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Drug Treatment of Type 2 Diabetes Mellitus

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The Cover Shot

The picture was taken at Camp Nou, a famous football stadium, during the game of Barcelona vs Manchester City (UEFA Champion League Round of 16 second leg, 18 March 2015).

Dr Ivan FN HUNG

MBChB (Bristol), MD (HK), MRCP (UK), FRCP (Lond, Edin), FHKCP, FHKAM (Medicine), PDipID (HK)

Clinical Associate Professor, Department of Medicine, The University of Hong Kong, Queen Mary Hospital

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References:
1. Kombiglyze prescribing information. 2. Jadzinsky M, Pfützner A, Paz-Pacheco E, et al. Saxagliptin given in combination with metformin as initial therapy improves glycaemic control in patients with type 2 diabetes compared with either monotherapy: a randomized controlled trial. Diabetes Obes Metab 2009;11:611-622.

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Drug Treatment of Type 2 Diabetes Mellitus

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Editor

Dr KK LEE

Drug treatment of type 2 diabetes mellitus (DM) has entered an exciting era. It has been long that we only have metformin and sulphonylureas as the oral form or injectable insulin only. Unfortunately type 2 DM is a progressive disease due to progressive beta-cell failure. Therefore treatment which can only target certain areas of the underlying mechanism is bound to fail.

More and more understanding of the underlying pathophysiology of type 2 DM results in better development in the drug treatment. Drugs are now being developed to try to target different components of the Ominous Octet. We have now a total of seven classes of oral drugs. We have injectable GLP-1 analogues. We also have more rapid onset insulin analogues and basal insulin, and both are much more physiological. In this issue of the Medical Diary, drug treatment of type 2 DM is re-visited.

Although metformin and sulphonylureas are "old drugs" we have got for more than half a century, they still have their own roles. In this issue, Dr Paul CH Lee is going to review the use of both metformin and sulphonylureas in the treatment of T2 DM, especially in reminding us some "good things" of these old drugs.

Then we have the alpha-glucosidase inhibitor, acarbose. It inhibits the enzyme needed to digest starch, resulting in less glucose being absorbed. Its use is limited by its GI side-effects. But it may still has its role in patients with impaired glucose tolerance to affect primarily post-prandial glucose concentration, together in patients with high-starch diets and diets low in simple sugar.

The next class is thiazolidinediones (the glitazones), the PPARs (peroxisome proliferator-activated receptors) agonists. The binding of glitazones to this group of nuclear receptors, can induce the interaction of the complex with specific DNA sequences (PPRE, PPAR response element) in thiazolidinedione-responsive genes, a process that ultimately results in enhanced or repressed transcriptional activity of specific genes. This results in enhanced glucose disposal, together with insulin-dependent inhibition of hepatic glucose output, presumably due to attenuation of gluconeogenesis and /or activation of glycolysis. This class of drug has been shown to have a better durability when compared with metformin and SUs in the ADOPT Study. They also showed additional benefits in improving the lipid profile of patients in the PROactive Study, independent of the beneficial effect of glycaemic control. Unfortunately the first of the group, troglitazone, has been withdrawn from the market due to drug induced hepatitis and rosiglitazone, has also been stopped marketing by GSK due to previous unfavourable results concerning heart failure, myocardial infarction and cardiovascular death. The remainding one, pioglitazone, has shown cardiovascular benefits in the PROactive Study, but it also raised concern about its association with bladder cancer.

Then we have the era of dipeptidyl peptidase-4 inhibitors (DPP4-i). After the launching of the first DPP4-i in HK in 2007, they became a favourite drug in the private sector. Theoretically they decrease the

HbA1c of T2DM patients by 0.6 to 1.0%, with a higher drop in patients with higher baseline HbA1c, and they are relatively free of side-effects. There were two cardiovascular outcome studies so far. The SAVOR Study showed saxagliptin has increased the rate of hospitalisation for heart failure in patients with pre-existing cardiovascular disease, while the EXAMINE Study showed alogliptin did not increase the incidence of cardiovascular risk of patients after acute coronary syndrome. We are still waiting for the results of the TECOS Study, which will be reported at the coming ADA Meeting in June, 2015. Then we can have a better insight on the cardiovascular safety of DPP4-i, and whether the heart failure issue is a class effect or not.

Dr CY Yeung presents to us a new class of drug, the SGLT2-inhibitors. The seventh class we now have. Then Dr Michele Yuen and Prof Karen Lam will try to express their views on the use of insulin in T2DM. Last but not least, Dr WB Chan presents to us his view on two different injectables, GLP-1 agonists and insulin.

I hope you will enjoy reading this issue of the Medical Diary. I would like to express my sincere thanks to all the authors for their effort and the valuable contribution of the articles. I wish we can all review our own practice, be individualised to our patients, and improve our care to the patients with this challenging disease.

THE FEDERATION OF MEDICAL SOCIETIES OF HONG KONG
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- **Management of Advanced Valvular Heart Diseases**
  Dr CHAN Kam-tim
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  Dr CHU Chung-ming
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  Dr David CL LAM
  (Clinical Assistant Professor, Department of Medicine, Queen Mary Hospital)

Lunch Symposium – Management of Pain for Advanced Diseases

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  Prof SW TANG
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- **Exciting Development in the Field of Inborn Errors of Metabolism (IEM)**
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- **New Era of Multi-disciplinary Refractory Epilepsy Management: How Surgical and Dietary Treatments Make a Difference?**
  Dr Mario WK CHAK
  (Associate Consultant, Department of Paediatrics and Adolescent Medicine, Tuen Mun Hospital)

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Old Drugs are Not Bad Drugs

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Dr Paul CH LEE

The improved understanding on the pathophysiology of type 2 diabetes mellitus (T2DM) has certainly facilitated the emergence of novel therapeutics in the last two decades, targeting different components in the Ominous Octet[1]. While newer agents like glitazones, incretin mimetics, and sodium-glucose co-transporter 2 (SGLT2) inhibitors are becoming increasingly popular among diabetologists, the roles of some older drugs like sulphonylureas have been called into question.

Nonetheless, old drugs are not necessarily bad drugs, and metformin stands out as a good example. In the 2015 guidelines for treatment of T2DM, metformin remains the first-line pharmacological therapy recommended jointly by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD)[2,3]. This is most probably due to its low cost, high efficacy, reasonable durability, weight neutrality and long term safety. For more than 50 years, metformin has been widely used both as monotherapy and in combination with other hypoglycaemic agents, including newer agents like glucagon-like peptide 1 (GLP-1) agonists and even SGLT2 inhibitors. Metformin lowers HbA1c by 1 to 1.5% at its maximum dose, principally by inhibition of hepatic gluconeogenesis and hence improvement of insulin resistance[4].

In fact, metformin does not gain its favour simply by its potent hypoglycaemic properties, but also by its effects beyond improved glycaemic control. The 10-year follow-up study of the landmark trial, the United Kingdom Prospective Diabetes Study (UKPDS), has already highlighted the possible cardiovascular benefits among metformin users, with a significant risk reduction in myocardial infarction of 33% (p = 0.005) demonstrable after a decade[5]. In addition, metformin is the only anti-diabetic drug to date that has been associated with decreased cancer risk and improved cancer prognosis. Although this anti-carcinogenic property of metformin was mainly reported in observational studies and retrospective series, which precluded a conclusion on any causal relationship, various possible mechanisms have been proposed, including activation of adenosine monophosphatase-activated protein kinase (AMPK) and inhibition of mammalian target of rapamycin (mTOR), a key regulator of cell growth and proliferation in human cancer[6].

Metformin is generally well tolerated, except mild transient gastrointestinal intolerance that could be ameliorated if co-administered with meals. In addition, the use of extended release (XR) formulations also greatly improves tolerability and patient acceptance. Lactic acidosis, an important and serious side effect of metformin, is uncommon and mostly accompanied by other predisposing conditions leading to its occurrence. In fact, unless the estimated glomerular filtration rate falls to <30ml/min/1.73m2, a level at which use of metformin is absolutely contraindicated, there are literature supporting its use in patients with stable, mild to moderate renal insufficiency[7]. On the other hand, another side effect, metformin related vitamin B12 deficiency has been increasingly recognised in recent years. In a nested case-control study involving Hong Kong Chinese T2DM patients, the authors reported the odds ratio of the development of vitamin B12 deficiency was 2.88 (95% confidence interval = 2.15 – 3.87; p = 0.001) for each gram of daily dose increment and was 2.39 (95% confidence interval = 1.46 – 3.91; p = 0.001) if metformin was used for more than 3 years[8]. Although there is still no consensus in the optimal management and screening strategy for metformin related vitamin B12 deficiency, discontinuation of metformin is usually not mandatory and replacement of vitamin B12 can be given either orally or parenterally. Nevertheless, the overall risk to benefit ratio of metformin is still favourable, hence securing its position as the recommended initial drug of choice in the treatment of T2DM.

In contrast, sulphonylurea, another old class of anti-diabetic drug with clinical use as long as metformin, has recently been challenged for its role to remain as one of the first line add-on agents to type 2 DM patients with suboptimal glycaemic control on metformin monotherapy[9]. Weight gain, low durability and moderate risk of hypoglycaemia are certainly downsides of sulphonylureas. Furthermore, there has been concern with the use of sulphonylureas in terms of cardiovascular safety over the years, although evidence from observation studies and randomised controlled trials were inconsistent. Inhibition of ischaemic conditioning and hypoglycaemia are possible mechanisms relating sulphonylureas with adverse cardiovascular outcomes. Sulphonylureas bind to pancreatic sulphonylurea receptors (SUR1), inhibit adenosine triphosphate-sensitive potassium (K_{ATP}) channels in beta cells and trigger insulin release. However, non-specific binding to extra-pancreatic sulphonylurea receptors on cardiac myocytes (SUR2A) produce undesirable inhibition of protective mechanisms against ischaemic insult, which might contribute to the increased cardiovascular mortality[10]. In a Danish study involving 76,000 sulphonylurea users, comparing the associations of various sulphonylureas with cardiovascular mortality, gliclazide was shown to have the lowest risk compared with glibenclamide, glipizide and glimepiride, highlighting the possible intra-class difference in the selectivity for sulphonylurea receptors[11]. In a recent systematic review, both gliclazide

and glimepiride were shown to be associated with a lower risk of all-cause and cardiovascular related mortality compared with glibenclamide[12].

In fact, this intra-class difference also exists in terms of the risk of hypoglycaemia. Glibenclamide was reported to have a relative risk of 1.44 in overall hypoglycaemia risk when compared with other sulphonylureas[13]. In contrast, newer sulphonylureas like glimepiride has been shown to have less hypoglycaemia risk. In addition, in the Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified Release Controlled Evaluation (ADVANCE) study, most subjects in the intensive-control group who were taking gliclazide modified release formulations also did not have hypoglycaemic episodes, despite having a baseline median HbA1c of 7.2%[14]. Taken together, this might give insights into the choice of sulphonylureas, especially when used in patients at higher risk of hypoglycaemia, which include the elderly, the cognitive impaired and those with long duration of diabetes, prevalent heart disease or renal impairment.

