries. The authors concluded that PRP leads to a reduction in pain; the available evidence supports the use of PRP in the management of lateral epicondylitis.

Houck et al.[24] reported in his systematic review that PRP is effective in the treatment of lateral epicondylitis in the intermediate term, while corticosteroids improve the functional outcome and pain relief in the short term.

Patellar tendinopathy is also a common chronic overuse tendon disorder. A recent systematic review and metanalysis on non-surgical treatments of patellar tendinopathy concluded that multiple PRP injections may offer more satisfactory results at long-term follow-up than other non-surgical treatment modalities and can be therefore considered a suitable option for the treatment of patellar tendinopathy.[25] However, the authors also commented that the 70 studies included were generally with poor study quality.

Achilles tendinopathy commonly affect our athletes, especially runners. Nauwelaers et al. published a systematic review with meta-analysis on 4 RCTs. They concluded that PRP has no clear additional value in the management of chronic midsubstance Achilles tendinopathy and, therefore should not be used as a first-line treatment option.[26]

Other potential use of PRP include ulnar collateral ligament injury, plantar fasciitis, meniscal tear, augmentation in rotator cuff repair, augmentation in anterior cruciate ligament (ACL) reconstruction and muscle injuries. Further high-quality studies are necessary to verify the clinical efficacy of PRP injection in these conditions.

Controversies

Despite the promising clinical results of PRP in the treatment of OA of the knee, international guidelines, including those issued by AAOS and the National Institute for Health and Care Excellence (NICE), suggested that there is still inconclusive evidence to support the use of PRP for OA of the knee. More high-quality studies are warranted to refine the optimal concentration of leucocyte, concentration of platelet, proportion of leucocyte subtype, severity and characteristics of the patients suffering from OA who will benefit from PRP injection.

STEM CELLS

Stem cells are undifferentiated cells that are capable of division and differentiation into specialised cell types. These characteristics render stem cells the potential for tissue repair and regeneration.

In treating musculoskeletal disease, mesenchymal stem cells (MSCs) and bone marrow aspirate concentrate (BMAC) are currently the potential candidates to be used in clinical settings.

MSCs are able to differentiate along the mesodermal lineage, which includes the osteoblasts and the chondrocytes. MSCs' potential disease-modifying function is believed to be via manipulation of the local environment by paracrine signalling rather than via direct differentiation of MSCs.[27] Additionally, MSCs offer their anti-inflammatory and immunomodulatory function via anti-inflammatory cytokine expression, monocyte maturation inhibition and inflammatory T-cell suppression.[28] Common human source of MSCs include bone marrow, adipose tissue, skeletal muscle and umbilical cord blood. Up to date, no MSC therapies have been approved by Food and Drug Administration (FDA) for clinical use in musculoskeletal disease.

Unlike MSCs, which depend upon laboratory manipulation and culture expansion to isolate and augment cell populations, BMAC only requires centrifuging process with commercial kits similar to that of PRP. BMAC is usually classified as minimally manipulated autologous blood products, with a mixed cell population and lower prevalence of progenitor cells. In contrast to MSCs, BMAC is cleared by the FDA for the clinical use in musculoskeletal disease.

Clinical Efficacy

Osteoarthritis

There are numerous preclinical studies on the use of cell therapy in OA of the knee. However, few high-quality studies reported its use in the clinical setting. Jo et al.[29] reported the safety and efficacy of autologous adipose-derived MSCs injection, which could reduce

knee pain and improve knee function at a 2-year follow-up. However, a recent meta-analysis[30] concluded that MSCs only significantly impacted self-reported physical function but not self-reported pain level. Furthermore, the functional benefit could only be demonstrated in patients who underwent concommitant surgery. Another review,[31] involving 18 clinical studies (including 4 RCTs), concluded that there are promising results in terms of safety and effectiveness of BMAC injections for the treatment of OA of the knee.

Tendon Injury

A recent systematic review 8 low-quality studies on the use of stem cells in rotator cuff tear, Achilles tendon injury, patellar tendinopathy and elbow tendinopathy, concluded that there is only level 3 evidence to support the efficacy of stem cell therapy for tendon disorders. Evidence-based recommendations for the use of stem cell therapy for tendon disorders in clinical practice cannot be made[32] due to considerable risk of bias in current available studies.

Controversies

There is still limited evidence to support the large-scale use of stem cell therapy in musculoskeletal disease in view of significant heterogeneity among the studies, the small sample size, short-term follow-up, and overall poor methodology in the currently available studies. Many aspects remain to be clarified in order to optimise the potential of stem cell use in musculoskeletal disease, including long-term safety, method of harvest and preparation, dosage of injection, timing of injection, and delivery method.

CONCLUSION

There is growing interest in the clinical use of hyaluronic acid injection and biological therapies in musculoskeletal disease. Studies show there is positive result in terms of safety and clinical efficacy. However, there is still a significant knowledge gap before we could rationalise their generalised use in clinical practice. Clinicians must be well-equipped with the scientific evidence when counselling a patient about the use of these modern non-surgical treatment options for musculoskeletal disease.

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I am Dr Jonathan Yuen, an associate consultant in the Department of Orthopaedic and Traumatology in Tseung Kwan O Hospital, but at the same time, I am also the team doctor of Hong Kong Lacrosse Association (HKLA) since 2013.

American Academy of Orthopedic Surgeons (AAOS) has a definition for "Team Doctor" - Team doctors carry the leadership role in the organisation, management and provision of care to athletes involved in individual, team or mass-participation sporting events.

That is the official answer for what a team doctor does; but in most cases, as it is with me, working with a sports organisation as a physician, we learn our role by fulfilling it as we go along.

When I look back at my personal journey of learning to be a team doctor, I saw myself going through three main phases, which I would like to share with you here.

Fig. 1. 2018 FIL Men's World Lacrosse Championship. Netanya, Israel (Photo from personal collection)

PHASE ONE: WHEN YOU FIRST STARTED…

The journey of being a team doctor starts when you decide to walk out of your consultation room and onto the field. It is a period where most of your work is reactive since you do not have much experience in this area and you are constantly in a problem-solving mode.

Here are a few key features that I think are important in this phase.

Knowing the Sport

You need to know what to expect and look for when you are working with athletes, as knowing the sport allows you to understand the needs of the athletes and to establish a better rapport with them when they come to you for help. Better understanding of the sports and needs of athletes also reduces mental stress on yourself when you are doing sideline support on the field, when a million things are happening simultaneously, especially for team sports. The more you know the sport, the more you know where and what you should put your focus on.

Working with Various Stakeholders

Rather than just working with fellow doctors and nurses who usually speak the same language as you working with a sports team means working with coaches, trainers, athletes, physiotherapists, team managers and administrative staff. Each and every stakeholder has their agenda, priorities and preferred way of communication. If you aspire to be an effective team doctor, you need to juggle your way through these various team members and bring your priority, which is the well-being of the athletes, to the negotiation table and hold your ground.

