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INFORMATION FOR AUTHORS

Circulation and Content

The Hong Kong Practitioner is published quarterly by The Hong Kong College of Family Physicians.

The Journal is indexed in *EMBASE/Excerpta Medica as 'HK Pract'*. It has a circulation of 4000, distributed to all members and some non-members of the College, academic institutions as well as private subscribers in Hong Kong and overseas.

The aim of the journal is to promote the development of quality family medicine/general practice in Hong Kong and the region, by publishing editorials, original articles, update reviews, letters to the editor, and self-assessment materials.

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Papers submitted for publication should fulfil the following criteria:-

a. Manuscript to be accompanied by covering letter, signed by all authors stating that it is original and no part of it has been submitted for publication elsewhere and identifying any possible conflict of interest, and the contribution of each author.
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c. Submission of manuscript should be the preferred Microsoft Word (DOC) format, and sent to "windylau@hkcfp.org.hk" with one printed copy of the manuscript to the Editor.
d. List of full names (both in English with Western name(s) first, then Chinese names hyphenated or initials, and then family name and if applicable in Chinese characters) with a maximum of six authors, giving basic and higher qualifications and current appointment of each.
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Papers on original research relating to primary care in Hong Kong are particularly welcome.

They should be set out in a standard format with an Introduction giving background and objectives; Method giving details of subjects, study design and measurements, interventions, outcomes, and statistical methods; Results; Discussion; Conclusions; References; and Acknowledgements.

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Graphs and tables should be limited to six and references to 40.

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All things in moderation

Kathy KL Tsim 詹觀蘭

Constipation itself is a symptom not a disease, but this one symptom alone can cause great psychological stress to the patient and, in the case of children, their parents. As any young parent would tell you, they start to worry if their young child has not passed stools for 1 to 2 days. With young infants, parents are used to a repetitive cycle of feeding and "pooing". Needless to say, any variation in this pattern is distressing to all. However in reality we find that young infants suffer commonly from gastrointestinal symptoms.[1] Only a small percentage of these children would eventually require hospitalisation. As parents, does knowing this fact truly help to eliminate parental anxiety?

This worry of being constipated not only applies to parents of young children but to those at the other extreme of age. We as family physicians have great experience with elderly patients who comes in with frequent requests for laxatives.[2] Experience tells us that knowing facts does nothing to truly alleviate stress brought on by a common symptom.

Concerns brought on by the sense of being constipated might be one of the reasons why colonic irrigation/hydrotherapy has been so popular in many countries around the world. Its advocates indicate that it helps to detox and cleanse our body. They do have a point as studies have shown a positive association between constipation and an increased risk for colon cancer.[3,4] However whether colonic irrigation is the way to solve this issue is another matter. We are therefore grateful to have Dr Wong share with us his timely review on the management of adult constipation. It is indeed important for us to be on the same language level as our patients with regards to the actual definition of constipation, the various assessment pathways and available treatment modalities.

We must not miss the functional gastrointestinal disorders which can be associated with psychological and social factors in its development.[5] We should also be aware of other important comorbidities, e.g. diabetes, as well as the fact that certain chronic illness e.g. Chronic Obstructive Pulmonary Disease (COPD) can be worsened by its presence.[6]

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As mentioned before, it is very important for patients and clinicians to be on the same wavelength when we communicate about something as important as a symptom or an illness. This is even more so for us clinicians during our inter-professional exchanges. One such an example can be seen in the categorisation of the severity of COPD. There exists a heterogeneity in the assignment of patients with different COPD severity categories to different symptom scores. According to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2013 classification of COPD, patients can be classified with either the Modified Medical Research Council Dyspnoea Scale (mMRC) score or the COPD Assessment Test (CAT). Completion of the multidimensional CAT may be difficult in our busy local primary care setting. The shorter unidimensional symptom scale mMRC is much simpler to apply and more practical. We obviously would like to know if these two tools can be used interchangeably. Dr Yeung's article answers just this very important question.

One of the important causes of constipation is autonomic neuropathy which could be easily overlooked by family physicians when encountering diabetic patients. We need to remember this important and embarrassing condition in our encounters with diabetic patients. They might not automatically volunteer this distressing symptom.

Diabetic peripheral neuropathy is an important consequence of diabetes. As Dr Ip rightly pointed out in his article, some 50% of patients with long-standing diabetes develop peripheral neuropathy. Knowing how to manage this distressing complication will bring great relief to our patients. Like all illnesses, we need to know not only the pharmacological agents available but also the non-pharmacological interventions that are available to us to minimise this often disturbing symptom and to prevent it from interfering with our patients' busy lives.

Dietary and lifestyle modification is a general important advice to give to all our patients. All too often patients would attend our clinics with a bottle of vitamins or supplements seeking our approval. One such vitamin which has been in the spotlight for the past few years is vitamin D. Research has shown that it is common for patients with multiple sclerosis to have low vitamin D level. It would appear that low levels of vitamin D in early disease is a risk factor for long term disease activity and progression.[7] Study has hence advised the supplementation of this vitamin for patients with multiple sclerosis.[8]

Multiple sclerosis is not the only disease associated with hypovitaminosis D. Diabetes and cardiovascular diseases (CVD) have also been linked[9], although evidence for vitamin D in reducing cardio-metabolic risk factors and improving vascular outcome is equivocal. Further large scale analysis is still warranted to determine its benefits, when to begin vitamin D therapy, as well as to determine the dose, route and duration of administration.[10] Until then it might be best to recommend vitamin D maintenance for patients who suffer from cardiovascular diseases and those with diabetes, especially patients with peripherial neuropathy. So in conclusion, maybe a little sunshine is good for us. All things in moderation, I suppose. ■

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Prevalence of different severities of chronic obstructive pulmonary disease in an out-patient clinic in Hong Kong

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Summary

Objective: *(1) To evaluate the prevalence of different categories of Chronic Obstructive Pulmonary Disease (COPD) severity in a general outpatient clinic (GOPC) using a combined assessment method recommended in the Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2013 guideline and (2) to describe if any difference in the categorisation of COPD patients by using COPD Assessment Test (CAT) versus Modified Medical Research Council Dyspnoea Scale (mMRC) and also (3) to investigate the adherence of pharmacological treatment to the guideline.*

Design: *A cross sectional study*

Subject: *All COPD patients who had regular follow-up in the participating clinic from 1st January 2014 to 31st May 2014.*

Main outcome measures: *(1) Our primary outcome was the prevalence of different COPD severity categories as defined by the GOLD 2013 guideline. (2) Secondary outcomes were the agreement and correlation between CAT score and mMRC scale and (3) the proportion of patients receiving recommended treatment.*