Current guidelines emphasise a patient-centred approach in the management of T2DM[2]. Other than the patient's life expectancy and other disease factors, the cost of therapy and resources are also important domains that worth consideration, in particular for patients being managed in the public sector. Although newer anti-diabetic drugs seem fascinating with advantages like low or absent hypoglycaemia risk, weight neutrality or even weight loss, or additional cardiovascular benefits, there are still places for old drugs like metformin and sulphonylurea. In fact, a significant proportion of type 2 diabetic patients managed under the Hospital Authority system do enjoy reasonably good glycaemic control while on combination therapy with metformin and sulphonylurea. After all, old drugs are not necessarily bad drugs. With careful selection of the patient group and choice of sulphonylurea agents, together with close monitoring of development of contraindications, diabetic patients might still benefit a lot from this combination therapy at an inexpensive cost.

References

1. Defronzo RA. Banting Lecture. From the triumvirate to the ominous octet: a new paradigm for the treatment of type 2 diabetes mellitus. Diabetes. 2009;58:773-795.
2. Inzucchi SE, Bergenstal RM, Buse JB, Diamant M, Ferrannini E, Nauck M, et al. Management of hyperglycemia in type 2 diabetes, 2015: a patient-centered approach: update to a position statement of the American Diabetes Association and the European Association for the Study of Diabetes. Diabetes care. 2015;38:140-149.
3. American Diabetes A. (7) Approaches to glycemic treatment. Diabetes care. 2015;38 Suppl:S41-48.
4. Garber AJ, Abrahamson MJ, Barzilay JI, Blonde L, Bloomgarden ZT, Bush MA, et al. American Association of Clinical Endocrinologists' comprehensive diabetes management algorithm 2013 consensus statement--executive summary. Endocr Pract. 2013;19:536-557.
5. Holman RR, Paul SK, Bethel MA, Matthews DR, Neil HA. 10-year follow-up of intensive glucose control in type 2 diabetes. N Engl J Med. 2008;359:1577-1589.
6. Foretz M, Guigas B, Bertrand L, Pollak M, Viollet B. Metformin: from mechanisms of action to therapies. Cell Metab. 2014;20:953-966.
7. Lipska KJ, Bailey CJ, Inzucchi SE. Use of metformin in the setting of mild-to-moderate renal insufficiency. Diabetes care. 2011;34:1431-1437.
8. Ting RZ, Szeto CC, Chan MH, Ma KK, Chow KM. Risk factors of vitamin B12 deficiency in patients receiving metformin. Arch Intern Med. 2006;166:1975-1979.
9. Genuth S. Should sulfonylureas remain an acceptable first-line add-on to metformin therapy in patients with type 2 diabetes? No, it's time to move on! Diabetes care. 2015;38:170-175.
10. Abdelmoneim AS, Eurich DT, Light PE, Senior PA, Seubert JM, Makowsky MJ, et al. Cardiovascular safety of sulphonylureas: over 40 years of continuous controversy without an answer. Diabetes Obes Metab. 2015.
11. Schramm TK, Gislason GH, Vaag A, Rasmussen JN, Folke F, Hansen ML, et al. Mortality and cardiovascular risk associated with different insulin secretagogues compared with metformin in type 2 diabetes, with or without a previous myocardial infarction: a nationwide study. Eur Heart J. 2011;32:1900-1908.
12. Simpson SH, Lee J, Choi S, Vandermeer B, Abdelmoneim AS, Featherstone TR. Mortality risk among sulfonylureas: a systematic review and network meta-analysis. Lancet Diabetes Endocrinol. 2015;3:43-51.
13. Gangji AS, Cukierman T, Gerstein HC, Goldsmith CH, Clase CM. A systematic review and meta-analysis of hypoglycemia and cardiovascular events: a comparison of glyburide with other secretagogues and with insulin. Diabetes care. 2007;30:389-394.
14. Group AC, Patel A, MacMahon S, Chalmers J, Neal B, Billot L, et al. Intensive blood glucose control and vascular outcomes in patients with type 2 diabetes. N Engl J Med. 2008;358:2560-2572.

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Treatment of Early Gastric Neoplasm – Endoscopic submucosal dissection (ESD)
Prof. Philip Wai-yan CHIU
Professor, Department of Surgery, The Chinese University of Hong Kong

Screening and treatment of early colorectal cancer - Transanal Endoscopic Microsurgery (TEM)
Dr. William Chia-shing MENG
Specialist in General Surgery
Honorary Consultant, Matilda International Hospital

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22nd June

Lipid treatment - new guidelines, new directions
Prof. Brian TOMLINSON
Professor, Department of Medicine & Therapeutics
The Chinese University of Hong Kong

Type 2 Diabetes: New & old treatments, how should we use them
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Sodium-Glucose Co-Transporter 2 Inhibitors: A Novel Glucose Control Mechanism Independent of Pancreatic Reserve

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This article has been selected by the Editorial Board of the Hong Kong Medical Diary for participants in the CME programme of the Medical Council of Hong Kong (MCHK) to complete the following self-assessment questions in order to be awarded 1 CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 30 June 2015.

Introduction: Diabetes Mellitus and the Kidneys

Diabetes mellitus (DM) is now the leading cause of end stage renal disease and the trend is ever rising along with the pandemic of DM worldwide[1]. Despite the rapid developments in the field of anti-diabetic treatments in the past two to three decades, unmet needs remain as the majority of DM patients still have their blood glucose sub-optimally controlled[2]. Furthermore, many of the oral agents, which actions depend on the patients' remaining insulin secretory reserve, lose their efficacy as the disease progresses. Glycosuria has long been considered as an indicator of poorly controlled diabetes and yet a novel class of anti-diabetic agents, the sodium-glucose co-transporter 2 (SGLT-2) inhibitors, improve the glycaemic control of DM patients by "worsening" their glycosuria intentionally through a mechanism independent of pancreatic beta-cell function.

Role of the Kidneys in Glucose Homeostasis: Normal and in Diabetes Mellitus

Apart from liver and muscle, kidneys also play a significant role in glucose metabolism as the kidneys contribute up to 25% of gluconeogenesis, which is an important source of glucose especially in the fasting state. In healthy subjects, around 180 gram of glucose is filtered at the glomeruli daily and reabsorbed into the body. The reabsorption process is accomplished mostly (90%) by the SGLT-2 located at the plasma membrane of the cells lining the proximal convoluted tubules (Fig. 1). The maximal capacity to handle the glucose load is around 260-350 mg/min/1.73m^2. It corresponds to a blood glucose concentration of approximately 11mmol/L and thus in healthy subjects, 100% of the plasma glucose filtered will be reabsorbed. When the maximum transport for glucose is exceeded, as in patients with poorly controlled DM whose serum glucose is higher than 11 mmol/L, glucose "overflows" into the urine[3]. Hyperglycaemia also appears to up-regulate the expression of SGLT-2, which explains why maximum glucose transport in patients with DM is higher than that in healthy subjects[4].

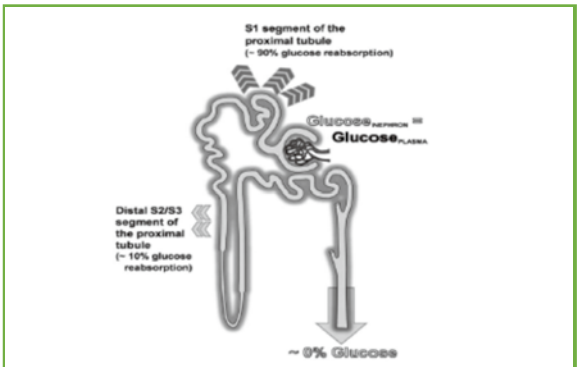

Fig. 1 Balance of glucose transport in proximal renal tubule of a nephron

SGLT-2 inhibition as a new therapeutic target for treatment of type 2 diabetes mellitus

The concept of targeting SGLT-2 in the treatment of type 2 DM originated from the study of patients with familial renal glycosuria (FRG), a condition in which SGLT-2 mutations reduces the renal re-absorptive capacity. The chronic glycosuria of patients with FRG does not appear to be associated with other pathological changes, and patients with FRG are mostly asymptomatic[5]. Phlorizin, a non-selective inhibitor of SGLT, has been isolated from the bark of apple trees since 1835 and was shown to increase glycosuria in animals. Different specific SGLT-2 inhibitors are being developed as new oral anti-diabetic agents. Therapeutic inhibition of SGLT-2 can produce around 70g per day of glucose elimination via the kidneys. Among these agents, dapagliflozin, canagliflozin and empagliflozin have been approved by the US Food and Drug Administration, as monotherapy, or add-on treatment for patients with type 2 DM.

Clinical Data of SGLT-2 inhibitors and benefits beyond glycaemic control

As a monotherapy, SGLT-2 has been shown to reduce the fasting plasma glucose, post-prandial plasma glucose and HbA1c (mean -0.78%, 95%CI -0.86 to -0.69 depending on agents and dose)[6]. Also, it can produce further HbA1c reduction when used as add-on therapy

to almost all other anti-diabetic therapies, including metformin, sulfonylurea, thiazolidinediones, DPPIV-inhibitors and insulin. Since the mechanism of SGLT-2 is independent of insulin/beta-cell function, the efficacy of SGLT-2 inhibitors in glucose lowering may be more sustainable, when compared with sulfonylurea as shown in some studies (Fig.2).

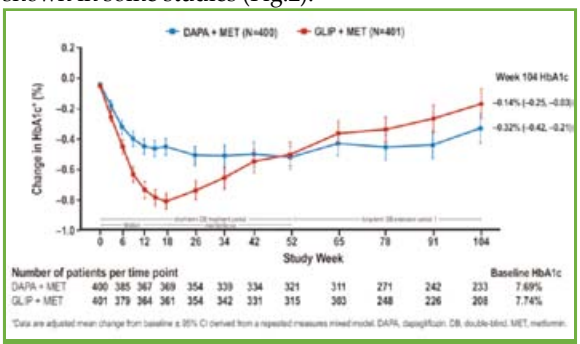

Fig 2. Effect of SGLT-2 (DAPA) vs sulfonylurea (GLIP) as add-on therapy to metfomrin (MET) on HbA1c over 104 weeks[7]

As the glucose elimination effect only occurs when the filtered glucose load exceeds the re-absorptive capacity, SGLT-2 inhibitors alone will not cause hypoglycaemia in contrast to most insulin secretagoues and insulin. In clinical studies, the rate of hypoglycaemia was much lower in subjects using SGLT-2 inhibitors when compared with sulfonylurea. Also, a glucose wasting of around 70g per day roughly corresponds to an energy deficit of 280kcal per day. As a result, weight loss of approximately 2-3 kg can be seen in patients taking SGLT-2 inhibitors[8]. This additional benefit is important in treating patients with type 2 DM, who are frequently obese and many anti-diabetic agents (e.g. sulfonylurea, insulin and thiazolidinediones) actually have the undesirable side effect of weight gain. By far, SGLT-2 inhibitors and the incretin-based therapy GLP-1 analogues, are the only two classes of anti-diabetic treatments which can produce significant weight loss. A blood pressure lowering effect (around 1.3-7.2 mmHg reduction in systolic blood pressure)[8] had also been demonstrated with SGLT-2 therapy due to a small degree of osmotic diuresis, natriuresis and volume contraction accompanying the glucose wasting. Moreover, owing to a reduction in intra-glomerular pressure, an improvement in albuminuria was observed which was independent of the HbA1c reduction. Whether this can be translated into reduction in adverse renal outcomes in the long run needs further confirmation.