Understand your Limits and Appreciate all Knowledge and Methods Available

Sports medicine is an ever-evolving science, and athletes search for anything that can make them perform better. As a team doctor, you need to be humble about the fact that you do not know all the possible treatments in the world. Instead of saying "no" to things you are not familiar with, you should use your knowledge to help the athletes to pick the best informed choice for them, even when it may not be the one that you learned from medical school. I always felt like a team doctor; I learn more from my athletes, trainers, and therapists than myself.

Establish a Vibe as a Team Physician

In order for the team to work with you, they will need to know what to expect from you. So be proactive and upfront about why you are here, be consistent with your work and always keep your doors open. Your proactivity and open mind will encourage

communication, which in time will establish not just your authority in the team but also the trust in you.

Once you have defined your identity as a team doctor, having a hold of what you do on and off the field and gaining your team's trust, you will move on to the next phase.

Fig. 2. 2016 FIL Men's U19 World Lacrosse Championship. Coquitlam, Canada (Photo from personal collection)

PHASE TWO: WHEN YOU BECOME A VETERAN…

In this phase, you are at ease in handling most complaints and needs from the team, so you start to have the mental capacity to think further about making your life easier. The team doctor at this stage should be taking a more leading role in the team and try to be more proactive by foreseeing problems before they arise.

Key features in this phase include:

Be a Good Lobbyist

You need to convince your team the medical side of the game is almost as important as the game itself. Put injury prevention programmes in place, add them into drills in practices. Get the resources from your association to drive various programmes and policies like pre-season screening, athletes education and getting different expertise into your medical team. Coaches and players also have to be on board to ensure the best compliance and greatest impact from your work.

Team-building

Supporting a sports team is not a one-man job (if possible); you need to build your own team of personnel to help you do your job while not forgetting to help them develop affection and passion towards the sports team. What sort of help you need will be determined by how well you know the strength and weaknesses of yourself, and the need of your athletes. It can vary from physiotherapist, sports trainer, and strength & conditioning coaches, etc.

Cultivate Every Individual Relationship

You need to know your athletes and even coaches well enough for them to approach you when they have a problem. You need to know them and the team well enough to let them believe you will understand their situation no matter if it is a sports injury or bigger tasks such as advice on practice planning or anti-doping issues.

Close-loop Communication

Adding onto the previous point, all actions and policies a team doctor makes affect everyone in the team or association; therefore, continuous feedback from your players, coaches, therapists, managers and office staff is of utmost importance to avoid any misunderstanding and to allow fine-tuning of your work.

If you can juggle all of the above agendas, you would have become a valuable member of the team and, to a certain extent, have lived up to the definition of "team doctor" from AAOS.

Fig. 3. 2016 FIL Men's U19 World Lacrosse Championship. Coquitlam, Canada (Photo from personal collection)

PHASE THREE: WHEN YOU ARE RUNNING OUT OF THINGS TO DO…

Now you are at a stage where you feel comfortable in the team and association. Everyone values your opinion and follows your lead; with a strong comprehensive medical team supporting your work, you are more hands-off in terms of day-in-day-out matters.

One can certainly stop there; no one could blame you for sitting back a bit enjoying the fruits of your work. But given a team doctor is surrounded by athletes and coaches who are endlessly chasing after better performance and better results, you certainly will be infected with that mentality and would undoubtedly look forward to what should be the next step to take to better yourself.

Personally, I am still exploring as I go along, working with the belief that I need to develop sustainability,

meaning if one day I am no longer with the team, systems and workflows would have been set in place, and my physical presence and contribution will no longer be essential.

Since there is still so much more to be done, I have not rendered myself completely redundant yet. Here I will share a few things I am doing or planning to do.

Injury Reporting and Management Framework

Currently, Hong Kong Lacrosse Association is running a self-developed web-based platform called Sports Injury Management System, aka SIMS, to help our medical team to manage all our players in the elite programmes.

Some of the functions of the platform include:

1. Keeping a record of all pre-participation screening forms and assessments, allowing easy review of players' background and past histories for management of any new injuries.

2. Injury reporting, which can be done by players or therapist/coaches, aiming to encourage players to have the habit of coming forward to seek help earlier after an injury. Injury data collected will also be reviewed and analysed after each season to facilitate better programme planning and injury prevention measures.

3. Via SIMS, various parties including doctor, therapists, coaches and players can communicate with each other concerning the management of an active injury in a player. SIMS facilitates a multi-disciplinary approach to treatment and rehabilitation of the injured, in an attempt to achieve seamless flow from the time of injury to the day of a full return to the sport. Out of concern for patient privacy, different personnel will be granted different levels of access to information.

4. Via the system, sorting of manpower for on-the-field support for all practice sessions and tournaments, and performing the accounting work for claim forms for expenses, thus greatly reducing the number of emails, WhatsApp and paperwork throughout a busy season.

Sideline Support / First-Aid Education

Education will no longer be just to players, but to other team members including coaches, trainers and staff who run the association's programmes of different skill levels. Reaching out to as many stakeholders as possible is one way to cultivate the awareness of the medical part of the sport.

Find your Successors

Always look for someone to take your job; it can be from within your supporting team by gradually letting individuals take the lead and ownership of the work, or from outside, by promoting your sport and by sharing what you do every time you have the chance. Mentor that person and leave nothing to yourself.

Finally, I have to say the paycheque of a team doctor is in the currency of the success of your athletes, the trust your coaches and team members have in you, and the enjoyment of working with the people you have surrounded yourself with. As a medical practitioner, I feel there is no better form of reward than that.

Fig. 4. 2017 FIL Women's World Lacrosse Championship. Surrey, UK (Photo from personal collection)

The Revelation: Myths of a Doctor's Daily Routine at the HKSI

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INTRODUCTION

After receiving the Master of Science degree in Sports Medicine and Health Science at the Chinese University of Hong Kong, I had the fortune to practise Sports medicine in various capacities. Eventually, I worked closely with elite athletes at the Hong Kong Sports Institute (HKSI). The HKSI was a 'mysterious sports palace' to me and many others, including young medical professionals interested in making Sports medicine their future career path. In this article, I will introduce the salient features in the doctor's roles and responsibilities at the HKSI, as opposed to providing care in the form of a once-off medical opinion for an athlete's injury or illness.

Designated by the HKSAR Government to provide a high-performance training system for eligible sports, the HKSI currently supports over 1,200 Scholarship Athletes (including para sports). A variety of clinical services are provided, including regular outpatient clinic consultation, periodic health evaluation and outreaching medical team support for the HKSAR teams in major national games.

The mixed clinical complaints of illnesses and injuries in the HKSI outpatient clinic are extraordinary. The patient group consists of young active elite athletes who are highly motivated and goal-oriented, having a congested training schedule and frequent overseas travelling plans. Given that the sports coach and the relevant sports association are also involved in the decision-making process, medical advice is usually based on teamwork approach.