Results: *The prevalence of COPD patients in group A and B were the highest but there were significant proportion of patients at high risk of COPD exacerbation. There was moderate GOLD categories agreement and correlation between CAT score and mMRC scale. About three-fourth of subjects (76.2%) were receiving recommended treatment.*

Conclusion: *A significant proportion of COPD patients were at high risk of COPD exacerbation in our primary care clinic. In view of the moderate agreement and correlation between CAT score and mMRC scale, the same assessment tool is recommended to be used for symptom monitoring and categorisation. The addition of first choice drugs into the GOPC drug formulary is recommended to improve adherence to recommended treatment.*

Keywords: *chronic obstructive pulmonary disease, COPD assessment test, Modified Medical Research Council Dyspnoea Scale, COPD categorisation, primary care*

摘要

目的：根據GOLD 2013指引(Global Initiative for Obstructive Lung Disease)，評估普通科門診按不同嚴重程度分類COPD的發病率，並且比較使用COPD評估測試（CAT）和醫學研究理事會改良呼吸困難量度表（mMRC）對COPD 病人分類的異同。另外就藥物治療對於指引的依從性進行了研究。

設計：橫切面研究

研究對象：2014年1月1日至2014年5月31日期間，在參加研究門診所跟進的全部COPD病人。

主要測量內容：根據GOLD 2013綱領的定義的不同COPD嚴重類別的流行程度。其次是評估CAT和mMRC量度表的一致性和關聯度。患者接受建議治療的比例。

結果：COPD患者患病率最高是A，B組，但是其中有可能急性加重的高危患者占顯著的比例。使用CAT評分和mMRC量度表，對GOLD分類的結果顯示中度一致性和中度關聯

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性。研究中的76.2%的受試者有接受建議的治療。
結論：在普通科門診接受治療的COPD患者當中，有顯著比例是會有可能急性加重的高危人群。鑑於CAT得分和mMRC量度之間的中度一致和關聯性，建議使用相同的評估工具進行症狀監測和分類。建議增加普通科門診的首選藥物，以改善治療依從性。

關鍵詞：慢性阻塞性肺疾病，慢性阻塞性肺病評估測試，醫學研究委員會改良呼吸困難量度表，COPD分類，基層醫療

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Introduction

Chronic Obstructive Pulmonary Disease (COPD) is an important global health problem. According to the World Health Organisation, an estimated 64 million people worldwide had COPD in 2004, with more than 3 million deaths attributed to COPD in 2005.[1] COPD was also the third leading cause of death globally in 2012.[2]

One study in Hong Kong suggested that 9% of people aged over 70 years suffered from COPD.[3] The prevalence of COPD in Hong Kong was estimated to be 3.5% in 2000.[4] In 2012, COPD was the cause of over 31,000 hospitalisations in public hospitals and was the fifth leading cause of death in Hong Kong.[5]

COPD patients are also commonly encountered in general outpatient clinics (GOPC). In our public primary care system, COPD ranked the seventh commonest chronic medical disease in 2013. By improving the standard of care of COPD patients provided in the primary care, the disease morbidities including the number of admissions due to COPD exacerbations may be reduced.

The 2011 Global Initiative for Chronic Obstructive Lung Disease (GOLD) guideline introduced the categorisation of COPD patients into 4 groups using the combined assessment of symptoms (using the COPD assessment test [CAT] or the modified Medical Research Council [mMRC] dyspnoea scale), airflow limitation using spirometry and risk of exacerbations to improve disease management (**Appendix A**).[6] The mMRC scale (a range of from 0 to 4) was developed by the American Thoracic Society as a modification of the original British Medical Research Council dyspnoea index, and is used to grade the degree of disability due to breathlessness, with 4 representing the most severe category. The CAT consists of 8 items with an overall score from 0 to 40. According to the GOLD 2013 classification, patients were classified with either mMRC score (0–1 versus ≥2) or CAT score (<10 versus ≥10) resulting in two low-symptom categories (A and C) and two high-symptom categories (B and D). Exacerbation risk was assessed with either forced expiratory volume in one second (FEV_1) percentage predicted (<50% versus ≥50%), or COPD exacerbation history (0–1 versus ≥2) in the previous one year to stratify patients into low-risk groups (A and B) and high-risk groups (C and D). This categorisation provides a guide for evidence-based pharmacological treatment, with an aim to reducing symptoms, improving health status and reducing exacerbation.[6]

CAT is a multidimensional questionnaire assessing different symptom domains and health status related to COPD. It was shown to correlate with some clinically important variables including FEV_1 and exacerbation frequency. It has high sensitivity and repeatability.[7-10] On the other hand, mMRC is a unidimensional symptom scale assessing only the degree of disability due to dyspnoea. mMRC is widely used clinically because of its simplicity and long history of establishment.[11-13] The difference in nature between these two symptom scores makes their application in the GOLD combined assessment in doubt.

The prevalence of different COPD categories was studied in a pulmonology clinic in Korea with highest prevalence in group D by using CAT score and highest prevalence in group A by using mMRC scale.[14] This study showed a moderate agreement for the GOLD categories by using CAT score and mMRC scale (κ= 0.510).[14] In a recent study in China involving pulmonary clinics patients, the CAT score was also shown to be only moderately correlated with the mMRC scale (ρ= 0.579).[15] Other international studies also showed that there was significant heterogeneity in group assignment by using different symptom scores.[16-18]

The combined assessment of COPD was not widely adopted in our GOPCs. Published data about the prevalence of different COPD severity categories

and the correlation of CAT and mMRC in primary care in the local or international setting are lacking. Understanding our local prevalence will be useful for devising future policies on COPD management in Hong Kong's primary care.

Drug choices for COPD treatment are limited in GOPCs as most patients were thought to be having mild diseases. Newer medications including long-acting beta$_2$-agonists (LABA), long-acting muscarinic antagonist (LAMA) and combined long-acting beta$_2$-agonits/inhaled corticosteroids (LABA/ICS) are mostly unavailable in GOPCs. According to the 2013 GOLD guideline, some of the newer drugs were recommended as first line treatment among group B, C and D patients (**Appendix B**).[6] Studies showed that the level of adherence to guidelines in the management of COPD has been consistently unsatisfactory.[19-22] Understanding the level of adherence to treatment guideline in our local clinic is important to identify the service gap for quality improvement.