Undesirable effects and limitations

SGLT-2 inhibitors are generally well tolerated. As more glucose appears in the urine which supports bacterial growth, urinary tract infections (risk ratio 1.44, 95%CI 10.5 to 1.98) and infections of the lower genital tract (e.g. Vulvovaginitis, balanitis etc. [risk ratio 3.42, 95% CI 2.19 to 5.33]) were higher in patients taking SGLT-2 inhibitors when compared with placebo[8]. These adverse effects can be reduced when personal hygiene is educated and reinforced. Besides, due to the volume depletion, patients may develop mild dehydration or hypotension. Patients should be educated to compensate the volume loss with extra fluid intake before initiation of the drugs. The blood pressure should be monitored with the dosage of anti-hypertensives adjusted when required. Concomitant use of SGLT-2 and loop diuretics is contraindicated. Furthermore, as the glucose lowering effect of SGLT-2 largely depends on the glucose filtration load, it should not be used in patients with lower creatinine clearance (<45ml-60ml/min) due to reduced efficacy. Dosage adjustment is required in patients with renal and hepatic impairments.

Conclusion

Sodium-glucose co-transporter 2 inhibitors are a promising new class of anti-diabetic agents, both as monotherapy and also as add-on therapy to other agents. Its position in the treatment algorithm of type 2 diabetes remains to be defined.

References

1. Ho YW, Chan KH, Choi BY et al. Hong Kong Renal Registry Report 2012. Hong Kong Journal of Nephrology 2013;15:28-43
2. Tong PCY, Ko TC, So WY et al. Use of anti-diabetic drugs and glycaemic control in type 2 diabetes-The Hong Kong Diabetes Registry. Diab Res Clin Pract 2008;82:346–352.
3. Rahmoune H, Thompson PW, Ward JM et al. Glucose transporters in human renal proximal tubular cells isolated from the urine of patients with non-insulin-dependent diabetes. Diabetes 2005;54:3427-34
4. Timothy C. Hardman, Peter Rutherford, Simon W. Dubrey et al. Sodium-Glucose co-transporter 2 Inhibitors: From Apple Tree to 'sweet pee'. Current Pharmaceutical Design, 2010;16: 3830-3838
5. Calado J, Soto K, Clemente C, Correia P, Rueff J. Novel compound heterozygous mutations in SLC5A2 are responsible for autosomal recessive renal glucosuria. Hum Genet. Feb 2004;114(3):314-6.
6. Berhan A and Barker A. Sodium glucose co-transporter 2 inhibitors in the treatment of tye 2 diabetes mellitus : a meta-analysis of randomized double-blind controlled trials. BMC Endocrine Disorders 2013; 13: 58-69
7. Nauck M, et al. Diabetologia. 2010;53(1):S107 (Presented at EASD Annual Meeting, Sep 24, 2010; #241)
8. Cart C, Gill LA, Court R et al. Systemic review of SGLT2 inhibitors in dual or triple therapy in type 2 diabetes. BMJ Open 2012;2(5)

MCHK CME Programme Self-assessment Questions

Please read the article entitled "Sodium-Glucose Co-Transporter 2 Inhibitors: A Novel Glucose Control Mechanism Independent of Pancreatic Reserve" by Dr CY YEUNG and complete the following self-assessment questions. Participants in the MCHK CME Programme will be awarded CME credit under the Programme for returning completed answer sheets via fax (2865 0345) or by mail to the Federation Secretariat on or before 30 June 2015. 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. Liver, muscle and kidneys are the major organs involved in glucose metabolism.
2. SGLT-2 is a sodium-glucose co-transporter located at the plasma membrane of the cells lining the proximal convoluted tubules of the kidney.
3. In healthy subjects, around 90% of the filtered glucose will be reabsorbed through SGLT-2.
4. SGLT-2 inhibitors have been approved in the treatment of type 2 DM as monotherapy, or add-on therapy to metformin, sulphonylureas, thiazolidinediones, DPP-4 inhibitors and insulin.
5. SGLT-2 inhibitors can decrease the post-prandial glucose level in T2 DM but not the fasting glucose level.
6. The efficacies of SGLT-2 inhibitors depend on the pancreatic reserve of the T2 DM patients.
7. SGLT-2 inhibitors are weight neutral.
8. One of the side-effects of SGLT-2 inhibitors is that it will increase the blood pressure of the patients receiving the drug.
9. SGLT-2 inhibitors cause an increase in urinary tract and genitourinary infections.
10. SGLT-2 inhibitors are not recommended for patients with impaired renal function.

ANSWER SHEET FOR JUNE 2015

Please return the completed answer sheet to the Federation Secretariat on or before 30 June 2015 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

Sodium-Glucose Co-Transporter 2 Inhibitors: A Novel Glucose Control Mechanism Independent of Pancreatic Reserve

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Answers to May 2015 Issue

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Insulin Use in Type 2 Diabetes

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Many doctors have tried to initiate insulin for their type 2 diabetic patients. A commonly asked question is often "Is it true that once I start insulin, I will need to be on insulin for the rest of my life?" "Can I try that new insulin that I read about in the newspaper?" In order to answer these questions (and many others), it is important to review some basics on type 2 diabetes and insulin therapy.

Why is insulin therapy needed in type 2 diabetes?

Type 2 diabetes is a disease of insulin resistance combined with inadequate compensatory insulin secretory response[1]. In the pre-clinical stage, normoglycaemia is maintained through compensatory hypersecretion of insulin from the pancreatic β cells. Over time, the "over-worked" β cells undergo premature apoptosis[2]. With progressive decline in the β cell mass and function, insulin resistance can no longer be overcome, hyperglycaemia results and diabetes develops[3]. Studies suggest that by the time type 2 diabetes is biochemically apparent, approximately 50% of the original β cell mass are lost[4]. One of the strategies in treating type 2 diabetes relies on increasing insulin secretion from the remaining β cells through the use of insulin secretogogues (e.g. sulphonylurea). With continued β cell loss during the natural course of type 2 diabetes, patients tend to require escalating doses of anti-diabetic medications to achieve the same level of glycaemic control[5]. The rate of β cell loss differs between individuals. When β cell loss reaches a critical point where endogenous insulin secretion becomes insufficient to compensate for the insulin resistance despite drug treatment, also known as the stage of secondary drug failure, the patient will require insulin therapy for the maintenance of glycaemic control. Approximately 50% of type 2 patients develop secondary drug failure in 10 years[6].

What is the difference between different types of insulin?

Insulin can be roughly divided into rapid-, short-, intermediate-acting and basal types. A comparison of the onset and duration of action for each is summarised in Table 1. The method of initiating insulin and the choice of insulin should be individualised to the individual need of patients. As a general rule of thumb, most type 2 diabetic patients with drug failure should be started on an once daily intermediate-acting or basal insulin. The timing of this once daily injection should be tailored to each patient, but usually a bedtime or pre-breakfast injection is used at insulin therapy initiation. Depending on their effectiveness, some or all of the oral diabetic agents should be terminated or continued in combination with insulin therapy.

Table 1[8].

Type	Onset	Peak	Duration	Examples
Rapid-acting	10 to 30 mins	30 mins to 3 hours	3 to 5 hours	Humalog®, Novorapid, Apidra
Short-acting (Regular insulin)	30 to 60 mins	2 to 5 hours	Up to 12 hours	Actrapid, Humulin R
Intermediate-acting	90 mins to 4 hours	4 to 12 hours	Up to 24 hours	Protaphane, Humulin N
Basal insulin	45 mins to 4 hours	Minimal	Up to 24 hours	Levemir, Glargine
Pre-mixed insulin	10 to 30 mins (depending on short-acting component)	2 to 12 hours (depending on long-acting component)	14 to 24 hours	Mixtard 30HM, Humulin 70/30, Humalog Mix 25/75 and 50/50

How should insulin be initiated?

As an illustrative example, a patient on maximal oral anti-diabetic agents (likely including metformin and a sulfonylurea), who has a high fasting glucose but relatively stable glycaemic control during the day, would benefit most from the addition of a single daily intermediate-acting or basal insulin given at bedtime. Alternatively, if the patient has uncontrolled glucose excursion during the day and relatively satisfactory fasting glucose, a single pre-breakfast injection should be considered. With the addition of daytime basal insulin, sulfonylureas should probably be stopped as they are unlikely to be effective. In the absence of contraindications, metformin should be continued in combination with insulin as its effect on insulin resistance would reduce the amount of insulin required. Dipeptidyl peptidase-4 inhibitors (DPP4-I) and thiazolidinedione may also be continued in conjunction with insulin therapy but one would need to watch out for fluid retention for the latter drug. The initial dosage of insulin should be tailored to the patient's body weight, age and renal / hepatic function. The American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) conjoint position statement of 2012 suggested an initial insulin dosage of 0.1-0.2 units/kg/day (or approximately 10 units daily) for patients starting on combination therapy, with further adjustments by 2-4 units once to twice weekly until the glycaemic target is reached[7]. Of course, this is only a rough guide and occasionally higher starting doses might be needed especially for

those with very poor glycaemic control, or for patients in whom some or all of the oral hypoglycaemic agents need to be stopped. For patients with basal insulin requirement that varies with the time of the day, the total basal insulin may be divided into two injections with approximately one-half to two-thirds given pre-breakfast and the remainder given pre-dinner, and pre-mixed insulin may offer better glycaemic control through the day compared to basal preparation.

With progressive decline in pancreatic reserve or in patients with compromised renal or liver function, combined therapy with oral drugs and basal insulin might be inadequate to control post-prandial hyperglycaemia. In such cases, prandial insulin (in the form of rapid- or short-acting insulin) should be added. There are many ways to add prandial insulin. The ADA and EASD conjoint position statement of 2012 suggested the addition of one to three injections of prandial insulin depending on the timing of hyperglycaemia. While this strategy allows for high flexibility, multiple injections may present a great challenge for elderly patients and inconvenience for younger patients. As such, an alternative method would be to use pre-mixed insulin twice daily with approximately one-half to two-thirds given pre-breakfast and the remainder given pre-dinner. Patients on twice daily pre-mixed insulin should be educated on the importance of strict diet compliance for optimal glycaemic control and minimising hypoglycaemic risk related to omission of scheduled meals or snacks.

Glycaemic control would inevitably continue to deteriorate in some patients. Among the multitude of causes for this are further insulin deficiency due to continued β cells loss associated with glucotoxicity or lipotoxicity from poor long term control, fluctuations in glucose levels due to progressive renal impairment from diabetic nephropathy, or worsening of insulin resistance resulting from liver derangement of other unrelated conditions. It is important to maintain an open dialogue with the patients at all points of diabetes treatment and to prime them well in advance on what is expected of their disease.