SPECTRUM OF ILLNESSES IN SPORTS MEDICINE

The most common cause of acute illness is an upper respiratory tract infection, followed by an infection of the digestive system, skin or subcutaneous tissues, and particularly among the para sports athletes, the genitourinary system. The disease pattern in the HKSI Clinic is very similar to the epidemiology of acute illness in elite-level athletes during an international competition[1]. Although it is commonly treated as a minor health issue in public, acute infective illness results in a significant health burden to the athlete.[2] The detrimental effects on athletes include subsequent reduction in sports performance due to muscle wasting[3] and to a decrease in isotonic and isometric muscle strength[4], an interruption to the training timetable and an increase in the likelihood of injury during the competition.[5] Some athletes may even end up missing important competitions which have been prepared for over the years.

The majority of acute infective illnesses could be prevented. In order to prevent the athlete from getting sick, education, promotion and execution of evidence-based infection control policy such as hand hygiene and massive vaccination are important at the HKSI. Even as common as the influenza vaccination, the doctor will need to be cognizant of athlete-specific factors, such as planning vaccination in the context of peak training or the tapering period before a major competition; discussions will likely involve shared decision making with the athlete and the coach. It also becomes extremely crucial to quickly identify and isolate the sick athlete who is potentially infected by Coronavirus (COVID-19) since the year 2020, in order to protect not only the sick athletes but also their teammates, coaches, staff and other athletes who are staying on the same campus during the lockdown periods. As a gatekeeper and medical supervisor, the doctor at the HKSI should also be equipped with excellent communication skills to form close teamwork with the administrative staff, athletes, and coaches at the HKSI to execute these preventive strategies effectively.

SPECTRUM OF INJURY IN SPORTS MEDICINE

Apart from taking care of acute general infective illnesses, a classic clinic day at the HKSI would also involve providing medical consultation on acute and chronic sport-specific musculoskeletal injuries. For example, head concussion with the need of interval SCAT5 assessment for Rugby player; or tenderness over tibial tuberosity, which is compatible with Osgood Schlatter Disease among the growing adolescent athletes. Fortunately, we have a great multidisciplinary professional team at the HKSI working together for athletes' injury prevention, management, rehabilitation and preparation for return to play; this team consists of an Orthopedic Surgeon, Sports Physiotherapist and Strength and Conditioning Coach. As the head coach is directly responsible for the athlete's training and performance, it is essential to include their opinion in the decision making of management and rehabilitation plan, which is also the key to success for ensuring the athlete's compliance. The typical dilemma in discussion with the athlete and coach is: Time for rehabilitation and health versus Time for training and medal. In the negotiating process, the doctor MUST be well familiar with the athlete and understand the uniqueness of

sports culture, working out of the comfort zone and shouldering the team's burden in order to establish good rapport. While speaking the same 'sports language', being compassionate in the discussion and actively participating as part of the team are essential, we, as healthcare providers, should prioritise the athlete's health securely and ethically at the same time.[6]

We cannot know everything. The knowledge of Sports medicine has grown broadly that we could not provide the best health care to our athlete's injury without strong team support anymore, which is very much like participating in a sports team. As the case-in-charge and coordinator, doctors at the HKSI should take care of the athletes in different stages from injury, recovery and return to play. By giving medical advice and initiating interdisciplinary discussion with all the experts in the Elite Training Science and Technology Division at the HKSI, we aim to provide the best customised medical care for our athletes.

PERIODIC AND PRE-COMPETITION MEDICAL ASSESSMENT

To assess the health condition of the elite athletes and ensure their safety in high performance sports, an annual health evaluation is performed from December to March every year at the HKSI. Health questionnaire, physical examination, blood and urine tests as well as resting ECG and echocardiogram are also part of the evaluation to monitor the athletes' body condition. The annual health evaluation helps to regularly assess the status of past injuries and chronic illness, screen the risk factors in sports participation (such as clinical features of Marfan's syndrome), obtain baseline testing for body condition as well as promote health education. The annual assessment also provides an opportunity to review the current medication(s) and to brief the athlete on the most updated Prohibited List from the World Anti-Doping Agency (WADA).

Ritalin, for example, a common prescription for young athletes who suffer from Attention Deficiency Hyperactivity Disorder, is one of the prohibited medications in competition under the classification Stimulants S6 in the WADA Prohibited List 2021. Application for Therapeutic Use Exemption will be submitted to the Hong Kong Anti-Doping Committee to give the athlete the authorisation to use the medication for treatment.[8]

One of the major purposes of periodic health evaluation is to identify the medical conditions that may render participation in sports contraindicated; for example, symptomatic pre-excitation with Wolff-Parkinson-White syndrome, with sudden cardiac death possibly being the first clinical manifestation. Several high-profile cases of sudden cardiac death globally and locally over recent years have stimulated a healthy debate about the pros and cons of using resting ECG in athlete's health screening. Those against it point out that there is a high false positive rate, the cost is high and undue stress may be associated with further investigations of 'abnormal' results. In contrast, those in favour of the routine use of ECG argue that it is more sensitive and specific than the medical history and physical examination alone, and the use of "International Criteria for Electrocardiographic Interpretation in Athletes 2017" can improve the accuracy and efficacy of athlete's ECG interpretation significantly[9]. It is not uncommon to find sinus bradycardia with a heart rate around 40 per minute, or T wave inversion limited to lead V1-2 or voltage criteria of left ventricular hypertrophy in a typical athlete' ECG at the HKSI. The international criteria serve as an accessible tool to assist doctors in Sports medicine in interpreting athlete's ECG effectively, which unavoidably has become the most popular topic in the International Olympic Committee Course on Cardiovascular Evaluation of Olympic Athletes in recent years. Since 2020, a 12-lead resting ECG with interpretation using the aforementioned international criteria has been introduced as part of the periodic health evaluation and pre-competition medical assessment for elite athletes at the HKSI.

Although most medical conditions (e.g. hypertension) are not the absolute contraindications to elite sports participation, optimal control should be established prior to commencing intense training and competition; continuous medical evaluation is necessary to monitor the progress of the disease throughout the athlete's career.

CONTINUOUS EDUCATION IN SPORTS MEDICINE

Being a physician, we should equip ourselves with updated knowledge. Akin to the spirit of our athletes in the HKSAR delegate, the doctor at the HKSI should be highly motivated in continuing education and should always be hungry for the most updated evidence-based knowledge in illness and injury prevention, sports-specific disease management, rehabilitation and athletic health evaluation. All the work we have done are to prepare our elite athletes to stand proud under the flag at the medal ceremony one day.

Through attending different international conferences in Sports medicine worldwide, such as visiting the Wimbledon Stadium in the U.K., the HKSI doctor builds up a global network of friends who are experts in various subspecialties in Sports Medicine. Future collaboration with various experts in Sports medicine in terms of clinical data sharing and research on Asian athletes is much anticipated.

CONCLUSION

The job nature of a doctor at the HKSI has been evolving over the past decade, from a primary healthcare provider to a more uniquely trained Sports medicine physician, in order to satisfy the growing expectation of comprehensive care for the HKSAR team. Working on our own is far from being good enough to provide better health care; therefore, the ability to efficiently work and communicate in a multidisciplinary team setting, where the team can direct proper multi-professional teamwork for the athletes, is extremely crucial for the best of care in the outpatient service .