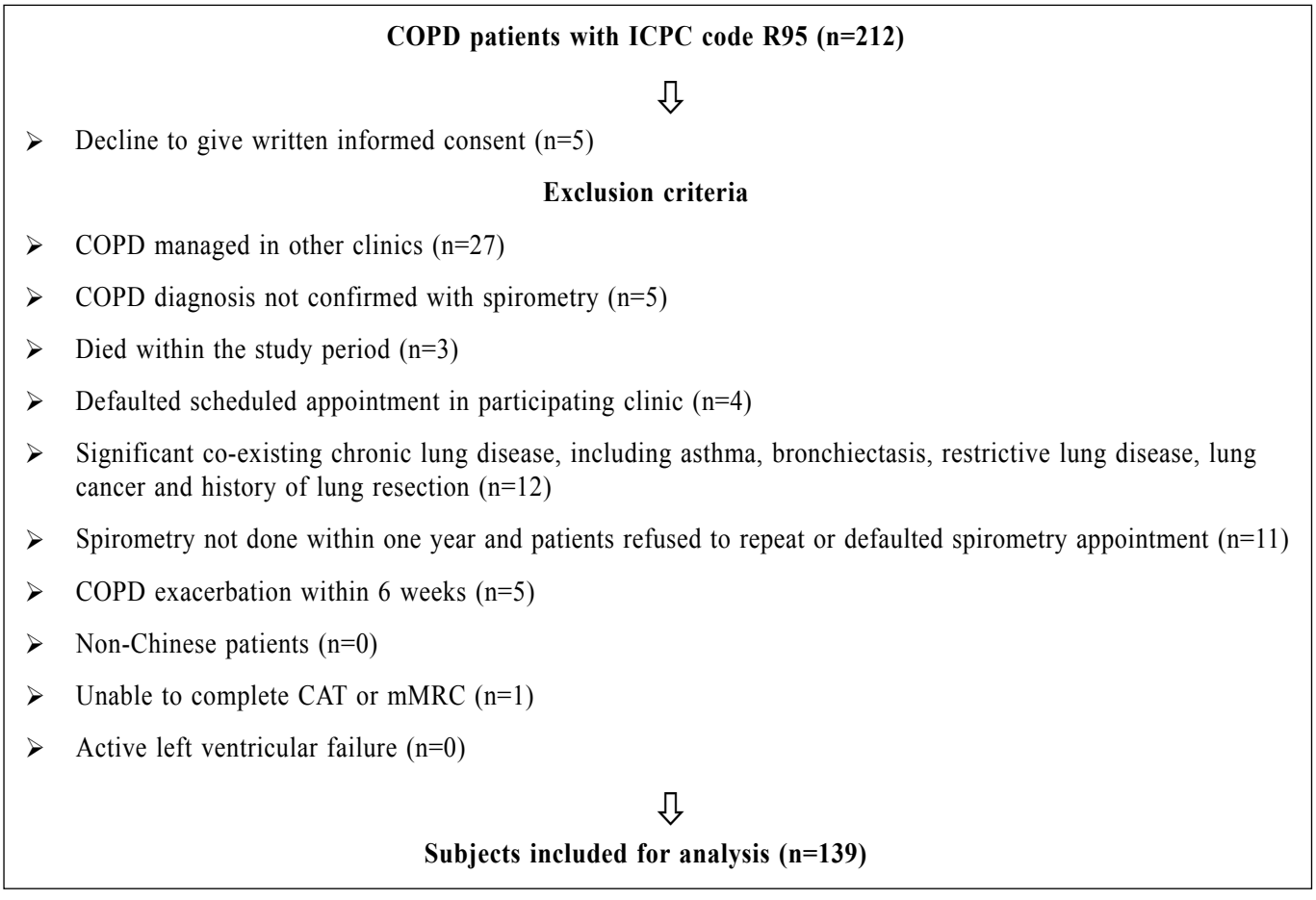
The primary objective of our study was to evaluate the prevalence of different COPD severity categories as defined by the 2013 GOLD guideline in our GOPC. The secondary objectives were to describe the differences in the COPD severity categorisation between CAT score and mMRC scale, and to compare the pharmacological treatment provided in the clinic with the recommended treatment in 2013 GOLD guideline.

Method

Study design

This was a cross-sectional study carried out in a GOPC in Hong Kong. Patients assigned with the International Classification of Primary Care (ICPC) code R95 (Chronic Obstructive Pulmonary Disease) and followed up in our clinic from 1st January 2014 to 31st May 2014 were identified from the Hospital Authority's Clinical Data Analysis and Reporting System (CDARS). These patients were invited to

Figure 1: Flow chart showing the exclusion criteria



participate in the study when they attended for their follow up. After obtaining informed consent, all patients would receive combined assessment according to the 2013 GOLD guideline. The flow chart in **Figure 1** illustrates our inclusion and exclusion criteria. This study was approved by our Kowloon Central Cluster/Kowloon East Cluster Research Ethics Committee/Institutional Review Board.

Procedure

A questionnaire including the CAT score and mMRC scale was administered by trained nurses during patient follow-up. Both the English and validated Chinese versions were available.[23-25]

The number of exacerbations in the previous one year was obtained from patients' history at the same consultation when mMRC scale and CAT score were measured. An exacerbation was defined as an acute event with worsening of the patient's respiratory symptoms that is beyond normal day to day variations and leads to a change in medication.[6] Patients would be referred to repeat a spirometry assessment if the previous results were more than 1 year from the study period. The validated hand-held spirometer Spirolab III was operated by a trained nurse for lung function testing - using spirometry results from adult Hong Kong Chinese data as reference.

According to the 2013 GOLD guideline, pharmacological management of COPD is classified into recommended first choice, alternative choice and other possible treatments.[6] Participants' medical records were reviewed for comparing with recommended management.

Statistical analysis

All statistical analyses were performed with IBM SPSS version 21.0. Proportions were presented as percentages. Continuous data with normal distribution were presented by mean with standard deviations. Kappa coefficient (κ) and Spearman correlation (ρ) was used to examine the extent of agreement and correlation between CAT versus mMRC score respectively. Differences were considered statistically significant if $p < 0.05$.

Results

Study population

212 patients were coded as having COPD in our clinic. 5 patients refused to participate in the study and 68 patients were excluded due to various reasons as shown in **Figure 1**. As a result, 139 subjects were included for data analysis. Clinical characteristics of the subjects were summarised in **Table 1**. 90.6% had no exacerbations over the past year. 7.2% experienced exacerbations requiring admission.