References

1. Standards of medical care in diabetes--2015: summary of revisions. Diabetes care 2015;38 Suppl:S4.
2. Matveyenko AV, Butler PC. Beta-cell deficit due to increased apoptosis in the human islet amyloid polypeptide transgenic (HIP) rat recapitulates the metabolic defects present in type 2 diabetes. Diabetes 2006;55:2106-14.
3. Weir GC, Bonner-Weir S. Islet beta cell mass in diabetes and how it relates to function, birth, and death. Annals of the New York Academy of Sciences 2013;1281:92-105.
4. Matveyenko AV, Butler PC. Relationship between beta-cell mass and diabetes onset. Diabetes, obesity & metabolism 2008;10 Suppl 4:23-31.
5. Prentki M, Nolan CJ. Islet beta cell failure in type 2 diabetes. The Journal of clinical investigation 2006;116:1802-12.
6. Wright A, Burden AC, Paisey RB, Cull CA, Holman RR. Sulfonylurea inadequacy: efficacy of addition of insulin over 6 years in patients with type 2 diabetes in the U.K. Prospective Diabetes Study (UKPDS 57). Diabetes care 2002;25:330-6.
7. Inzucchi SE, Bergenstal RM, Buse JB, et al. Management of hyperglycemia in type 2 diabetes, 2015: a patient-centered approach: update to a position statement of the American Diabetes Association and the European Association for the Study of Diabetes. Diabetes care 2015;38:140-9.
8. Insulin Action. Joslin Diabetes Center, 2015. (Accessed at http://www.joslin.org/info/insulin_action.html.)

GLP-1 Analogues vs Insulin – Good Partners or Competitors

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Type 2 diabetes is a chronic asymptomatic disease with a chronic deteriorating course, and as a result, is often diagnosed late and difficult to control. This is reflected by the fact that over the world, less than half of the diabetic population achieve an HbA1c of less than 7%, a target considered reasonable for most of the type 2 diabetic patients[1]. Metformin is considered the first line treatment by most guidelines, while the second line treatment remains controversial and may well need individualisation[2]. Countries with a national coverage of medical service usually recommend sulphonylureas as their second line treatment due to financial considerations, though sulphonylureas are notorious for their high risk of hypoglycaemia and poor sustainability of glycaemic control. Among the available oral agents, thiazolidinediones have the best durability. In patients treated with thiazolidinediones, their HbA1c deteriorates at a rate of only 0.07% per year as shown in the ADOPT study[3]. Furthermore, the use of thiazolidinediones reduces the need of long term insulin therapy as shown in the Proactive study[4]. However, as disease progresses, injectable therapy, classically insulin will be needed to maintain a reasonable glycaemic control.

Insulin can be used almost at any stage of the disease and is a powerful tool in achieving reasonable control. Recent long term data also establish its long term safety[5]. However, insulin is not without problems. Both patients and physicians are worried about the use of insulin, though often due to a psychological barrier and lack of good understanding rather than true barriers. Insulin also can induce weight gain, which is often disliked by the patients and can cause hypoglycaemia, though much improved with modern insulin analogues[6]. The most common regime of insulin treatment in Type 2 diabetes is basal insulin in combination with oral agents. This modality of treatment can often make fasting glucose under good control, but is often limited by lack of active titration of insulin dose. Furthermore, post-prandial hyperglycaemia is often inadequately controlled. As a result, even in clinical trials, only around 50% of subjects can achieve an HbA1c of 7% only; not to mention real life practices in which close monitoring and active insulin titration are often inadequate[7].

GLP-1 analogues have been introduced since the last decade. They work on the incretin pathway and enhance glucose dependent insulin secretion from pancreatic beta cells. In early studies, such as those with exenatide, GLP-1 analogues are often used in combination with metformin and/or sulphonylureas[8]. They seem to achieve an HbA1c reduction of around 1%. In head to head comparative studies, in the setting of oral agent failures, they achieve a similar improvement in HbA1c in comparison to basal insulin. However, on closer look at the data, we will find that exenatide improves glycaemic control in different ways compared with basal insulin. Basal insulin improves largely fasting glucose, while the post-prandial excursion of glucose is only modestly improved. Exenatide on the other hand has less improvement in fasting glucose, but largely flatten the post-prandial glucose excursion, especially for breakfast and dinner. Though exenatide has the advantage of having less hypoglycaemia and weight loss in comparison with basal insulin, gastrointestinal side effects such as nausea and vomiting are very common and hence limit its extensive use in real life practices[9]. It can be used as an alternative to insulin therapy at times of oral agent failure in selected populations; or even at the early stage to limit weight gain or induce weight loss as an added value on top of glycaemic control.

After introduction of exenatide, several other GLP-1 analogues have been introduced into the market, ranging from once daily injections such as liraglutide and lixisenatide to once weekly injections such as long acting exenatide. Table 1 is a list of GLP-1 analogues with their half-lives. They all share the advantage of weight loss and low risk of hypoglycaemia in the absence of insulin and sulphonylurea. On the other hand, they all share the disadvantage of gastrointestinal side effects[10,11]. There are numerous studies which compared basal insulin with GLP-1 analogues. They all showed that GLP-1 is at least non-inferior to basal insulin at the scenario of oral hypoglycaemic agent failure and has less hypoglycaemia and weight gain[12]. The data with the longest follow up came from comparison of long acting exenatide with basal insulin. It showed that adding long acting exenatide at times of oral hypoglycaemic agent failures led to better glycaemic control at three years and less hypoglycaemia, though with less control of fasting glucose and increased gastrointestinal side effects. However, the insulin arm in this study did not achieve a fasting glucose of less than 6.0mmol/l and hence it either reflects that the study was suboptimally carried out or there are practical barriers in insulin titration in its long term use[13].

Table 1. Half-life and frequency of GLP-1 analogues

GLP-1 Analogues	Half-life	Dosing
Exenatide BID	2.4 hours	Twice daily
Liraglutide	13 hours	Once daily
Lixisenatide	~3 hours	Once daily
Exenatide QW	Steady state over 7 weeks	Once weekly
Albiglutide	5 days	Once weekly

Since all GLP-1 analogues belong to the same class of drugs and have similar mechanism, one may expect they are similar to each other in terms of glycaemic control and hence agents with longer half-lives will have the unformidable advantage of convenience and less injections. However, clinical studies showed that although long acting GLP-1 analogues such as long acting exenatide are more convenient to use and have better control of fasting plasma glucose, they have lesser effects on post-prandial glycaemic control compared to twice daily short acting exenatide[14]. Similar phenomena happened when liraglutide was compared with short acting exenatide[15], suggesting that the change in half-life leads to changes in the pharmacodynamics as well. The underlying reason may be due to more marked delay of gastric emptying by short acting GLP-1 analogues[16]. Table 2 shows the different characteristics of short and long acting GLP-1 analogues[17]. The question followed will be how these differences in characteristics affect their clinical use. The obvious answer is that it is scenario dependent. Let us take the comparison between lixisenatide and liraglutide as an example. In one comparative study, liraglutide had better overall glycaemic control compared with lixisenatide, but was inferior in post-prandial glycaemic control[18]. Therefore, liraglutide may be a preferred option if combined with an oral hypoglycaemic agent when both fasting and post-prandial glucose are targets of control. However, if GLP-1 analogues are used in combination with basal insulin, the fasting plasma glucose should be well controlled by the basal insulin, short acting GLP-1 may be a preferred option.

Table 2. Characteristics of long and short acting GLP-1 analogues[17]

Parameters/Effect	Exenatide BID and Lixisenatide	Exenatide QW and Liraglutide
Fasting blood glucose levels	Modest reduction	Strong reduction
Postprandial hyperglycaemia	Strong reduction	Modest reduction
Fasting insulin secretion	Modest stimulation	Strong stimulation
Postprandial insulin secretion	Reduction	Modest stimulation
Glucagon secretion	Reduction	Reduction
Gastric emptying rate	Deceleration	No effect
Body weight reduction	1-5 kg	2-5 kg
Induction of nausea	20-50%, attenuates slowly (weeks to many months)	20-40%, attenuates quickly (~4-8 weeks)

When glycaemic control is suboptimal after active titration of basal insulin, the other possible option will be using more complicated regimes such as multiple dose injections or basal plus, or premix insulin[19]. Apart from increased number of injections, the other down side of this approach will be the increased risk of hypoglycaemia and weight gain. Since GLP-1 analogues have a lower risk of hypoglycaemia and can limit weight gain or induce weight loss, adding a GLP-1 analogue seems to be a better option than the more complicated insulin regime. This is well demonstrated by a recent meta-analysis, which showed that adding a GLP-1 analogue to basal insulin has slightly better glycaemic control, and 33% lower risk of hypoglycaemia, and a marked weight difference of 5.6kg compared to basal bolus insulin regime[20].

Since basal insulin and GLP-1 analogues preferentially target fasting plasma glucose and post-prandial glucose respectively and the effect of both has been shown to confer better therapeutic benefit if they are used earlier, we may consider using them simultaneously or even in combination at times of oral hypoglycaemic agent failures. In fact, a fixed combination of insulin degludec and liraglutide named IDegLira had been compared with insulin degludec and liraglutide respectively at times of oral agent failures and showed promising results. It was shown that this fixed dose combination is better than either of them alone in glycaemic control. It has less weight gain and hypoglycaemia compared with degludec and less gastrointestinal side effects compared with liraglutide[21]. More and more similar combinations may come into the market in the coming future. As a new class of agents, one would expect that long term data are lacking. However, there are many ongoing large scale endpoint studies which will be released in the coming few years and will shine light on its long term effect and hence clarify its role in clinical practice.

In conclusion, GLP-1 analogues show promising results in their clinical use especially in its low risk of hypoglycaemia, weight loss and control of post-prandial hyperglycaemia. However, its use has been limited by gastrointestinal side effects and lack of long term end point data. It can be used in combination with many agents, but has been commonly used at times of oral hypoglycaemic agent failures or in combination with insulin. Its combination with insulin is promising as they complement each other in their benefit and side effects. GLP-1 analogues and insulin may be considered to be used simultaneously or as a fixed dose combination in the coming future.

References

1. Chan, J.C., et al., Multifaceted determinants for achieving glycemic control: the International Diabetes Management Practice Study (IDMPS). Diabetes Care, 2009. 32(2): p. 227-33.
2. American Diabetes, A., (7) Approaches to glycemic treatment. Diabetes Care, 2015. 38 Suppl: p. S41-8.
3. Kahn, S.E., et al., Glycemic durability of rosiglitazone, metformin, or glyburide monotherapy. N Engl J Med, 2006. 355(23): p. 2427-43.
4. Scheen, A.J., et al., Long-term glycaemic control with metformin-sulphonylurea-pioglitazone triple therapy in PROactive (PROactive 17). Diabet Med, 2009. 26(10): p. 1033-9.
5. Investigators, O.T., et al., Basal insulin and cardiovascular and other outcomes in dysglycemia. N Engl J Med, 2012. 367(4): p. 319-28.
6. Korytkowski, M., When oral agents fail: practical barriers to starting insulin. Int J Obes Relat Metab Disord, 2002. 26 Suppl 3: p. S18-24.
7. Fonseca, V., et al., An analysis of early insulin glargine added to metformin with or without sulfonylurea: impact on glycaemic control and hypoglycaemia. Diabetes Obes Metab, 2011. 13(9): p. 814-22.
8. Fineman, M.S., et al., Effect on glycemic control of exenatide (synthetic exendin-4) additive to existing metformin and/or sulfonylurea treatment in patients with type 2 diabetes. Diabetes Care, 2003. 26(8): p. 2370-7.
9. Heine, R.J., et al., Exenatide versus insulin glargine in patients with suboptimally controlled type 2 diabetes: a randomized trial. Ann Intern Med, 2005. 143(8): p. 559-69.
10. Montanya, E., A comparison of currently available GLP-1 receptor agonists for the treatment of type 2 diabetes. Expert Opin Pharmacother, 2012. 13(10): p. 1451-67.
11. Schmidt, L.J., et al., A systematic review and meta-analysis of the efficacy of lixisenatide in the treatment of patients with type 2 diabetes. Diabetes Obes Metab, 2014. 16(9): p. 769-79.