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- Appreciate key skills and qualities needed to handle patient complaints effectively

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Date	Topics	Speakers
17 Aug 2021	**Complaint system** The rights-, interest-, and power-based complaint system Complaint system design - with resolution and preventive focus	Dr. Ludwig TSOI
24 Aug 2021	**Complaint – is somebody at fault?** Complaint system of Medical Council and other regulatory bodies	Dr. Robert LAW
31 Aug 2021	**Media in complaint** Handling media in adverse events	Dr. Carl LEUNG
7 Sept 2021	**Complaint management** Practical tips on handling complaints and how to survive a legal action	Ms. Suk-chong LEUNG Ms. Asha SHARMA
14 Sept 2021	**Complaint – what's new** Just culture, open disclosure and apology handling	Dr. Kai-ming CHOW
21 Sept 2021	**Patients' complaint** Patients' complaint avenue in HK What motivate patients to complain What they want and deserve	Dr. Kim-lian ONG

Date : 17, 24, 31 August & 7, 14, 21 September 2021 (Every Tuesday)
Duration of session: 1.5 hours (6 sessions)
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The Health Benefits of Great Outdoors

Dr Lobo HT LOUIE

DPE(Springfield)
Associate Professor, Department of Sport, Physical Education & Health,
Hong Kong Baptist University

Dr Lobo HT LOUIE

In Hong Kong, a total of 24 country parks have been designated for the purposes of nature conservation, countryside recreation and outdoor education.[1] Since 1970s, these country parks have been governed by the Country Parks Ordinance, which provides a legal framework for the designation, development and management of country parks and special areas.(Fig. 1) According to the Centre for Diseases Control and Prevention of the U.S.A., spending time outdoors is a safer choice than staying indoors during the pandemic as there is less likelihood of being exposed to COVID-19 during outdoor activities. The outdoor natural environment not only offers many opportunities to be physically active, but also promotes mental health, stress reduction as well as overall wellness.[2-6] Heart rate, blood pressure, and self-report measures have provided convincing evidence that spending time outdoors helps to reduce the experience of stress, and ultimately improve health.[6] Meanwhile, the outdoor setting has also been adopted as a valuable learning site for young schoolchildren, including positive pro-environment attitudes, scientific learning, enhancement of motor fitness, and physical health.[6-9] The outdoors can be described as an open and constantly changing environment, providing the potential for experiencing freedom, gross and boisterous movements, and contact with natural elements.[10] It also allows children time for unstructured activities in nature, which is beneficial for children's positive affect, attitudes towards nature, and pro-sociality.[11] (Fig. 2)

Fig. 1. The Country Parks Ordinance enacted in 1976 provides a legal framework for the designation, development and management of country parks. The MacLehose Trail (100 km) traverses the New Territories from Sai Kung in the east to Tuen Mun in the west. (Photo from personal collection)

Fig. 2. Hiking is recognised to have a variety of health benefits, ranging from physical exercise one gets when out on the trail, to emotional or mental relief that comes from being in nature. (Photo from personal collection)

Research has demonstrated the health benefits of participating outdoors, specifically psychological, sociological, educational, and physical benefits.[12] Breitenstein and Ewert summarised the health benefits of the outdoor recreation model based on the previous studies, as shown in Table 1.

The green space is important for mental health; regular engagement is linked with longevity and decreased risk of mental ill-health.[13] Being physically active outdoors has been associated with enhanced mental well-being. The older adults showed fewer depressive symptoms when they spent more time outdoors and were physically active.[14] The study estimated that each additional weekly use of the natural environment could lower the risk of poor mental health by 6 per cent.[15] A multitudes analysis assessed the regime of doses of acute exposure to green exercise required to improve self-esteem and mood (indicators of mental health). The researchers utilised the meta-analysis methodology to analyse 10 studies involving 1,252 participants. The overall effect size for improved self-esteem and mood was found to be significant and showed mental benefits from engagement in green exercise.[16]

To summarise, the outdoors appears to be a great escape from the pandemic. Many health-related benefits can be gained through the close encounters with the natural outdoors; however, a risk management plan should be conducted in order to get everything prepared before setting out.

Table 1: Health benefits of outdoor recreation, excerpted from "Health benefits of outdoor recreation: implications for health education" by Breitenstein and Ewert.[12]

Benefits of Outdoors	Examples of Specific Health Outcomes
Catharsis/Relaxation/ Stress Reduction/ Novelty	• Opportunities for shared activities with family and friends • Getting "away from it all" as a means of coping with stress • A different setting allowing contemplation and a new perspective
Fitness	• Opportunities to improve cardiovascular fitness and achieve the desired weight • Increased self-esteem through improved fitness and body image
Skills: Social, Leisure, Physical	• Acquiring new skills, e.g. hiking • Developing leadership skills • Skills gained in problem-solving, decision making, creativity, etc. • Increased congruence between values/ beliefs and behaviours • Increased ability to accept others and individual differences
Efficacy/Self-empowerment/ Confidence	• Increased confidence in the ability to make decisions concerning self, others and career • Ability to overcome restrictive sex role stereotyping, empowerment and network • Self-actualisation and locus of control
Transformational Cognisance: Awareness of environment and self	• Sense of calm or peace when in a natural setting • Cognition of interrelatedness of man and natural • A sense of awe at the majesty of the universe, a sense of openness with nature and natural forces

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Medical Diary of July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 * FMSHK ASM 2021
4 * FMSHK ASM 2021	5	6 * Live Lecture HKMA - HKS&H CME Programme 2021 Topic: Surgical management of Lymphoedema (Online) * Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)	7 * Live Lecture Overview of Adult Attention Deficit Hyperactivity Disorder and Long-Term Management Strategy - Online	8 * Live Lecture Certificate Course for GPs 2021 - Management on Fungal Infections - Online	9 * Live Lecture Tailor-Made BPH Treatment: Data Update And Experience Sharing - Online * Certificate Course in Allergy 2021 (Video Lectures)	10 * Novel Diagnostic Methods and Interventions in Paediatric Radiology
11	12 * Live Lecture Recombinant Vaccine Technology for Seasonal Influenza Prevention - Online * Certificate Course on Cytogenomics 2021 (Video Lectures)	13 * Live Lecture Acting on Key Factors for Hypertension Management - Online * Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures) * HKMA Annual General Meeting	14 * The Hong Kong Neurosurgical Society Monthly Academic Meeting –The pain syndromes and interventions in Neurosurgery * Live Lecture HKU Bone & Muscle Health Series - Topic: Technological Advances in Joint Replacement Surgery - Online	15 * Live Lecture A New Perspective on Rotavirus Disease Prevention - Online	16 * Certificate Course in Allergy 2021 (Video Lectures)	17
18	19 * Certificate Course on Cytogenomics 2021 (Video Lectures)	20 * Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)	21 * Live Lecture HKU Bone & Muscle Health Series - Topic: Management of Sport Injury: What's new in 2021? - Online	22 * Live Lecture COVID-19 and Update on the Management of Hypertension with Vasodilating Beta-Blockers - Online * HKFMS Foundation Meeting * FMSHK Executive Committee Meeting	23 * Live Lecture Weight Loss Surgery for Diabetes - Online * Certificate Course in Allergy 2021 (Video Lectures)	24
25	26 * Certificate Course on Cytogenomics 2021 (Video Lectures)	27 * Live Lecture HKMA-GHK CME Programme 2020 Topic: When medication don't work in rhinitis patients (Online) * Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)	28	29 * Live Lecture Certificate Course for GPs 2021 - Update on Management of Parkinsonism - Online * Live Lecture Local Clinical Experience on Obesity Management - Online	30 * Live Lecture Fracture Prevention in Postmenopausal Osteoporosis Women * Certificate Course in Allergy 2021 (Video Lectures)	31