Prevalence of different GOLD categories

The prevalence of different GOLD categories is shown in **Table 2**. Using the CAT score, the prevalence of categories A, B, C, D were 52.5%, 24.5%, 10.8% and 12.2% respectively. On the basis of the mMRC scale, the prevalence of categories A, B, C, D were 51.8%, 25.2%, 9.3% and 13.7% respectively. The prevalence of group A (less symptoms, low risk) was the highest, and least patients were classified as group C (less symptoms, high risk) irrespective of the assessment tools used.

Correlation of the GOLD categories between CAT score and mMRC scale

There was moderate agreement for the GOLD categories by using CAT score and mMRC scale with kappa coefficient of 0.516 ($p<0.001$) (**Table 3**). The Spearman's correlation coefficient for CAT score and mMRC was 0.572 ($p<0.001$), suggesting moderate correlation. The cut-point for mMRC (score of 2) corresponded with a mean CAT score of 10.9 which was approximate to the cut-point (score of 10) of CAT (**Table 4**).

Adherence to the recommended pharmacological treatment

Data analysis in this part was performed according to CAT score categorisation because available evidence suggests CAT is more repeatable and sensitive than the mMRC scale.[7,8] Among the 139 subjects, 37.4% were put on the recommended first choice treatment. 1.5% and 37.4% of them were put on alternative choice and other possible treatments respectively. The pharmacological treatment provided in 23.7% of the subjects was not

following any of the recommended options (**Table 5**). The reasons for this were prescription of ICS (78.8%, 26/33) in low risk patients and no medication given (21.2%, 7/33) in indicated patients. 71.2% (52/73) of category A patients were put on first choice treatment, while 5.5% (4/73) were on alternative or other possible treatments. In category B, C and D, no patients were put on first or alternative choice treatment. 55.9% (19/34) of category B patients, 93.3% (14/15) of category C patients and 100% (17/17) of category D patients were treated with medications belonging to other possible treatments. Up to 23.3% (17/73) of category A patients, 44.1% (15/34) of category B patients and 6.7% (1/15) of category C patients were not receiving pharmacological treatment in accordance to the 2013 GOLD guideline.

Table 1: Demographic data and clinical characteristics of patients (n=139)

	Mean (SD)	Number (%)
Age	73.4 (10.3)	
(i) < 50		1 (0.7)
(ii) 50-59		13 (9.4)
(iii) 60-69		38 (27.3)
(iv) 70-79		44 (31.7)
(v) 80-89		38 (27.3)
(vi) ≥ 90		5 (3.6)
Sex		
Male		119 (85.6)
Smoking status		
Ever smoker		133 (95.7)
Non smoker		6 (4.3)
FEV_1 (% predicted)		
(i) ≥ 80		52 (37.4)
(ii) 50-79		55 (39.6)
(iii) 30-49		28 (20.1)
(iv) < 30		4 (2.9)
CAT score	8.1 (6.0)	-
mMRC scale	1.3 (0.9)	-
Exacerbation history		
No exacerbation		126 (90.6)
Exacerbation without admission		3 (2.2)
Exacerbation with admission		10 (7.2)

Table 2: Distribution of patients in GOLD categories by different symptom measures (CAT score vs mMRC scale)

Risk (Airflow limitation or exacerbation history)	Number of patient (%) Symptom category			
	CAT score		mMRC scale	
	<10	≥10	<2	≥2
High	**C** 15 (10.8)	**D** 17 (12.2)	**C** 13 (9.3)	**D** 19 (13.7)
Low	**A** 73 (52.5)	**B** 34 (24.5)	**A** 72 (51.8)	**B** 35 (25.2)

Table 3: GOLD categories by symptom measure (CAT score vs mMRC scale)

		GOLD categories by mMRC scale No. of patients (%)			
		A	B	C	D
GOLD categories by CAT score No. of patients (%)	A	57 (41.0)	16 (11.5)	0 (0.0)	0 (0.0)
	B	15 (10.8)	19 (13.7)	0 (0.0)	0 (0.0)
	C	0 (0.0)	0 (0.0)	8 (5.8)	7 (5.0)
	D	0 (0.0)	0 (0.0)	5 (3.6)	12 (8.6)

* Kappa coefficient = 0.516, $p < 0.001$

† (A) Less symptoms and low risk; (B) More symptoms and low risk; (C) Less symptoms and high risk; (D) More symptoms and high risk

Table 4: Distribution of the mean CAT score by mMRC scale

mMRC scale	CAT score mean (SD)
0	2.8 (2.6)
1	7.4 (4.8)
2	10.9 (6.3)
3	13.8 (6.1)
4	18.0 (-)

Table 5: Distribution of different pharmacological therapy in patients with COPD in the participating clinic

	GOLD category by CAT score, number of patients (%)				
	A	B	C	D	Total
Recommended first choice	52 (71.2)	0 (0.0)	0 (0.0)	0 (0.0)	52 (37.4)
Alternative choice	2 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.5)
Other possible treatment	2 (2.7)	19 (55.9)	14 (93.3)	17 (100)	52 (37.4)
Treatment not following GOLD 2013 guideline	17 (23.3)	15 (44.1)	1 (6.7)	0 (0.0)	33 (23.7)
a. Inappropriate use of ICS	17	9	0	0	26
b. Not put on any medication	0	6	1	0	7
Total	73	34	15	17	139

Discussion

Prevalence of different GOLD categories

Our results showed that our clinic has a high prevalence (77%) of categories A and B patients and among these groups of patients, nearly one-third belonged to group B, i.e. more symptoms. There was also a significant proportion (23%) of patients with high COPD exacerbation risk (categories C and D), highlighting the importance of performing comprehensive assessment for these patients in order to optimise their management and reducing their risk.

Categorisation by using CAT score and mMRC scale

Our results are consistent with existing literature, demonstrating heterogeneity in COPD category assignment with different symptom scores[14,16-18], and only moderate correlation between CAT score and mMRC scale.[14-18] Although the mMRC scale continues to be recommended in the 2014 GOLD guideline, the CAT score is preferred because of its more comprehensive assessment.[28] However, in our busy primary care setting, the mMRC scale remains a useful alternative to CAT score. Moreover, our results confirm that a mMRC score of 2 can be used as the cut-point as recommended in the 2013 and 2014 GOLD guidelines.[28] In order to ensure continuity of care, patients' symptoms should be monitored with the same assessment tool (either CAT or mMRC) for COPD categorisation.