12. Wang, Y., et al., Glucagon-like peptide-1 receptor agonists versus insulin in inadequately controlled patients with type 2 diabetes mellitus: a meta-analysis of clinical trials. Diabetes Obes Metab, 2011. 13(11): p. 972-81.
13. Diamant, M., et al., Exenatide once weekly versus insulin glargine for type 2 diabetes (DURATION-3): 3-year results of an open-label randomised trial. Lancet Diabetes Endocrinol, 2014. 2(6): p. 464-73.
14. Drucker, D.J., et al., Exenatide once weekly versus twice daily for the treatment of type 2 diabetes: a randomised, open-label, non-inferiority study. Lancet, 2008. 372(9645): p. 1240-50.
15. Buse, J.B., et al., Liraglutide once a day versus exenatide twice a day for type 2 diabetes: a 26-week randomised, parallel-group, multinational, open-label trial (LEAD-6). Lancet, 2009. 374(9683): p. 39-47.
16. Owens, D.R., L. Monnier, and G.B. Bolli, Differential effects of GLP-1 receptor agonists on components of dysglycaemia in individuals with type 2 diabetes mellitus. Diabetes Metab, 2013. 39(6): p. 485-96.
17. Meier, J.J., GLP-1 receptor agonists for individualized treatment of type 2 diabetes mellitus. Nat Rev Endocrinol, 2012. 8(12): p. 728-42.
18. Kapitza, C., et al., Pharmacodynamic characteristics of lixisenatide once daily versus liraglutide once daily in patients with type 2 diabetes insufficiently controlled on metformin. Diabetes Obes Metab, 2013. 15(7): p. 642-9.
19. Holman, R.R., et al., Three-year efficacy of complex insulin regimens in type 2 diabetes. N Engl J Med, 2009. 361(18): p. 1736-47.
20. Eng, C., et al., Glucagon-like peptide-1 receptor agonist and basal insulin combination treatment for the management of type 2 diabetes: a systematic review and meta-analysis. Lancet, 2014. 384(9961): p. 2228-34.
21. Gough, S.C., et al., Efficacy and safety of a fixed-ratio combination of insulin degludec and liraglutide (IDegLira) compared with its components given alone: results of a phase 3, open-label, randomised, 26-week, treat-to-target trial in insulin-naive patients with type 2 diabetes. Lancet Diabetes Endocrinol, 2014. 2(11): p. 885-93.

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- Regression of fibrosis or cirrhosis[5]

Abbreviated Prescribing Information

Presentation: Film-coated tablet containing 300 mg of tenofovir disoproxil fumarate (TDF). **Indications:** 1. Treatment of chronic hepatitis B (CHB) in adults. 2. In combination with other antiretroviral medicinal products for treatment of HIV-1 infected adults and pediatric patients 12 years of age and older. **Dosage:** Adults: One tablet once daily taken orally, without regard to food. Pediatric patients: CHB: Not recommended; HIV-1: One tablet once daily taken orally, without regard to food for patients ≥12 years of age and ≥35 kg. Elderly: Insufficient data to make dose recommendations for patients >65 years. The dosing interval of VIREAD should be adjusted in patients with baseline creatinine clearance <50 mL/min. **Contraindications:** None. **Warnings and Precautions:** Lactic acidosis/severe hepatomegaly with steatosis; severe exacerbation of hepatitis after discontinuation of anti-HBV treatment; new onset or worsening renal impairment; coadministration with products containing TDF or adefovir dipivoxil; patients coinfected with HIV-1 and HBV; decreases in bone mineral density; fat redistribution; immune reconstitution syndrome; early virologic failure. **Interactions & Side effects:** refer to Package Insert.
Before prescribing, please consult full prescribing information which is available upon request.

References: 1. Lok SF and McMahon BJ. Hepatology 2009;50:1-36 **2.** EASL. Journal of Hepatology 2012;57:167-185 **3.** Liaw YF. et al. Hepatol Intl 2012;6:531-561 **4.** Marcellin P et al. 64th Annual Meeting of AASLD 2013. Poster 926 **5.** Marcellin P et al. The Lancet. vol.381. issues 9865. Feb 2013. pp.468-475

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Hypoglycaemia in Four Doctor Soccer Fans

Dr Pierre CHAN

MBBS (HK), MRCP (UK), FHKCP, FHKAM (Medicine)

Specialist in Gastroenterology and Hepatology
Associate Consultant, Department of Medicine, Ruttonjee and Tang Siu Kin Hospitals
President, Hong Kong Public Doctors Association

Dr Pierre CHAN

I must thank the team leader, Dr KKL, for letting me write something non-medical in a medical journal.

Four soccer fans, Dr KKL, Dr IH, Dr SH and I had a crazy trip to Europe for soccer matches in March 2015.

Let me introduce my crazy team members first, Dr KKL, the trip designer and leader, is a super Liverpool fan. He has visited Anfield, the Liverpool Stadium, for more than 10 times. He remembers every single Liverpool football club history and piece of news well. His little boy is the youngest registered Liverpool fan in Hong Kong[1].

Dr IH, the trip co-organiser, who is one of the several Middlesbrough FC fans[2] in Hong Kong, turns Dr KKL's crazy idea into a workable fantastic trip.

Dr SH takes hand-carried baggage[3] for an 8-day Europe trip, unbelievable.

We have been involved in different kinds of soccer activities together for more than ten years, for instance, watching soccer matches on TV, winning soccer competitions[4], playing soccer TV games and online games[5]. We love soccer so much.

How crazy was the trip? The story started from planning and preparing…
One week before the trip, I asked Dr KKL for the itinerary. His reply was crazy.
"Day one: Champions League by Atleltico de Madrid and Leverkusen[6],
Day two: Champions League by Barcelona and Manchester City[7],
Day five: Premier League by Newcastle and Arsenal[8],
Day six will be the most exciting day, because at noon, we will have Premier League by Liverpool and Manchester United[9] and in the evening we will be at La Liga Clásico Barcelona vs Read Madrid[10]."
"How about details of the flights and hotels?"
"Don't worry," Dr KKL replied.

Three days before the trip, I asked Dr KKL again for the details of the flights and accommodations.
"Day one, flight to Frankfurt and then to Madrid;
Day two, train to Barcelona,
Day four, flight to Newcastle,
Day five, drive to Liverpool,
Day six, flight back to Barcelona,
Day seven, flight, from Barcelona, to Madrid, then to London and finally back to Hong Kong."
"OK, may I know the names of the hotels we will stay in?"
"Don't worry," Dr KKL replied.

The craziest day was day six. In the morning, we had big English breakfast in Liverpool and then we went to the Anfield souvenir shop. In the afternoon, we watched the match of Liverpool and Manchester United. We had to leave 5 minutes earlier because we had to catch the 5pm plane to Barcelona. When we stepped on the ground of Barcelona at 8:30 pm, we still did not have the tickets in our hands. We entered Camp Nou 7 minutes late and luckily we enjoyed the El Clásico[11] so much. After the match, it was too late to have any traffic including train and taxi. So we walked along silent empty Barcelona streets for more than two hours to get back to our hotel. Until 1:30am, we had the late "lunch and dinner" prepared by Dr SH to relieve our hypoglycaemia. What a fruitful day we had.

It was ONE crazy trip organised by TWO tour guides, involving THREE different kinds of transportation, having FOUR crazy super soccer fans, watching FIVE matches, rushing to SIX cities, by taking SEVEN flights, in EIGHT days, watching NINE soccer teams to play and having TEN thousand tons of joy.

Friendship and safety are priceless.

References

1. Official Liverpool FC Supporters Club http://www.lfc.org.hk/index.php?party=home
2. Middlesbrough Football Club Website http://www.mfc.co.uk/
3. http://www.cathaypacific.com/cx/en_HK/travel-information/baggage/carry-on-baggage.html
4. https://sites.google.com/site/drpierresoccer/prizes/2010-hk-west-cluster-cup
5. Yahoo Sports Fantasy Soccer https://sports.yahoo.com/fantasy/soccer/premier-league/
6. Champions League - Atlético Madrid make last eight after shoot-out victory over Bayer Leverkusen https://uk.eurosport.yahoo.com/football/champions-league/atl%C3%A9tico-de-madrid-bayer-04-leverkusen-22662/
7. Champions League - Lionel Messi stars as Barcelona knock out Manchester City https://uk.eurosport.yahoo.com/football/champions-league/barcelona-manchester-city-22663/
8. Premier League - Olivier Giroud stars but Arsenal have to cling on against Newcastle https://uk.eurosport.yahoo.com/football/premier-league/newcastle-united-arsenal-14702/
9. Premier League - Juan Mata wonder show stuns Liverpool as Steven Gerrard self-destructs https://uk.eurosport.yahoo.com/football/premier-league/liverpool-manchester-united-14700/
10. Liga - Luis Suarez leads Barcelona to Clasico win over Real Madrid https://uk.eurosport.yahoo.com/football/la-liga/barcelona-real-madrid-17364/
11. [El Clásico http://en.wikipedia.org/wiki/El_Cl%C3%A1sico