Date / Time	Function	Enquiry / Remarks
3 SAT (4 SUN)	**FMSHK ASM 2021** Organiser: The Federation of Medical Societies of Hong Kong; Format: ZOOM	Ms. Jovan CHUN Tel: 2527 8898
6 TUE 2:00 PM	**Live Lecture** **HKMA - HKS&H CME Programme 2021** **Topic: Surgical management of Lymphoedema (Online)** Organiser: Hong Kong Medical Association & Hong Kong Sanatorium & Hospital Speaker: Dr CHOI Wing-kee	HKMA CME Dept. Tel: 3108 2507 1 CME Point
7:00 PM	**Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Assunta HO	Ms Vienna LAM Tel: 2527 8898
7 WED 2:00 PM	**Live Lecture** **Overview of Adult Attention Deficit Hyperactivity Disorder and Long-Term Management Strategy - Online** Organiser: HKMA-CW&S Community Network Speaker: Dr Roger Man-kin NG	Ms Antonia LEE Tel: 3108 2514 1 CME Point
8 THU 2:00 PM	**Live Lecture** **Certificate Course for GPs 2021 - Management on Fungal Infections - Online** Organiser: HKMA-KLN East Community Network, HA-United Christian Hospital & HK College of Family Physicians Speaker: Dr David LUK	Ms Elise HAW Tel: 3949 3079 1 CME Point
9 FRI 2:00 PM	**Live Lecture** **Tailor-Made BPH Treatment: Data Update And Experience Sharing - Online** Organiser: Hong Kong Medical Association Speaker: Dr Martin Kwok-tin WONG	HKMA CME Dept. Tel: 3108 2507 1 CME Point
7:00 PM	**Certificate Course in Allergy 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Alson WM CHAN	Ms Vienna LAM Tel: 2527 8898
10 SAT 2:00 PM	**Novel Diagnostic Methods and Interventions in Paediatric Radiology** Organiser: Hong Kong College of Paediatricians Chairpersons: Prof Ting-fan LEUNG, Prof Winnie CHU, Dr Elaine KAN Speakers: Dr Carol NG, Dr Elaine KAN, Dr Kevin FUNG, Prof Winnie CHU	CME: HK College of Paediatricians (3 points, Category A) Ms Lily LIN Tel: 2871 8752
12 MON 2:00 PM	**Live Lecture** **Recombinant Vaccine Technology for Seasonal Influenza Prevention - Online** Organiser: Hong Kong Medical Association Speaker: Dr Wilson LAM	HKMA CME Dept. Tel: 3108 2507 1 CME Point
7:00 PM	**Certificate Course on Cytogenomics 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Chev CHAN Wing-kwong	Ms Vienna LAM Tel: 2527 8898
13 TUE 2:00 PM	**Live Lecture** **Acting on Key Factors for Hypertension Management - Online** Organiser: HKMA-YTM Community Network Speaker: Dr Jason Leung-kwai CHAN	Ms Candice TONG Tel: 3108 2513 1 CME Point
7:00 PM	**Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Winnie KY CHAN, Dr Sylvia LEUNG	Ms Vienna LAM Tel: 2527 8898
9:00 PM	**HKMA Annual General Meeting** Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms Candy YUEN Tel: 2527 8285
14 WED 7:30 AM	**The Hong Kong Neurosurgical Society Monthly Academic Meeting –** **The pain syndromes and interventions in Neurosurgery** Organiser: Hong Kong Neurosurgical Society Venue: Conference Room, F2, Department of Neurosurgery, Queen Elizabeth Hospital; or via Zoom meeting Chairperson: Dr Danny Tat-Ming CHAN Speaker: Dr HE Zhexi	Dr Calvin MAK Tel: 2595 6456 1.5 CME points
2:00 PM	**Live Lecture** **HKU Bone & Muscle Health Series -** **Topic: Technological Advances in Joint Replacement Surgery - Online** Organiser: HKU-Dept of Orthopaedics & Traumatology, Hong Kong Medical Association & HK St. John Ambulance Speaker: Dr Henry Chun-him FU	HKMA CME Dept. Tel: 3108 2507 1 CME Point
15 THU 2:00 PM	**Live Lecture** **A New Perspective on Rotavirus Disease Prevention - Online** Organiser: HKMA-KLN East Community Network Speaker: Dr Philip Chak-on SHAM	Ms Antonia LEE 3108 2514 1 CME Point
16 FRI 7:00 PM	**Certificate Course in Allergy 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Gilbert T CHUA	Ms Vienna LAM Tel: 2527 8898
19 MON 7:00 PM	**Certificate Course on Cytogenomics 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Stephen Tak-sum LAM	Ms Vienna LAM Tel: 2527 8898
20 TUE 7:00 PM	**Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Winnie KY CHAN	Ms Vienna LAM Tel: 2527 8898
21 WED 2:00 PM	**Live Lecture** **HKU Bone & Muscle Health Series -** **Topic: Management of Sport Injury: What's new in 2021? - Online** Organiser: HKU-Dept of Orthopaedics & Traumatology, Hong Kong Medical Association & HK St. John Ambulance Speaker: Dr WONG Tak-man	HKMA CME Dept. Tel: 3108 2507 1 CME Point
22 THU 7:00 PM	**Live Lecture** **COVID-19 and Update on the Management of Hypertension with Vasodilating Beta-Blockers - Online** Organiser: HKMA-New Territories West Community Network Speaker: Dr Bernard Bun-lap WONG	Ms Antonia LEE Tel: 3108 2514 1 CME Point