Adherence to the recommended pharmacological treatment

In our study, majority of our patients were receiving pharmacological treatment according to the recommendations in 2013 GOLD guideline. However, except in group A, all patients in other groups were receiving medications belonging to other possible treatment instead of recommended first choice or alternative choice. Selected choices of COPD drugs in GOPC drug formulary may be one of the reasons for this observation. Existing evidence suggests that long-acting bronchodilators are preferred over short-acting bronchodilators in the management of COPD.[29,30] The benefits of LAMA, LABA or LABA/ICS including long-term improvements in lung function, quality of life, and reduction of exacerbations in patients with COPD were well demonstrated in international studies.[30,31] Inclusion of long-acting bronchodilators and LABA/ICS in the GOPC drug formulary may be beneficial in improving the care of some COPD patients. The cost-effectiveness of introducing these medications in GOPC would require further studies.

ICS is recommended for patients with FEV_1 less than 60% predicted. However, the prescription of ICS in some low risk group patients was observed in this study. Similar finding was found in other western countries.[32,33] Unfamiliarity with the latest GOLD guideline has been suggested as one of the reasons for this finding.[32,34] Another reason could be due to inconsistency of recommendations among different guidelines. According to the National Institute of Clinical Excellence (NICE) 2010 guideline for COPD management, in people with stable COPD and an FEV_1 of more than 50% who remain breathless or have exacerbations despite maintenance therapy with a LABA, LABA plus ICS in a combination inhaler could be considered.[35] Therefore, doctors may add ICS to the low risk group patients because of the unavailability of long-acting bronchodilators.

Limitations

We acknowledge some limitations in our study. Firstly, some patients with recent COPD exacerbation were excluded from the study and hence the true prevalence of patients at higher exacerbation risk would be underestimated. Secondly, subjects were recruited from a single primary care clinic which limits generalisability of results to other primary care clinics, although our results were comparable to other international multicenter studies. Thirdly, our subjects were predominantly male, and so our findings might not be applicable to female COPD patients. Lastly, some ICS was initiated in patients by the previous attending physicians for various clinical indications, which might include suspected or tested airway reversibility and after acute exacerbations before referring to GOPC for follow-up. Airway reversibility was also not tested by spirometry in the participating clinic. As a result, the assessment of non-adherence in currently low risk patients would be overestimated.

In the future, multi-centered prospective studies on the application of the combined assessment in COPD patients on long term follow up could be of significant

Key messages

1. The prevalence of GOLD categories A and B was the highest in our primary care clinic, but a significant proportion of patients were at high risk of COPD exacerbation.

2. There was moderate agreement between CAT and mMRC scales for differentiating different GOLD categories, resulting in significant differences in category assignment if different tools are used. Therefore, the same assessment tool should be used for symptoms monitoring and disease categorisation.

3. The addition of currently unavailable recommended first choice COPD medications into the GOPC drug formulary is recommended.

clinical importance in investigating the practicability and benefits of integrating the recommended symptoms and risks stratification in primary care.

Conclusion

In our study, the prevalence of GOLD categories A and B was the highest but there was a significant proportion of patients at high risk of COPD exacerbation. There were significant differences in GOLD categories assignments between CAT score and mMRC scale. Therefore, COPD patients' symptoms should be monitored with the same symptoms assessment tool in order to preserve continuity. mMRC scale would be a suitable alternative in assessing the degree of dyspnoea when CAT score is not clinically applicable. The observations of underuse of long-acting bronchodilators or combined LABA/ICS and overuse of ICS were highlighted in this study. The addition of those unavailable recommended first choice medications into the GOPC drug formulary is recommended.

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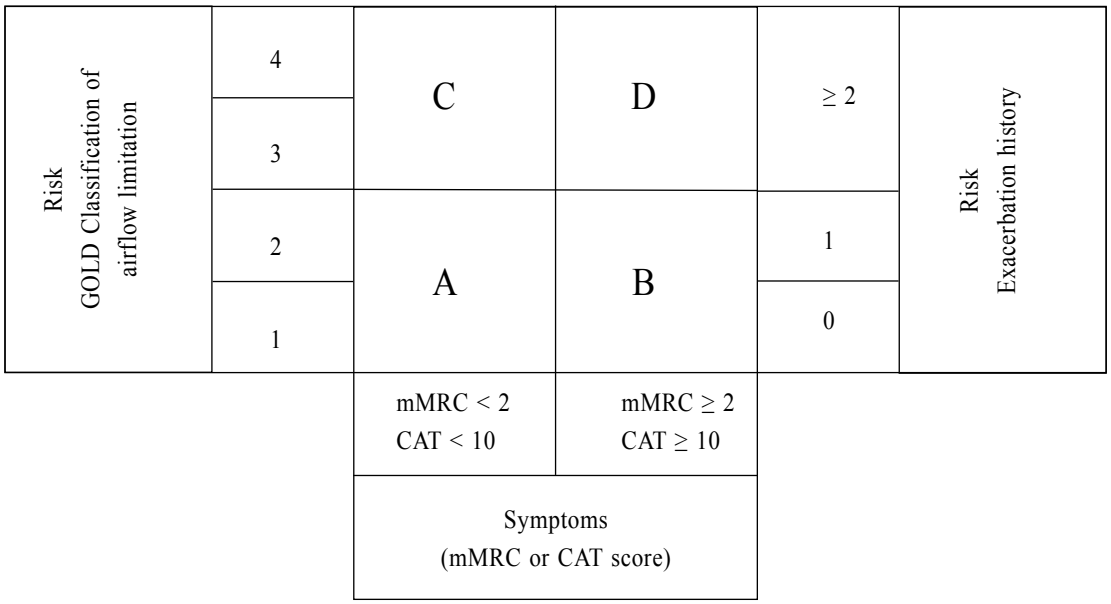
Appendix A: Combined assessment of COPD according to 2013 GOLD guideline



Group A – low risk, less symptoms, Group B – low risk, more symptoms
Group C – high risk, less symptoms, Group D – high risk, more symptoms

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Appendix B: Recommended pharmacological treatment in 2013 GOLD guideline

Patient group	Recommended first choice	Alternative choice	Other possible treatment*
A	SABA prn or SAMA prn	LABA or LAMA or SABA + SAMA	Theophylline
B	LABA or LAMA	LABA + LAMA	SABA and/or SAMA Theophylline
C	ICS + LABA or LAMA	LABA + LAMA or LABA + phosphodiesterase-4 inhibitor or LAMA + phosphodiesterase-4 inhibitor	SABA and/or SAMA Theophylline
D	ICS + LABA and/or LAMA	ICS + LABA + LAMA or ICS + LABA + phosphodiesterase-4 inhibitor or LABA + LAMA or LAMA + phosphodiesterase-4 inhibitor	Carbocysteine SABA and/or SAMA Theophylline