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TOPAMAX® Tablets 25 mg, 50 mg, 100 mg
ABBREVIATED PRESCRIBING INFORMATION
ACTIVE INGREDIENT(S): Topiramate
INDICATION(S): Monotherapy epilepsy: Initial monotherapy in patients ≥ 2 yrs of age with partial onset or primary generalized tonic-clonic seizures. Adjunctive therapy epilepsy: Adjunctive therapy for adults and pediatric patients ages 2 – 16 yrs with partial onset seizures or primary generalized tonic-clonic seizures, and in patients ≥ 2 yrs of age with seizures associated with Lennox-Gastaut syndrome. Migraine: Prophylaxis of migraine headache in adults.
DOSAGE & ADMINISTRATION: See the full prescribing information for titration details. Monotherapy Use for Epilepsy: Recommended dose of 400 mg/day in two divided doses for adults and pediatric patients ≥ 10 yrs. Dosing in patients 2 to <10 yrs is based on weight. Initial dose is 25 mg/day nightly for the first week. Adjunctive Therapy Use for Epilepsy: Adults ≥ 17 yrs: Partial onset seizures – Recommended total daily dose of 200 to 400 mg/day in two divided doses, Primary generalized tonic-clonic seizures - Recommended total daily dose of 400 mg/day in two divided doses. Initiate therapy at 25-50 mg/day followed by titration to an effective dose in increments of 25-50 mg/day every week. Pediatric patients ages 2-16 yrs: Recommended total daily dose of approximately 5-9 mg/kg/day in two divided doses. Titration should begin at 25mg/day nightly for the first week. Migraine: Recommended total daily dose of 100 mg/day administered in two divided doses for adults.
CONTRAINDICATIONS: None
SPECIAL WARNINGS & PRECAUTIONS: Acute myopia and secondary angle closure glaucoma: Discontinue TOPAMAX as rapidly as possible to reverse symptoms. Visual field defects: If visual problems occur at any time during topiramate treatment, consideration should be given to discontinuing the drug. Oligohidrosis and hyperthermia: Monitor decreased sweating and increased body temperature, especially in pediatric patients and in hot weather. Caution should be used when TOPAMAX is prescribed with other drugs that predispose patients to heat-related disorders. Metabolic acidosis: Measurement of baseline and periodic of serum bicarbonate during treatment. If metabolic acidosis develops and persists, reducing the dose or discontinuing topiramate should be considered. Suicidal behavior and ideation: Antiepileptic drugs increase the risk of suicidal behavior or ideation. Monitored for the emergence or worsening of depression, suicidal thoughts or behavior, and/or any unusual changes in mood or behavior. Cognitive/neuropsychiatric: Cognitive-related dysfunction, psychiatric/behavior disturbances and somnolence or fatigue were observed in epilepsy and migraine populations. Fetal Toxicity: Infants exposed to topiramate in utero have an increased risk for cleft lip and/or cleft palate. Withdrawal of Antiepileptic Drugs: Should be withdrawn gradually to minimize the potential for seizures. Hyperammonemia and encephalopathy associated with or without concomitant valproic acid use: Patients with inborn errors of metabolism or reduced hepatic mitochondrial activity may have an increased risk. Measure ammonia level if patients develop unexplained lethargy, vomiting or changes in mental status associated with any topiramate treatment. Kidney stones: Avoid use with drugs causing metabolic acidosis, or in patients on a ketogenic diet. Hypothermia: reported in association with topiramate use with concomitant valproic acid both in conjunction with and without hyperammonemia. Adjustment of dose in renal failure: May be required in patients with reduced renal function. Decreased hepatic function: Used with caution in hepatically impaired patients.
SIDE EFFECTS: Monotherapy epilepsy: Paresthesia, weight decrease, anorexia, somnolence, and difficulty with memory for adults; fever, weigh decrease, mood problems, cognitive problems, infection, flushing, and paresthesia for pediatric patients. Adjunctive Therapy Epilepsy in adults: non dose-related-somnolence, dizziness, ataxia, speech disorders and related speech problems, psychomotor slowing, abnormal vision, difficulty with memory, paraesthesia and diplopia; dose-related - fatigue, nervousness, difficulty with concentration or attention, confusion, depression, anorexia, language problems, anxiety, mood problems, and weight decrease. Migraine: Paresthesia, fatigue, nausea, anorexia, dizziness, difficulty with memory, diarrhea, weight decrease, difficulty with concentration/attention, and somnolence. ***Refer to the full prescribing information for other side effects.***
PREGNANCY & LACTATION: Pregnancy Category D. Caution should be exercised when administered to a nursing woman.
INTERACTIONS: Antiepileptic drugs. CNS Depressants. Oral contraceptives. Metformin. Lithium. Carbonic anhydrase inhibitors.
PLEASE REFER TO FULL PRESCRIBING INFORMATION BEFORE PRESCRIBING.
Prescribing information last revised: Mar-2014 [3GG9A1070P09]
API version to be quoted on promotional material: Topamax aPI ver.1.0

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References:
1. Schreiner A et al. Conversion from valproic acid onto topiramate in adolescents and adults with epilepsy. Acta Neurol Scand. 2009; 119(5): 304-12

Further information is available on request.

CN-15-11A

A patient with chronic renal disease complaining of right foot pain

Dr Angus KC LAM
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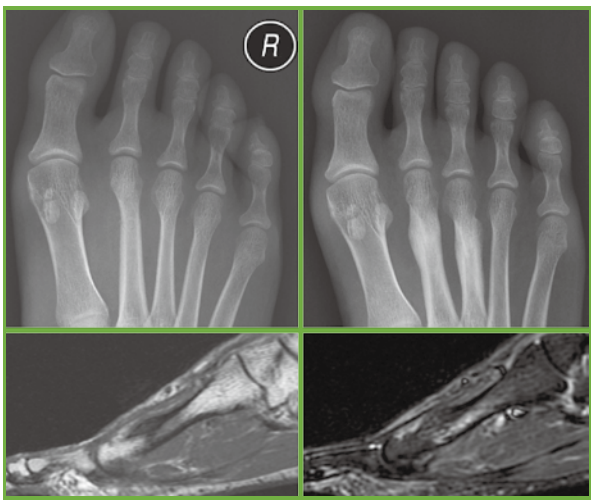
Department of Radiology, Queen Mary Hospital, Hong Kong

Dr Wendy WM LAM
MBBS, FRCR, FHKAM (Radiology)
Department of Radiology, Queen Mary Hospital, Hong Kong


Dr Angus KC LAM Dr Wendy WM LAM



A 47-year-old lady with history of chronic renal impairment was complaining of pain and swelling at the dorsum of the right foot for 1 week. There was no history of injuries. The picture on the left is the first x-ray while the picture on the right is a follow-up x-ray taken half a year later. In between, the patient had a MRI scan (Left: T1-weighted image; Right: T2-weighted image with fat saturation) performed.

Questions:

1. What are the radiographic findings?
2. What are the MRI findings?
3. What is the most likely diagnosis?

(See P.32 for answers)

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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
10 Sep	Common investigation tests for renal disease including approach to proteinuria and haematuria Update and management of glomerular disease	Dr. Chi-kwan WONG Associate Consultant Department of Medicine Pamela Youde Nethersole Eastern Hospital Dr. Tsz-ling HO Associate Consultant Department of Medicine Tseung Kwan O Hospital
17 Sep	Update and management of hypertension Update on diabetic nephropathy	Dr. Siu-man WONG Associate Consultant Department of Medicine Alice Ho Miu Ling Nethersole Hospital Dr. Kin-yee LO Associate Consultant Department of Medicine & Geriatrics Kwong Wah Hospital
24 Sep	Update and management of acute kidney injury Pharmacologic and non-pharmacologic strategies for chronic renal disease	Dr. Terence Pok-siu YIP Associate Consultant Department of Medicine Tung Wah Hospital Dr. Bonnie Ching-ha KWAN Department of Medicine & Therapeutics Prince of Wales Hospital The Chinese University of Hong Kong
8 Oct	Introduction to palliative care in end stage renal failure Drug prescribing in renal failure	Dr. Hoi-wong CHAN Associate Consultant Department of Medicine Queen Elizabeth Hospital Dr. Kai-ching HAU Associate Consultant Department of Medicine & Geriatrics Tuen Mun Hospital
15 Oct	ABC of peritoneal dialysis therapy ABC of hemodialysis therapy	Dr. Man-fai LAM Private Nephrologist Dr. Joseph Ho-sing WONG Associate Consultant Department of Medicine Queen Elizabeth Hospital
22 Oct	ABC of kidney donation ABC of renal transplantation	Dr. Desmond Yat-hin YAP Clinical Assistant Professor Department of Medicine Queen Mary Hospital, The University of Hong Kong Dr. Au CHEUK Associate Consultant Department of Medicine & Geriatrics Princess Margaret Hospital

Date : 10 September 2015 – 22 October 2015 (Every Thursday, skip 1 October 2015)
Time : 7:00 pm – 8:30 pm
Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
Language Media : Cantonese (Supplemented with English)
Course Fee : HK$750 (6 sessions)
Certificate : Awarded to participants with a minimum attendance of 70%
Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong
Tel.: 2527 8898 Fax: 2865 0345 Email: info@fmshk.org

CNE / CME / CPD Accreditation in application

Application form can be downloaded from website: http://www.fmshk.org

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	★ Genitourinary Tuberculosis Revisited **1**	★ FMSHK Officers' Meeting ★ HKMA Council Meeting **2**	★ Mastering Adverse Outcomes - 2 hours **3**	**4**	**5**	★ International Digestive Disease Forum 2015 ★ HKMA Career Seminar **6**
★ International Digestive Disease Forum 2015 **7**	**8**	★ HKMA Yau Tsim Mong Community Network - Diet and Chest Pain ★ HKMA Kowloon West Community Network - Novel Management of Pneumonia from Prevention to Treatment **9**	★ Hong Kong Neurosurgical Society Monthly Academic Meeting – Spontaneous supratentorial hemorrhage – literature and latest guideline review ★ Mastering Professional Interactions **10**	★ HKMA Hong Kong East Community Network - Reference Framework for Preventive Care for Older Adults in Primary Care Settings ★ HKMA New Territories West Community Network - Certificate Course on Pain (Session 3) - A New Approach for Treating Elderly Patients Suffering from Postherpetic Neuralgia (PHN) ★ HKMA Kowloon East Community Network - New Treatment Option for the Management of Facial Redness in Rosacea ★ HKMA Structured CME Programme with HKS&H Session 6: Ultrasound for Head & Neck Disease **11**	**12**	★ Refresher Course for Health Care Providers 2014/2015- Primary care rheumatology **13**
★ HKMA Structed CME Programme with Hong Kong Sanatorium & Hospital Year 2015 - Ultrasound for Head & Neck Disease ★ HKMA Tenpin Bowling Tournament 2015 ★ Mastering Difficult Interactions with Patients **14**	**15**	★ HKMA Yau Tsim Mong Community Network - Certificate Course on Sports Medicine (Session 1) - (1) Can We Prevent Sudden Cardiac Death during Sports Event?; (2) Common Sports Lower Limbs Injuries ★ HKMA Tai Po Community Network – Local and Global Perspectives and Updates on Rotavirus Vaccines ★ 1) Screening and treatment of latent tuberculosis in biologies users; 2) Case presentation **16**	★ HKMA Medical Exchange Tour to Xi'an **17**	★ HKMA Medical Exchange Tour to Xi'an ★ HKMA New Territories West Community Network - Certificate Course on Pain (Session 4) - Herpes Zoster and Post Herpetic Neuralgia – Are They Related? ★ FMSHK Executive Committee Meeting **18**	★ HKMA Medical Exchange Tour to Xi'an ★ HKMA Kowloon East Community Network: Tip and Tricks of Heel Pain Management **19**	★ HKMA Medical Exchange Tour to Xi'an **20**
★ HKMA Medical Exchange Tour to Xi'an **21**	**22**	★ HKMA Kowloon West Community Network - Reference Framework for Preventive Care for Older Adults in Primary Care Settings **23**	★ Mastering Shared Decision Making **24**	★ HKMA Kowloon East Community Network – The Journey to Optimize Type 2 Diabetes Therapy ★ HKMA Hong Kong East Community Network - Annual Meeting cum CME Lecture on "Communication, Consent & Consultation Paper" **25**	★ HKMA Yau Tsim Mong Community Network - Update on the Management of Hypertension **26**	★ KECN-HKCFP-UCH - Certificate Course for GPs 2015 (Session 2) - Update on Management of Carcinoma of Colon ★ Annual Scientific Meeting 2015 **27**
★ Annual Scientific Meeting 2015 **28**	**29**	★ HKMA Yau Tsim Mong Community Network - Certificate Course on Sports Medicine (Session 2) - (1) Exercises-Induced Asthma; (2) Common Sports Upper Limbs Injuries ★ Mastering Adverse Outcomes **30**				