Date / Time	Function	Enquiry / Remarks
22 THU 7:00 PM	**HKFMS Foundation Meeting** Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms Nancy CHAN Tel: 2527 8898
8:00 PM	**HKFMS Foundation Meeting** Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms Nancy CHAN Tel: 2527 8898
23 FRI 2:00 PM	**Live Lecture** **Weight Loss Surgery for Diabetes - Online** Organiser: HKMA-KLN City Community Network Speaker: Dr Dennis Chung-tak WONG	Ms Candice TONG Tel: 3108 2513 1 CME Point
7:00 PM	**Certificate Course in Allergy 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Agnes SY LEUNG	Ms Vienna LAM Tel: 2527 8898
26 MON 7:00 PM	**Certificate Course on Cytogenomics 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Chris Tsun-leung CHAN	Ms Vienna LAM Tel: 2527 8898
27 TUE 2:00 PM	**Live Lecture** **HKMA-GHK CME Programme 2020** **Topic: When medication don't work in rhinitis patients (Online)** Organiser: Hong Kong Medical Association & Gleneagles Hong Kong Hospital Speaker: Dr Winnie KAN	HKMA CME Department Tel: 2527 8452 1 CME Point
7:00 PM	**Certificate Course on Childhood Arthritis and Rheumatic Disease II (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr KWOK Piu-lee	Ms Vienna LAM Tel: 2527 8898
29 THU 2:00 PM	**Live Lecture** **Certificate Course for GPs 2021 - Update on Management of Parkinsonism - Online** Organiser: HKMA-KLN East Community Network, HA-United Christian Hospital & HK College of Family Physicians; Speaker: Dr CHEUNG Ka-yin	Ms Elise HAW Tel: 3949 3079 1 CME Point
2:00 PM	**Live Lecture** **Local Clinical Experience on Obesity Management - Online** Organiser: HKMA-HK East Community Network Speaker: Dr Michele Mae-ann YUEN	Ms Candice TONG Tel: 3108 2513 1 CME Point
30 FRI 2:00 PM	**Live Lecture** **Fracture Prevention in Postmenopausal Osteoporosis Women** Organiser: HKMA-Shatin Community Network Speaker: Dr Henry Wing-ming KONG	Ms Candice TONG Tel: 3108 2513 1 CME Point
7:00 PM	**Certificate Course in Allergy 2021 (Video Lectures)** Organiser: The Federation of Medical Societies of Hong Kong Speaker: Dr Jalme S Rosa Duque	Ms Vienna LAM Tel: 2527 8898

Answers to Dermatology Quiz

Answers:

1. The diagnosis is pityriasis amiantacea, and the possible differential diagnoses include scalp dermatitis, psoriasis, seborrhoeic dermatitis and tinea capitis. Head lice and lichen simplex chronicus should also be considered. Pityriasis amiantacea is characterised by thick yellowish scales wrapping around the tufts of hairs. It may be complicated by secondary bacterial infection, especially staphylococcal infection, and by various extent of hair loss.

2. Pityriasis amiantacea is diagnosed by its characteristic clinical features. No investigation is needed to confirm the diagnosis. At times, fungal smear or culture may be necessary to rule out tinea capitis, and bacterial culture may be used in case of suspected secondary bacterial infection. If the patient is having pityriasis amiantacea, the most important task is to do a thorough skin examination to look for other cutaneous clues which may help to differentiate this condition from other possible associated diagnoses such as scalp dermatitis, seborrhoeic dermatitis, psoriasis, tinea capitis and so on, skin biopsy is necessary only rarely in a difficult case.

3. Treatment of pityriasis amiantacea depends on the specific associated diseases. In general, mineral or vegetable oil such as olive oil may help to loosen the adherent scales. Shampoo containing salicylic acid, coal tar or sulphur may reduce the scales and inflammation. Topical steroids are useful especially when the condition is associated with psoriasis or other forms of dermatitis. Oral antibiotics are needed if the secondary bacterial infection is suspected. Antifungal shampoo such as ketoconazole shampoo is often prescribed if associated with seborrheic dermatitis.

Dr Chi-keung KWAN
MBBS(HK), FRCP(Lond, Glasg, Edin), Dip Derm(Glasg), FHKCP, FHKAM(Medicine)
Specialist in Dermatology and Venereology

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References: 1. Global Datasheet Fluticasone furoate/vilanterol: v11, March 2020. **2.** Bardsley G, *et al. Respir Res* 2018;19:133. **3.** Woodcock A, *et al. Lancet* 2017;390:2247-2255. **4.** GSK Clinical report. HZA 115150;2017. Assessed on April 2021. **5.** Berstein DI, et al. J Asthma 2015;52:1073-1083. **6.** Svedaster H, et al, Respir Med 2018;141:198-206. **7.** Daley-Yates P. *et al. Br J Clin Pharmacol* 2020;1-11. **8.** Parimi M, et al, Adv Ther 2020;37:2916-2931. **9.** Svedaster H, et al, NPJ Prim Care Respir Med 2014;24:14019. **10.** Relvar (Fluticasone Furoate/Vilanterol) Hong Kong Prescribing Information HK102018 (GDS10/EMC20180924).

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A starting dose of **Relvar Ellipta 100/25mcg** should be considered for adults and adolescents 12 years and over who require a low to mid dose of inhaled corticosteroid in combination with a long-acting beta2-agonist. If patients are inadequately controlled on **Relvar Ellipta 100/25mcg,** the dose can be increased to **Relvar Ellipta 200/25mcg,** which may provide additional improvement in asthma control. The maximum recommended dose is **Relvar Ellipta 200/25mcg** once daily. *Children aged under 12 years.* The safety and efficacy of Relvar Ellipta in children under 12 years of age has not yet been established in the indication for asthma. *Elderly patients (>65 years) & renal impairment* No dose adjustment. Relvar Ellipta is for inhalation use only. After inhalation, thepatient should rinse their mouth with water without swallowing. Patients should be made aware that **Relvar Ellipta** must be used regularly, even when asymptomatic. Patients should be regularly reassessed by a healthcare professional so that the strength of **Relvar Ellipta** they are receiving remains optimal and is only changed on medical advice. **CONTRAINDICATIONS** Hypersensitivity to the active substances or to any of the excipients **WARNINGS AND PRECAUTIONS** Deterioration of disease Fluticasone furoate/vilanterol should not be used to treat acute asthma symptoms or an acute exacerbation in COPD, for which a short-acting bronchodilator is required. Increasing use of short-acting bronchodilators to relieve symptoms indicates deterioration of control and patients should be reviewed by a physician. Patients should not stop therapy with fluticasone furoate/vilanterol in asthma or COPD, without physician supervision since symptoms may recur after discontinuation. Asthma-related adverse events and exacerbations may occur during treatment with fluticasone furoate/vilanterol. Patients should be asked to continue treatment but to seek medical advice if asthma symptoms remain uncontrolled or worsen after initiation of treatment with Relvar Ellipta. Paradoxical bronchospasm Paradoxical bronchospasm may occur with an immediate increase in wheezing after dosing. This should be treated immediately with a short-acting inhaled bronchodilator. Relvar Ellipta should be discontinued immediately, the patient assessed and alternative therapy instituted if necessary. Cardiovascular effects Cardiovascular effects, such as cardiac arrhythmias e.g. supraventricular tachycardia and extrasystoles may be seen with sympathomimetic medicinal products including Relvar Ellipta, Therefore fluticasone furoate/ vilanterol should be used with caution in patients with severe cardiovascular disease, or heart rhythm abnormalities, thyrotoxicosis, uncorrected hypokalaemia or patients predisposed to low levels of serum potassium. Systemic corticosteroid effects Systemic effects may occur with any inhaled corticosteroid, particularly at high doses prescribed for long periods. These effects are much less likely to occur than with oral corticosteroids, Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, decrease in bone mineral density, growth retardation in children and adolescents, cataract and glaucoma and more rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children). Fluticasone furoate/vilanterol should be administered with caution in patients with pulmonary tuberculosis or in patients with chronic or untreated infections. The incidence of pneumonia in patients with asthma was common at the higher dose. The incidence of pneumonia in patients with asthma taking Relvar Ellipta 200/25mcg was numerically higher compared with those receiving Relvar Ellipta 100/25mcg or placebo. No risk factors were identified. **INTERACTIONS** Interaction with beta-blockers Beta$_2$-adrenergic blockers may weaken or antagonise the effect of beta$_2$-adrenergic agonists. Concurrent use of both non-selective and selective beta$_2$-adrenergic blockers should be avoided unless there are compelling reasons for their use. Interaction with CYP3A4 inhibitors Caution is advised when co-administering with strong CYP 3A4 inhibitors as there is potential for increased systemic exposure to both fluticasone furoate and vilanterol. Co-administration should be avoided unless the benefit outweighs the increased risk of systemic corticosteroid side effects, in which case patients should be monitored for systemic corticosteroid side effects. **PREGNANCY AND LACTATION** Pregnancy Administration of fluticasone furoate/vilanterol to pregnant women should only be considered if the expected benefit to the mother is greater than any possible risk to the foetus. Breast-feeding A decision must be made whether to discontinue breast-feeding or to discontinue fluticasone furoate/vilanterol therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman. **ADVERSE REACTIONS** Pneumonia, upper respiratory tract infection, bronchitis, influenza, candidiasis of mouth and throat, headache, extrasystoles, nasopharyngitis, oropharyngeal pain, sinusitis, pharyngitis, rhinitis, cough, dysphonia, abdominal pain, arthralgia, back pain, fractures, muscle spasms, pyrexia. **OVERDOSE** There is no specific treatment for an overdose with fluticasone furoate/ vilanterol. If overdose occurs, the patient should be treated supportively with appropriate monitoring as necessary. Further management should be as clinically indicated or as recommended by the national poisons centre, where available. Abbreviated Prescribing Information based on Relvar Ellipta Hong Kong Prescribing Information HK102018 (GDS10/EMC20180924).