ICS – inhaled corticosteroid, LABA – long-acting beta2 agonist, LAMA – long-acting muscarinic antagonist (anticholinergic), SABA – short-acting beta2 agonist, SAMA – short-acting muscarinic antagonist (anticholinergic)

** Medications in this column can be used alone or in combination with other options in the recommended first choice and alternative choice column*

Multidisciplinary management of painful diabetic peripheral neuropathy: literature review and updated recommendation

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Summary

The management of painful diabetic peripheral neuropathy (DPN) requires a multidisciplinary approach, encompassing both pharmacological and non-pharmacological treatment strategies. The Multidisciplinary Panel on Neuropathic Pain has published recommendations on the management of painful DPN and provides here an update that emphasises the importance of good glycaemic control for all patients with diabetes, and includes newly published epidemiological studies and clinical evidence for the management of painful DPN. Based on published clinical evidence and international guidelines, first-line agents for DPN include $\alpha_2\delta$-ligands, tricyclic antidepressants and selective serotonin-norepinephrine reuptake inhibitors. If a reasonable trial of a first-line agent does not relieve pain effectively, combination therapy with or switching to another first-line agent should be considered. Tramadol can be considered as a second-line treatment option.

摘要

糖尿病性末梢神經病變引起的疼痛，需由不同學科的醫療團隊以藥物及非藥物方式進行治療。跨學科研究神經病變性疼痛小組在最近發表治療糖尿病性末梢神經病變的建議時，強調所有糖尿病患者在控制血糖水平的重要性，並引述最新處理糖尿病末梢神經病變性疼痛的流行病學研究和臨床實證。據已發表的臨床實證和國際指引，治療糖尿病性末梢神經病變的第一線藥物包括$\alpha_2\delta$-配體、三環類抗抑鬱藥和選擇性血清素及正腎上腺素再吸收抑制劑。當第一線藥物未能有效紓緩痛楚時，可考慮轉換另一種第一線藥物或同時使用兩種一線藥物；而曲馬朵 (tramadol) 可作為第二線治療選擇。

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Introduction

The Multidisciplinary Panel on Neuropathic Pain (MPNP) publishes evidence-based recommendations on the management of neuropathic pain. The MPNP aims to improve the awareness and understanding of neuropathic pain in Hong Kong via medical education activities and materials for physicians and the community. The panel held its inaugural meeting in December 2001 and includes specialists from a range of disciplines involved in treating neuropathic pain, namely anaesthesiology, geriatric medicine, neurology, neurosurgery, psychiatry, orthopaedics and rheumatology.

Recommendations on the management of painful diabetic peripheral neuropathy (DPN) were first published in 2003[1], with an update in 2006.[2] This present updated recommendation aims to help healthcare professionals to evaluate a patient's condition and decide on a suitable treatment strategy. The recommendation is not intended to replace professional judgment in determining the appropriate management of individual patients.

Prevalence, symptoms, pathophysiology, and burden of illness

Globally, the prevalence of diabetes is increasing, particularly in Asia. The estimated prevalence of diabetes in East Asian countries ranges from 6 to 11%; in Hong Kong the prevalence is 9%.[3] Diabetic neuropathy is a family of progressive degenerative disorders affecting the sensory, motor or autonomic peripheral nerves.[4,5] Poor glycaemic control and chronic hyperglycaemia are believed to be responsible for peripheral nerve damage.[6] In Chinese patients with DPN, changes in nerve conduction velocity and histopathology of peripheral nerves were shown to be positively correlated with duration of diabetes and overall blood glucose levels.[7] Abnormalities in nerve growth factors, autoimmune disorders, ischaemia and hypoxia may also contribute to loss of nerve fibres. Key risk factors for the development and progression of diabetic neuropathy are presented in **Table 1**.

Up to 50% of patients with long-standing diabetes develop some form of neuropathy.[4,5,8] Common symptoms of painful DPN are listed in **Table 2**. The overall prevalence of sensory neuropathy in Hong Kong is estimated from registry data to be around 2%.[9] While this figure is lower than estimates from other countries, the average disease duration of Hong Kong registry patients is only 5 years.

Distal symmetric polyneuropathy is the most common form of diabetic neuropathy, affecting around 40% of

Table 1: Risk factors for the development and progression of diabetic neuropathy[5,6]

- Poor glycaemic control
- Increasing age
- Undiagnosed type 2 diabetes
- Long duration of diabetes
- Cardiovascular disease
- Peripheral vascular disease
- Smoking
- High alcohol intake
- Low socioeconomic status
- Renal failure

Table 2: Common signs and symptoms of painful diabetic peripheral neuropathy[6,8]

- Tingling
- Burning
- Sharp, shooting and/or lancinating pain
- Electric-shock sensations
- Allodynia (painful sensations to innocuous stimuli)
- Hyperalgesia (increased sensitivity to painful stimuli)
- Pain is often worse at night
- Toes and distal foot are usually affected first, but symptoms progress proximally to involve feet and legs

patients who have had diabetes for 25 years or longer.[4] In a study conducted in China, 47% of 556 subjects with diabetes of more than 10 years' duration were characterised as having diabetic neuropathy. Of these, 38% had mild pain, while 41% reported moderate and 11% severe pain.[10] Diabetic polyneuropathies usually involve the peripheral nerves of the feet and legs and, in some cases, the hands and arms. Early symptoms include numbness, tingling, burning or pain, usually starting in the toes and spreading proximally.[8] The condition also involves loss of reflexes, and loss of sensation which can lead to foot ulceration and even the need for amputation.[8,11] Early diagnosis and management of at-risk patients might prevent at least half of all diabetes-related amputations.[11]

Painful DPN is associated with significant burden of illness. In the United States, an observational study of 112 subjects with painful DPN revealed that 44% suffered from sleep disturbance/insomnia, 41% had depressive symptoms and 36% had anxiety.[12] Almost 80% of these subjects reported moderate to severe pain. Healthcare resource utilisation was high, and increased with greater pain severity. Indeed, healthcare resource utilisation and costs are higher in patients with painful DPN compared with those with diabetes alone, with the highest burden associated with severe painful DPN.[13]

Diagnosis

Diagnosis of diabetic neuropathy is based on clinical symptomatology. Other underlying pathologies for neuropathy should be excluded (eg, vascular disease, human immunodeficiency virus [HIV], vitamin B_{12} deficiency, hypothyroidism).[4] Clinical features vary widely, and people with diabetic neuropathy may even be pain-free. However, the classic presentation of advanced polyneuropathy is

Table 3: Patient history, screening for neuropathic pain and neurological examination for the diagnosis of painful diabetic neuropathy

Patient history[4]:

1. Type, duration and level of control of diabetes.
2. Nature of symptoms, if any (intensity, duration, progression, nocturnal exacerbation, recurrent foot problems).
3. Pain characteristics using standard pain questionnaires (chronic or acute pain, bilateral, type of dysaesthesia, hyperaesthesia). The identification (ID) pain questionnaire is a simple assessment tool to screen whether a patient may have neuropathic pain symptoms and has been validated in a Hong Kong Chinese population (see below).[14]
4. Lifestyle factors that may contribute to progression of neuropathy.