Date / Time	Function	Enquiry / Remarks
1 MON 7:30pm	**Genitourinary Tuberculosis Revisited** Organiser: Hong Kong Urological Association; Chairman: Dr. CHEUNG Man Hung; Speaker: Dr. LI Churk Fai Trevor, UCH; Venue: Multi-disciplinary Simulation and Skills Centre, 4/F, Block F, QEH	Ms. Tammy HUNG Tel: 9609 6064 1 CME Point
2 TUE 8:00pm	**FMSHK Officers' Meeting** Organiser: The Federation of Medical Societies of Hong Kong; Venue: Gallop, 2/F, Hong Kong Jockey Club Club House, Shan Kwong Road, Happy Valley, Hong Kong	Ms. Nancy CHAN Tel: 2527 8898
	HKMA Council Meeting Organiser: The Hong Kong Medical Association; Chairman: Dr. SHIH Tai Cho, Louis; Venue: HKMA Head Office, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Christine WONG Tel: 2527 8285
3 WED 1:30pm	**Mastering Adverse Outcomes - 2 hours** Organisers: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. Leung Kwok Ling, Ares; Venue: Eaton, Hong Kong, 380 Nathan Road, Kowloon	HKMA CME Dept Tel: 2527 8452 2 CME Points
6 SAT 9:00am (7)	**International Digestive Disease Forum 2015** Organisers: Institute of Digestive Disease & The Chinese University of Hong Kong; Venue: Hong Kong Convention and Exhibition Centre	Meeting Secretariat Tel: 2116 4348
1:00pm	**HKMA Career Seminar** Organiser: The Hong Kong Medical Association; Chairmen: Dr. PONG Chiu Fai, Jeffrey & Dr. SIN Pui Yee, Helena; Speaker: various; Venue: Wanchai Activities Centre, LG/F, Wan Chai Market, 258 Queen's Road East, Wan Chai, Hong Kong	Miss Kayin LEE Tel: 2527 8285
9 TUE 1:00pm	**HKMA Yau Tsim Mong Community Network - Diet and Chest Pain** Organiser: HKMA Yau Tsim Mong Community Network; Chairman: Dr. SO Chun; Speaker: Dr. KO Wai Chin; Venue: Pearl Ballroom, Level 2, Eaton, Hong Kong, 380 Nathan Road, Kowfloon	Ms. Candice TONG Tel: 2527 8285 1 CME Point
1:00pm	**HKMA Kowloon West Community Network - Novel Management of Pneumonia from Prevention to Treatment** Organiser: HKMA Kowloon West Community Network; Chairman: Dr. LEUNG Gin Pang; Speaker: Dr. Wong Ka Chun; Venue: Crystal Room I-III, 30/F, Panda Hotel, 3 Tsuen Wah Street, Tsuen Wan	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
10 WED 7:30am	**Hong Kong Neurosurgical Society Monthly Academic Meeting – Spontaneous supratentorial hemorrhage – literature and latest guideline review** Organiser: Hong Kong Neurosurgical Society; Chairman: Dr. KWAN Cheuk Lun; Speaker: Dr. YUEN Ming Him, Michael; Venue: M Block, G/F, Lecture Theatre, Queen Elizbeth Hospital	Dr. LEE Wing Yan, Michael Tel: 2595 6456 1.5 CME Points
6:30pm	**Mastering Professional Interactions** Organisers: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. Lee Wai Hung, Danny; Venue: HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road, Central, Hong Kong	HKMA CME Dept Tel: 2527 8452 2.5 CME Points
11 THU 1:00pm	**HKMA Hong Kong East Community Network - Reference Framework for Preventive Care for Older Adults in Primary Care Settings** Organiser: HKMA Hong Kong East Community Network; Chairman: Dr. LAM See Yui, Joseph; Speaker: Dr. LUK Kam Hung; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Candice TONG Tel: 2527 8285 1 CME Point
1:00pm	**HKMA New Territories West Community Network - Certificate Course on Pain (Session 3) - A New Approach for Treating Elderly Patients Suffering from Postherpetic Neuralgia (PHN)** Organiser: HKMA New Territories West Community Network; Chairman: Dr. MOK Kwan Yeung, Matthew; Speaker: Dr. Lo Man Wai; Venue: G/F., Marina Club House Lobby, Gold Coast Yacht and Country Club, 1 Castle Peak Road, Castle Peak Bay, Hong Kong (黃金海岸鄉村俱樂部-遊艇會會所大堂)	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
1:00pm	**HKMA Kowloon East Community Network - New Treatment Option for the Management of Facial Redness in Rosacea** Organiser: HKMA Kowloon East Community Network; Chairman: Dr. AU Ka Kui, Gary; Speaker: Dr. CHAN Yung; Venue: Lei Garden Restaurant (利苑酒家) Shop no. L5-8, apm, Kwun Tong, No. 418 Kwun Tong Road, Kowloon	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
1:15pm	**HKMA Structured CME Programme with HKS&H Session 6: Ultrasound for Head & Neck Disease** Organisers: Hong Kong Medical Association & Hong Kong Sanatorium & Hospital; Speaker: Dr. Fan Sheung Tat; Venue: Function Room A, HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Dept Tel: 2527 8452 1 CME Point
13 SAT 2:15pm	**Refresher Course for Health Care Providers 2014/2015 - Primary care rheumatology** Organisers: Hong Kong Medical Association, HK College of Family Physicians & HA-Our Lady of Maryknoll Hospital; Speaker: Dr. Ying King Yee; Venue: Training Room II, 1/F, OPD Block, Our Lady of Maryknoll Hospital, 118 Shatin Pass Road, Wong Tai Sin, Kowloon	Ms. Clara Tsang Tel: 2354 2440 2 CME Points
14 SUN 2:00pm	**HKMA Structed CME Programme with Hong Kong Sanatorium & Hospital Year 2015 - Ultrasound for Head & Neck Disease** Organisers: Hong Kong Medical Association & Hong Kong Sanatorium & Hospital; Venue: HKMA Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Dept. Tel: 2527 8285 1 CME Point
2:00pm	**HKMA Tenpin Bowling Tournament 2015** Organiser: The Hong Kong Medical Association; Venue: South China Association	Mr. Ian KWA Tel: 2527 8285
2:30pm	**Mastering Difficult Interactions with Patients** Organisers: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. Cheng Ngai Shing, Justin; Venue: HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road, Central, Hong Kong	HKMA CME Dept. Tel: 2527 8285 2.5 CME Points
16 TUE 1:00pm	**HKMA Yau Tsim Mong Community Network - Certificate Course on Sports Medicine (Session 1) - (1) Can We Prevent Sudden Cardiac Death during Sports Event?; (2) Common Sports Lower Limbs Injuries** Organisers: HKMA Yau Tsim Mong Community Network; Chairman: Dr. LAM Tzit Yuen, David; Speakers: Dr. CHAN Wai Kwong, Andy; Dr. HO Hok Ming; Venue: Jade Ballroom, Level 2, Eaton, Hong Kong, 380 Nathan Road, Kowloon	Ms. Candice TONG Tel: 2527 8285 1 CME Point
1:45pm	**HKMA Tai Po Community Network – Local and Global Perspectives and Updates on Rotavirus Vaccines** Organiser: HKMA Tai Po Community Network; Speaker: Dr. Yu Chak Man; Venue: Chiuchow Garden Restaurant, Tai Po	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
6:00pm	**1) Screening and treatment of latent tuberculosis in biologies users; 2) Case presentation** Organisers: The Hong Kong Society of Rheumatology; Chairman: Dr. TK HO; Speakers: Dr. Tse Yin Fung; Venue: Hospital Authority Headquarters, Room 205S	Dr. LEE Ka Lai Tel: 9229 4616 1 CME Point

Date / Time	Function	Enquiry / Remarks
17 WED *(18-21)*	**HKMA Medical Exchange Tour to Xi'an** Organiser: The Hong Kong Medical Association; Chairman: Dr. LAM Tzit Yuen, David; Venue: Xi'an, PRC	Miss Kayin LEE Tel: 2527 8285
18 THU 1:00pm	**HKMA New Territories West Community Network - Certificate Course on Pain (Session 4) - Herpes Zoster and Post Herpetic Neuralgia – Are They Related?** Organiser: HKMA New Territories West Community Network; Chairman: Dr. LEE Huen; Speaker: Dr. Tong Ka Fai, Henry; Venue: G/F., Marina Club House Lobby, Gold Coast Yacht and Country Club, 1 Castle Peak Road, Castle Peak Bay, Hong Kong (黃金海岸鄉村俱樂部 - 遊艇會會所大堂)	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
8:00pm	**FMSHK Executive Committee Meeting** Organiser: The Federation of Medical Societies of Hong Kong; Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Nancy CHAN Tel: 2527 8898
19 FRI 1:00pm	**HKMA Kowloon East Community Network: Tip and Tricks of Heel Pain Management** Organiser: HKMA Kowloon East Community Network; Chairman: Dr. AU Ka Kui, Gary; Speaker: Dr. Yeung Yeung; Venue: Lei Garden Restaurant (利苑酒家), Shop No. L5-8, apm, No. 418 Kwun Tong Road, Kwun Tong	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
23 TUE 1:00pm	**HKMA Kowloon West Community Network - Reference Framework for Preventive Care for Older Adults in Primary Care Settings** Organisers: HKMA Kowloon West Community Network and Primary Care Office of the Department of Health; Chairman: Dr. WONG Wai Hong, Bruce; Speaker: Dr. Mok Chun Keung, Francis; Venue: Crystal Room I-III, 30/F, Panda Hotel, 3 Tsuen Wah Street, Tsuen Wan	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
24 WED 6:30pm	**Mastering Shared Decision Making** Organisers: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. Cheng Ngai Shing, Justin; Venue: Eaton, Hong Kong, 380 Nathan Road, Kowloon	HKMA CME Dept. Tel: 2527 8285 2.5 CME Points
25 THU 1:00pm	**HKMA Kowloon East Community Network – The Journey to Optimize Type 2 Diabetes Therapy** Organiser: HKMA Kowloon East Community Network; Chairman: Dr. MA Ping Kwan, Danny; Speaker: Dr. Tsang Man Wo; Venue: V Cuisine, 6/F, Holiday Inn Express Hong Kong Kowloon East, 3 Tong Tak Street, Tseung Kwan O	Miss Hana YEUNG Tel: 2527 8285 1 CME Point
7:00pm	**HKMA Hong Kong East Community Network - Annual Meeting cum CME Lecture on "Communication, Consent & Consultation Paper"** Organiser: HKMA Hong Kong East Community Network; Chairman: Dr. CHAN Nim Tak, Douglas; Speaker: Dr. CHIU Shing Ping, James; Venue: HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Candice TONG Tel: 2527 8285 1 CME Point
26 FRI 1:00pm	**HKMA Yau Tsim Mong Community Network - Update on the Management of Hypertension** Organiser: HKMA Yau Tsim Mong Community Network; Chairman: Dr. HO Fung; Speaker: Dr. LEUNG Tat Chi, Godwin; Venue: Jade Ballroom, Level 2, Eaton, Hong Kong, 380 Nathan Road, Kowloon	Ms. Candice TONG Tel: 2527 8285 1 CME Point
27 SAT 1:00pm	**KECN-HKCFP-UCH - Certificate Course for GPs 2015 (Session 2) - Update on Management of Carcinoma of Colon** Organisers: HKMA Kowloon East Community Network, Hong Kong College of Family Physicians & United Christian Hospital; Chairman: Dr. MA Ping Kwan, Danny; Speaker: Dr. KWAN Man Yee, Wendy; Venue: United Christian Hospital	Ms. Polly TAI / Ms. Cordy WONG Tel: 3949 3430 (Polly) / 3949 3087 (Cordy) Fax: 3949 5505 1.5 CME Points
(28)	**Annual Scientific Meeting 2015** Organiser: Hong Kong Society of Dermatology and Venereology; Venue: Sheraton Hong Kong	Meeting Secretariat Tel: 2155 8557
30 TUE 1:00pm	**HKMA Yau Tsim Mong Community Network - Certificate Course on Sports Medicine (Session 2) - (1) Exercises-Induced Asthma; (2) Common Sports Upper Limbs Injuries** Organiser: HKMA Yau Tsim Mong Community Network; Chairman: Dr. CHENG Kai Chi, Thomas; Speaker: Dr. CHAN Ka Wing, Joseph; Dr. HO Hok Ming; Venue: Jade Ballroom, Level 2, Eaton, Hong Kong, 380 Nathan Road, Kowloon	Ms. Candice TONG Tel: 2527 8285 1 CME Point
6:30pm	**Mastering Adverse Outcomes** Organiser: Hong Kong Medical Association & Medical Protection Society; Speaker: Dr. Hung Chi Wan, Emily; Venue: Eaton, Hong Kong, 380 Nathan Road, Kowloon	HKMA CME Dept. Tel: 2527 8285 2.5 CME Points