Please read the full prescribing information prior to administration.
Full prescribing information is available on request from
GlaxoSmithKline Ltd, 23/F, Tower 6, The Gateway, 9 Canton Road, Tsimshatsui, Kowloon, Hong Kong or Level 20, AIA Tower, Nos 251A-301 Avenida Commercial de Macau, Macau.
For adverse event reporting, please call GlaxoSmithKline Limited at (852) 3189 8989 (Hong Kong) [or (853) 2871 5569 (Macau)], or send an email to us at HKAdverseEvent@gsk.com.

RELVAR ELLIPTA SAFETY INFORMATION

Safety Profile of Relvar Ellipta Inhalation Powder, Pre-dispensed 100 mcg/25 mcg and **200 mcg/25 mcg (100/200 mcg** fluticasone furoate and 25 mcg vilanterol)

- Hypersensitivity to the active substances or to any of the excipients is contraindicated to Relvar
- Relvar should not be used to treat acute asthma symptoms, for which a short-acting bronchodilator is required
- Relvar should be used with caution in patients with severe cardiovascular disease, pulmonary tuberculosis or in patients with chronic or untreated infections
- Systemic effects may occur with any inhaled corticosteroids, particularly at high doses prescribed for long periods. Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents and decrease in bone mineral density
- Patients should not stop therapy with Relvar in asthma without physician supervision.

Adverse effects observed with Relvar in clinical studies and post-marketing		
Frequency Category	**Number of Subjects**	**Adverse reaction(s)**
Very common	≥1/10	Headache, nasopharyngitis
Common	≥1/100 to <1/10	Pharyngitis, rhinitis, candidiasis of mouth and throat, pneumonia, arthralgia, pyrexia
Uncommon	≥1/1,000 to <1/100	Extrasystoles
Rare	≥1/10,000 to <1/1,000	Hypersensitivity reactions including anaphylaxis, angioedema, rash, and urticaria, Palpitations

For Healthcare Professionals only. Images used are for illustrative purposes only.
If symptoms arise in the period between doses, an inhaled, short-acting beta$_2$-agonist should be taken for immediate relief.
Relvar Ellipta was developed in collaboration with INNOVIVA

PM-HK-FFV-ADVT-210001 (04/2023) Date of preparation: 27/04/2021

COMBAT PAIN WITH Celebrex® and Lyrica®

CELEBREX®
(CELECOXIB)

Well-tolerated Relief of Nociceptive Pain[1]

22 MINS

Fast onset of pain relief as early as 22 minutes, sustained for up to 24 hours[2]

Fewer upper and lower GI events compared with NSAIDs + PPI[3,4]

Noninferior CV safety compared with ibuprofen or naproxen[5]

First-line Treatment for Neuropathic Pain[6,7]

LYRICA® PREGABALIN

Rapid and sustained pain relief from Day 2[8]

Low potential for pharmacokinetic interactions[7]

Significantly improved pain-related sleep interference and anxiety[9]

Abbreviations: CV=cardiovascular; GI=gastrointestinal; NSAID=non-steroidal anti-inflammatory drug; PPI=proton pump inhibitor

References: 1. Celebrex (celecoxib) Prescribing Information. Viatris Healthcare Hong Kong Limited: Version May 2019. **2.** Cheung R, Krishnaswami S, Kowalski K. Analgesic efficacy of celecoxib in postoperative oral surgery pain: a single-dose, two-center, randomized, double-blind, active- and placebo-controlled study. *Clin Ther.* 2007;29 Suppl:2496-510. **3.** Chan PKL, Lanas A, Scheiman J, et al. Celecoxib versus omeprazole and diclofenac in patients with osteoarthritis and rheumatoid arthritis (CONDOR): a randomised trial. *Lancet.* 2010;376(9736):173-9. **4.** Chan PKL, Ching JYL, Tse YK, et al. Gastrointestinal safety of celecoxib versus naproxen in patients with cardiothrombotic diseases and arthritis after upper gastrointestinal bleeding (CONCERN): an industry-independent, double-blind, double-dummy, randomised trial. *Lancet.* 2017;389(10087):2375-82. **5.** Nissen SE, Yeomans ND, Solomon DH, et al. Cardiovascular Safety of Celecoxib, Naproxen, or Ibuprofen for Arthritis. *N Engl J Med.* 2016;375(26):2519-29. **6.** Attal N, Cruccu G, Baron R , et al. EFNS guidelines on the pharmacological treatment of neuropathic pain: 2010 revision. *Eur J Neurol.* 2010;17(9):1113-e88. **7.** Lyrica (pregabalin) Prescribing Information. Viatris Healthcare Hong Kong Limited: Version December 2019. **8.** Dworkin RH, Corbin AE, Young JP Jr, et al. Pregabalin for the treatment of postherpetic neuralgia: a randomized, placebo-controlled trial. *Neurology.* 2003;60(8):1274-83. **9.** Saldaña MT, Navarro A, Pérez C, et al. Patient-reported-outcomes in subjects with painful lumbar or cervical radiculopathy treated with pregabalin: evidence from medical practice in primary care settings. *Rheumatol Int.* 2010;30(8):1005-15.