Neurological examination[4,11]:

1. Characterise distal sensory function and reflexes, eg, pin-prick test, light touch, vibration test, ankle reflex, pressure perception, temperature assessment, monofilament test of two-point discrimination.
2. Electrophysiological assessment to document neuropathy, if required, eg, nerve conduction study and electromyography, or doppler sonography to determine the presence of vascular disease.

Screening for neuropathic pain: The ID pain questionnaire[14]

Question	Original version	Chinese version
1	Did the pain feel like pins and needles?	您的痛楚是否好像被針刺般疼痛？
2	Did the pain feel hot/burning?	您的痛楚是否灼熱或好像被火燒一樣？
3	Did the pain feel numb?	您的痛楚是否帶有麻痺？
4	Did the pain feel like electrical shocks?	您的痛楚是否好像觸電一樣？
5	Is the pain made worse with the touch of clothing or bedsheets?	您的痛楚是否因觸碰衣服或床單而加劇？
6	Is the pain limited to your joints?	您的痛楚是否只限於關節部位？

Scoring: Questions 1-5: Yes = +1 point; No = 0 points; Question 6: Yes = -1 point; No = 0 points
If patients score 3 or higher, further examinations, investigations, and even specific treatment relevant to neuropathic pain may be warranted.

distal wasting and weakness, absent tendon reflexes, and glove-and-stocking sensory loss and/or pain.[8] Patients may also experience allodynia. Key points to consider in assessing patients for painful DPN are presented in **Table 3**.

Management

The goals of treatment for painful DPN are to relieve painful symptoms, prevent further tissue damage and educate patients. While a cure for painful DPN may not be available, deterioration of neurological condition and pain can be managed with good glycaemic control and pain management techniques.[8] A summary of key points to consider in the management of DPN is presented in **Table 4**. This review provides a summary for family physicians outlining the importance of a multidisciplinary approach, whether they initiate treatment themselves or who refers to a specialist.

Multidisciplinary management of painful DPN

A number of international guidelines on pharmacological management of neuropathic pain (some of these are specifically on painful DPN) have been published in the past few years.[16-19] These guidelines recommend $\alpha_2\delta$-ligands (eg, pregabalin or gabapentin), tricyclic antidepressants (TCAs; eg, amitriptyline) or selective serotonin-norepinephrine reuptake inhibitors (SNRIs; eg, duloxetine, venlafaxine) as first-line treatment for painful DPN. The American Academy of Neurology recommends that pregabalin be given as first-line treatment for painful DPN, which is the only medication with Level A evidence.[16] There is no particular preference among the first-line agents, the choice of which depends on physician' experience and patient' tolerance as well as financial considerations. A multidisciplinary approach to management should be taken to maximise pain relief. Good glycaemic control is essential, and pharmacotherapy should be used in conjunction with physical and psychological therapy (**Table 5**).

Pharmacological management

The pharmacological treatments included in these recommendations are based on published clinical evidence from trials in patients with painful DPN and current clinical practice. PubMed was searched for clinical trials, review articles and treatment guidelines on peripheral diabetic neuropathy from the date of the last recommendation update (2006)[2] until January 2015. Full prescribing information should be consulted before initiating drug therapy. Some drugs may not be approved for use in neuropathic pain syndromes. The proposed treatment algorithm for painful DPN is presented in **Figure 1**.

The $\alpha_2\delta$-ligands

Pregabalin

Pregabalin (300 and 600 mg/day) is effective in painful DPN and is associated with greater improvements in pain, mood, sleep disturbance and quality of life measures than placebo.[20,21] Pain relief and improved sleep were observed from as early as one week in many patients, and were sustained throughout the study period.[20] Recent randomised, placebo-controlled studies performed on patients with painful DPN in China (n=308) and in Japan (n=317) with pregabalin treatment over 8 and 14 weeks, respectively, were similarly associated with improved pain ratings and other clinical outcomes than placebo.[23,24] Pregabalin was well tolerated, with dizziness and somnolence the most common