Certificate Course for Doctors, Allied Health Professionals and people interested in Medical Insurance

• Course No. C262 • CME / CNE Course

Certificate Course on
Medical Insurance
醫療保險淺談

Organised by

The Federation of
Medical Societies of Hong Kong

Objectives:

Medical insurance is getting more popular among our society. From this course, we would like to introduce:

1. The basic concept as well as the logistics of medical insurance
2. The relationship and role between different shareholders
3. Similarities and differences between various insurance plans
4. Real cases illustration

Date	Topics	Speakers
3 June	What is Medical Insurance ? 什麼是醫療保險 ? Relationship with the insurance company doctors and the public 保險公司與醫生及市民的關係 Architecture and departments of insurance companies 保險公司的架構及部門	Mr. Mike DOU Dr. Wai-man HUNG 熊偉民醫生
10 June	The current popularity of medical products 現時普及之醫療產品 Terms of medical products 醫療產品的條款	Mr. Andrew LAM Dr. Wai-man HUNG 熊偉民醫生
17 June	Normal claims process 正常理賠流程 Special claims process 特別理賠流程 Insurance companies and insurance agents (Agent) role at the claims of 保險公司及保險從業員 (Agent) 在理賠時之角色 The role of doctors in the claims of 醫生在理賠時之角色	Mr. Dick CHU Dr. Samson Chun-yiu TSE 謝俊耀醫生
24 June	By insurance practitioners (Agent) share real case of critical illness and medical 由保險從業員 (Agent) 分享危疾及醫療的真實個案 How to help doctors share medical insurance and uninsured patients 由醫生分享如何幫助有醫療保險及無醫療保險的病人 By insurance practitioners (Agent) Share - 由保險從業員 (Agent) 分享 - How to use health insurance to help customers weather the storm in the private health care 如何使用醫療保險幫助客戶在私營醫療渡過難關	Mr. CHEONG Ho Dr. Samson Chun-yiu TSE 謝俊耀醫生

Date : 3, 10, 17, 24 June 2015 (Every Wednesday)
Time : 7:00 pm – 8:30 pm
Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
Language Media : Cantonese (Supplemented with English)
Course Fee : $500 (4 sessions)
Certificate : Awarded to participants with a minimum attendance of 3 lectures
Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong
Tel.: 2527 8898 Fax: 2865 0345 Email: info@fmshk.org

CME / CNE / CPD Accreditation in application

Application form can be downloaded from website : http://www.fmshk.org

Public Talk for Pre- and Post- Natal Care

The Public Talk for Pre- and Post- Natal Care was held at the Federation Lecture Hall on 21 March 2015. It was our pleasure and privilege to invite Dr Casey Ka-wai HO, Specialist in Obstetrics & Gynaecology, who delivered a talk on "產前準備與產後護理" and Dr Rebecca LEE (PhD), Scientist (Team Leader) in R&D department at DiagCor Bioscience Inc. Ltd., who delivered a talk on "認識SNP非入侵產前篩檢". The participants' active questioning in the Q&A section helped to complete a very successful & interactive seminar. The event concluded with Dr Mario CHAK, Hon. Secretary of the Federation, thanking the two speakers with souvenirs presentation.

Celebrity Millennium Ship Visit

The Celebrity Millennium Ship Visit was successfully held on 22 Dec 2014 (Mon). The event was held for fraternity with the friends of the Federation at Winter Solstice. We were privileged to have friends of the Federation & Foundation, Presidents of Member Societies in joining us on board. The participants had an enjoyable afternoon with a ship tour and fine dining in the exquisite restaurant. Our Executive Director, Ms Nancy CHAN delivered a warm welcome speech, followed by a short presentation by representative from W Cruising. We also thank WESTMINSTER Travel Limited for sponsoring the event.

The Hong Kong Society of Practising Urologists

The Hong Kong Society of Practising Urologists (HKSPU) was incorporated in February 2014. It started as a CME group in 2007, when 14 founding members gathered every month sharing knowledge and experience. We now have more than 20 full members. All of them are actively practising urologists, both from the private and public sectors. Our mission is to uphold the standard of urological practice in Hong Kong; and to promote Urology as a distinct specialty among the general public. Last October, we organised our first large-scale annual education programme, the Urology Week, which included GP lectures, public talks, radio programmes, out-reach education programmes in shopping mall, newspaper columns and press conference publishing the early results of our "nocturia research" with CUHK. It received very good and encouraging comments.

Joining FMSHK, we are looking forward to closer co-operation with the fellow medical societies and making more contributions to our community.

Dr Martin KT Wong
Hon. Secretary, HKSPU

Answers to Radiology Quiz

Answer:

1. In the initial x-ray, mild soft tissue swelling is seen at the right middle and forefoot. A cortical break is noted at the medial shaft of the right second metatarsal. The follow-up x-ray reveals smooth periosteal reaction over the shafts of both the second and third metatarsal bones. Generalised reduced bone density with coarsening of bony trabeculations and cortical thinning is appreciated. No destructive osseous lesion is noted.

2. MRI of the second metatarsal reveals smooth periosteal reaction. A T1-hypointense line is seen at the shaft perpendicular to the long axis of the bone, in keeping with the fracture. A T2-hyperintense signal at the adjacent medulla represents reactive marrow oedema.

3. The imaging features are compatible with an insufficiency fracture in the background of osteopenia. The initial x-ray depicts the acute phase while the follow-up x-ray and MRI represent the healing phase.

Discussion:

Stress fractures can be classified into two types. It can be either a fatigue fracture where there is abnormal stress on a normal bone, or an insufficiency fracture where there is normal stress on an abnormal bone. As the patient has underlying osteopenia due to chronic renal disease, this should be classified as an insufficiency fracture.

An insufficiency fracture is often normal in the acute stage. Cortical linear lucency can be seen in the early stage. Cortical thickening, periosteal new bone formation and medullary sclerosis represent the healing process.

Our case demonstrates typical features of early and healing stress fractures. The calcaneum is an another common site of involvement in the foot.

Common causes of insufficiency fractures include osteoporosis, renal osteodystrophy (as in our case), hyperparathyroidism, rheumatoid arthritis, Paget disease and chronic steroid use.

Dr Angus KC LAM
MBBS, FRCR
Department of Radiology, Queen Mary Hospital, Hong Kong

Dr Wendy WM LAM
MBBS, FRCR, FHKAM (Radiology)
Department of Radiology, Queen Mary Hospital, Hong Kong

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* Frequency of hypoglycemia depends on the background antidiabetic therapy used.
SGLT2 = sodium-glucose cotransporter 2.
FORXIGA™ is not indicated for the management of obesity or high blood pressure.

References
1. Forxiga™ prescribing information. 2. Bailey CJ, et al. Lancet 2010;375:2223-2233. 3. Nauck MA, et al. Diabetes Care 2011;34:2015-2022. 4. Wilding JP, et al. Ann Intern Med 2012;156:405-415. 5. Bailey CJ, et al. BMC Med 2013;11:43. 6. Nauck MA, et al. Diabetes Obes Metab 2014;16:1111-1120. 7. Wilding JP, et al. Diabetes Obes Metab 2014;16:124-136.

Presentation:
Dapagliflozin propanediol monohydrate film-coated tablet. Indication and Usage: Improve glycaemic control in adults aged 18 years and older with type 2 diabetes mellitus, as monotherapy when diet and exercise alone do not provide adequate glycaemic control in patients for whom use of metformin is considered inappropriate due to intolerance; or in combination with other glucose-lowering medicinal products including insulin, when these, together with diet and exercise, do not provide adequate glycaemic control. Dosage and Administration: 5 mg or 10 mg. To be taken orally once daily at any time of day with or without food. Tablets are to be swallowed whole. Contraindications: Hypersensitivity to the active substance or to any of its excipients. Warnings and Precautions: Should not be used in patients with type 1 diabetes mellitus; for the treatment of diabetic ketoacidosis; in patients with hereditary problems of galactose intolerance, the Lapp lactase deficiency, or glucose-galactose malabsorption; and while breastfeeding. Not recommended in patients with moderate to severe renal impairment (CrCl < 60 ml/min or eGFR < 60 ml/min/1.73 m²); patients concomitantly treated with pioglitazone; patients receiving loop diuretics or who are volume depleted; and in patients 75 years and older for initiating dapagliflozin. Discontinued if renal function falls below CrCl < 60 ml/min or eGFR < 60 ml/min/1.73 m²; and when pregnancy is detected. Temporarily interrupted in patients who develop volume depletion until the depletion is corrected; and when treating pyelonephritis or urosepsis. Caution in patients on anti-hypertensive therapy with a history of hypotension; elderly patients; and patients with already elevated haematocrit. Limited or no data in hepatic impairment; cardiac failure; pregnancy; paediatric population; and when used with DPP4 inhibitors or GLP1 analogues.Adverse Reactions: Very common: Hypoglycaemia when used with SU or insulin. Common: Vulvovaginitis, balanitis and related genital infections, urinary tract infection; back pain dysuria and polyuria; dyslipidaemia and increased haematocrit. Uncommon: Vulvovaginal pruritus; volume depletion, thirst; constipation; hyperhidrosis; nocturia; increased blood creatinine and blood urea. Drug interaction: Coadministration with rifampicin may reduce dapagliflozin systemic exposure; coadministration with mefenamic acid may increase dapagliflozin systemic exposure. Local prescribing information is available upon request. APLHKFOR0113

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1. Triplitt C, et al. Vasc Health Risk Manag. 2010; 6: 671-690 2. Oseni Hong Kong Product Monograph 3. White WB et at. N Engl J Med 2013; 369:1327-1335 4. Dormandy JA, et al. Lancet. 2005; 366(9493):1279-1289. 5. Hanefeld M, et al. Curr Med Res Opin 2006; 22(6):1211-1215. 6. Del Prato S, et al. Diabetes Obes Metab. 2014 Aug 8.

HK/TC/OSE/05/09-2014