CELEBREX SUMMARY OF PRODUCT INFORMATION 1. TRADE NAME: Celebrex **2. PRESENTATION:** Capsules contain either 100mg, 200mg or 400mg of celecoxib. **3. INDICATIONS:** Adult: For the management of the signs and symptoms of osteoarthritis (OA), rheumatoid arthritis (RA), ankylosing spondylitis (AS); management of acute pain (AP) in adults; management of primary dysmenorrhea (PD); treatment of the signs and symptoms of low back pain (LBP). **4. DOSAGE:** OA: 200mg QD or 100mg BID; RA: 100 or 200mg BID; AS: 200mg QD or 100mg BID, 400mg QD if no response after 6 weeks; AP & PD: 400mg initially, an additional 200mg if needed on the first day, subsequent days 200mg BID as needed; LBP: 100mg BID. **5. CONTRAINDICATIONS:** Hypersensitivity to celecoxib, any components of the drug product. Allergic-type reactions to sulfonamides. Experienced asthma, urticaria, or allergy-type reactions after taking aspirin or other NSAIDs. Use as treatment for peri-operative pain in the setting of CABG surgery. Severe heart failure. **6. WARNINGS & PRECAUTIONS:** Increased risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke; Can cause new onset or worsening of hypertension; Increased risk of serious gastrointestinal adverse events including inflammation, bleeding, ulceration, and perforation of the esophagus, stomach, small intestine or large intestine; Hepatotoxicity; Heart failure and edema; Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury; Anaphylactic reactions; Exacerbation of asthma related to aspirin sensitivity; Serious skin reactions such as erythema multiforme, exfoliative dermatitis, Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN); drug reaction with eosinophilia and systemic symptoms (DRESS), and acute generalized exanthematous pustulosis (AGEP); Premature closure of the ductus arteriosus; Hematological Toxicity: Masking of inflammation and fever; consider monitoring patients on long-term NSAID treatment with a CBC and a chemistry profile periodically. **7. INTERACTIONS:** ACE inhibitors and angiotensin receptor blocker, aspirin, beta-blockers, corticosteroids, cyclosporine, diuretics, digoxin, drugs that interfere with hemostasis (e.g. warfarin, aspirin, SSRIs and SNRIs), lithium, methotrexate, NSAIDs and salicylates, pemetrexed and CYP2C9 inhibitors or inducers, CYP2D6 substrates. **8. PREGNANCY AND LACTATION:** Pregnancy Category C; Pregnancy category D from 30 weeks of gestation onward; there are no studies on the effects of Celebrex during labor or delivery. The effects in labor and delivery in pregnant women are unknown. Caution should be exercised when Celebrex is administered to a nursing woman. **9. SIDE EFFECTS:** Abdominal pain; Diarrhea, Dyspepsia; Flatulence; Nausea; Back pain; Peripheral edema; Accidental injury; Dizziness; Headache; Insomnia; Pharyngitis; Rhinitis; Sinusitis; Upper respiratory infection; Rash. Reference: HK PI (May 2019) Date of preparation: Mar 2020 Identifier number: CELE0320

LYRICA SUMMARY OF PRODUCT INFORMATION 1. TRADE NAME: LYRICA **2. PRESENTATION:** Each Lyrica hard capsule contains 25mg, 50mg, 75mg, 100mg, 150mg, 200mg or 300mg of pregabalin. (Not all strengths may be marketed). **3. INDICATIONS:** Treatment of peripheral and central neuropathic pain in adults; adjunctive therapy in adults with partial seizures with or without secondary generalisation; treatment of Generalised Anxiety Disorder (GAD) in adults; management of fibromyalgia. **4. DOSAGE:** 150 to 600mg/day given in either two or three divided doses. For neuropathic pain: start at 150mg/day, may be increased to 300mg/day after interval of 3 to 7 days, if needed, to a maximum of 600mg/day after an additional 7-day interval. For epilepsy: start with 150mg/day, may be increased to 300mg/day after 1 week. The maximum dosage of 600mg/day may be achieved after an additional week. For GAD: start with 150mg/day, may be increased to 300mg/day after 1 week. Following an additional week, dosage may be increased to 450mg/day. The maximum dosage of 600mg/day may be achieved after an additional week. For fibromyalgia: The recommended dose is 300 to 450mg/day. Dosing should begin at 75mg BID (150mg/day) and may be increased to 150mg BID (300mg/day) within 1 week based on efficacy and tolerability. Patients who do not experience sufficient benefit with 300mg/day may be further increased to 225mg BID (450mg/day). Treatment with doses above 450mg/day is not recommended. Renal impairment: Dosage reduction in patients with compromised renal function must be individualized according to creatinine clearance. Paediatric population: No recommendation on posology can be made. Elderly population: Elderly patients may require a dose reduction due to decreased renal function. **5. CONTRAINDICATIONS:** Hypersensitivity to active substance or to any of the excipients. **6. WARNINGS & PRECAUTIONS:** Some diabetic patients who gain weight on pregabalin treatment may need to adjust hypoglycaemic medicinal products. Hypersensitivity reactions: Pregabalin should be discontinued immediately if symptoms of angioedema, such as facial, perioral, or upper airway swelling occur. Pregabalin treatment has been associated with dizziness and somnolence, and therefore, may influence the ability to drive or use machines. There have been post-marketing reports of loss of consciousness, confusion, mental impairment, visual adverse reactions, and congestive heart failure. Cases of renal failure, misuse, abuse, dependence, encephalopathy, suicidal ideation and behavior have been reported. Withdrawal symptoms have been observed in some patients after discontinuation of short-term and long-term treatment of pregabalin. Caution is advised when prescribing pregabalin concomitantly with opioids due to risk of CNS depression. Lyrica contains lactose monohydrate. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicinal product. Please refer to full prescribing information for complete information. **7. INTERACTIONS:** Pregabalin may potentiate the effects of ethanol and lorazepam. **8. PREGNANCY AND BREAST-FEEDING:** There are no adequate data from the use of pregabalin in pregnant women. Studies in animals have shown reproductive toxicity. The potential risk for humans is unknown. Pregabalin should not be used during pregnancy unless clearly necessary. Effective contraception must be used in women of child bearing potential. Pregabalin is excreted into human milk. A decision must be made whether to discontinue breast-feeding or to discontinue pregabalin therapy. **9. SIDE EFFECTS:** Very common: Dizziness, somnolence, headache. Common: nasopharyngitis, appetite increased, euphoric mood, confusion, irritability, disorientation, insomnia, libido decreased, ataxia, coordination abnormal, tremor, dysarthria, amnesia, memory impairment, disturbance in attention, paraesthesia, hypoesthesia, sedation, balance disorder, lethargy, vision blurred, diplopia, vertigo, vomiting, nausea, constipation, diarrhoea, flatulence, abdominal distension, dry mouth, muscle cramp, arthralgia, back pain, pain in limb, cervical spasm, erectile dysfunction, oedema peripheral, oedema, gait abnormal, fall, feeling drunk, feeling abnormal, fatigue, weight increased. Reference: HK PI (Dec 2019) Date of preparation: Oct 2020 Identifier number: LYRI1020

FULL PRESCRIBING INFORMATION IS AVAILABLE UPON REQUEST.

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