Table 4: Key points for the management of diabetic peripheral neuropathy

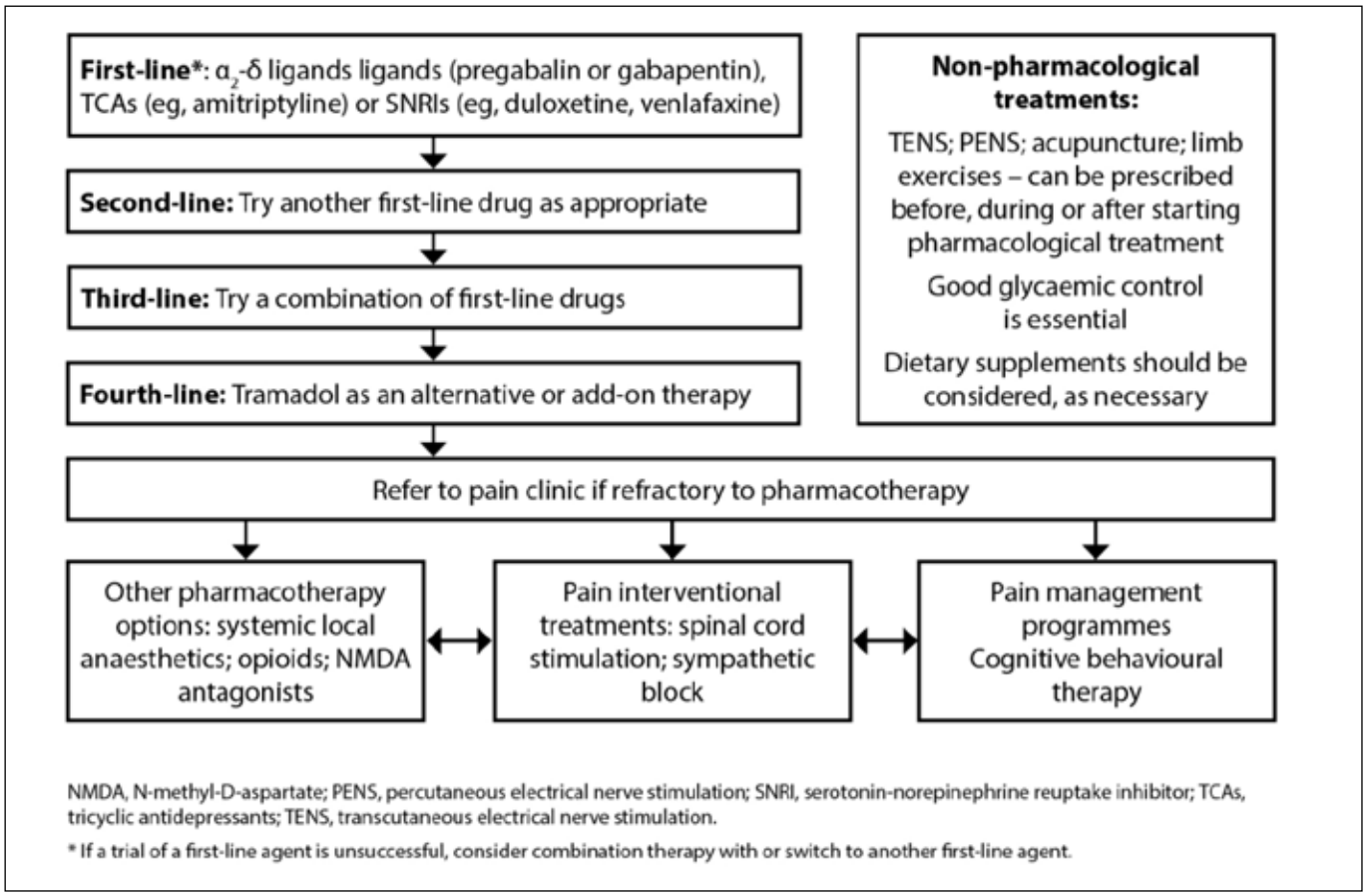
- The importance of good glycaemic control should be stressed to all diabetic patients[3,5,15], as this may slow or prevent the development of peripheral neuropathy and other complications, including retinopathy, nephropathy and angiopathy.
- Patients without clinical neuropathy should be educated on lifestyle, foot care and the importance of controlling blood glucose levels.[3,15] Daily foot care is essential to prevent complications of diabetic neuropathy.[5] Refer to a diabetes specialist nurse or chiropodist for a yearly foot examination, if necessary.
- Patients with suspected diabetic amyotrophy or a decreased quality of life due to symptomatic neuropathy should be referred to a diabetologist or neurologist for further evaluation. In the interim, commence treatment for acute or chronic pain.
- Patients with peripheral neuropathy and complete or partial loss of sensation should be educated on good glycaemic control and foot care. Refer patients to a diabetes foot specialist.
- Trauma, cellulitis or acute ischaemia of the foot require urgent referral to the specialist diabetes foot-care team to prevent new or recurrent lesions and reduce the risk of future amputation.

Table 5: Pharmacological and nonpharmacological management strategies for painful diabetic peripheral neuropathy

- $\alpha_2\delta$-ligands (eg, pregabalin or gabapentin) are considered first-line treatment options due to their efficacy and safety.[16-25] Side effects can be minimised by slow dose titration.
- TCAs (eg, amitriptyline, nortriptyline, desipramine) are also first-line treatment options.[17-19] TCAs are contraindicated in patients with cardiac and hepatic disease. Some patients cannot tolerate the side effects of TCAs, but these can be minimised by starting with a low dose at night and increasing the dose gradually. Nortriptyline, imipramine and desipramine are less sedating than amitriptyline.
- The SNRIs (duloxetine and venlafaxine) can also be considered as first-line treatment.[17,19,26-29] Both of these antidepressants have demonstrated efficacy and safety in painful DPN.
- If a patient does not receive adequate pain relief with a trial of one first-line agent, consider combination therapy with, or switch to, another first-line agent.
- For acute pain, start with simple analgesics and progress to TCAs or other adjuvant analgesics, if necessary.
- Tramadol may be an effective alternative or add-on therapy for some patients.[16]
- Patients remaining refractory to a reasonable trial of pharmacotherapy (eg, 2 to 3 months with two or three different agents) should be referred to a multidisciplinary pain clinic for further treatment options.
- Physical stimulation, such as TENS[30] and acupuncture[31], may counteract painful sensations. However, acupuncture and topical treatments should be used with caution in the lower leg in patients with diabetes, as they may aggravate the skin and lead to infection. More invasive stimulatory interventions, such as spinal cord stimulation, may be considered as a last option.
- Pain management programmes and cognitive behavioural therapy[32] can also be used in combination with pharmacological approaches to teach patients how to live with pain. Regular walking, warm baths or use of elastic stockings may also help to relieve leg pain.

DPN, diabetic peripheral neuropathy; SNRI, serotonin-norepinephrine reuptake inhibitor; TCAs, tricyclic antidepressants; TENS, transcutaneous electrical nerve stimulation.

Figure 1: Proposed treatment algorithm for painful diabetic peripheral neuropathy



adverse events; the adverse events were generally mild to moderate in severity.

A recently published meta-analysis involving nine trials (n=2,056) demonstrated pregabalin's superiority over placebo in improving mean pain scores.[33] Furthermore, 36% of pregabalin patients and 24% of placebo patients reported at least a 50% reduction in pain (relative risk [RR] 1.54; 95% confidence interval [CI] 1.20−1.98; p=0.007). Sleep improvement was greater with pregabalin than placebo. While more pregabalin-treated patients experienced mild side effects, the drug was considered reasonably well tolerated.

In older patients (≥ 65 years), pregabalin is an effective treatment option as it provides effective pain relief, comparable with that in younger patients, and has no known drug–drug interactions in a population in which polypharmacy is quite common.[25] Add-on therapy with low-dose oxycodone (10 mg/day) did not provide any additional pain relief compared to pregabalin in patients with painful DPN.[34]

Gabapentin

Gabapentin was the first oral drug therapy to be licensed for the management of painful DPN. In a large, multicentre, double-blind, placebo-controlled trial, gabapentin was associated with lower pain scores and significant improvements in a number of clinical outcomes, such as sleep interference, quality of life and "Clinician Global Impression of Change" (CGIC) scores, compared with placebo.[22] Dizziness and somnolence were the only two adverse events that occurred significantly more frequently in gabapentin-treated patients.

A gastro-retentive gabapentin (gabapentin-GR) formulation, requiring once-daily dosing, is effective and well tolerated in painful DPN.[35] A double-blind, placebo-controlled trial randomised the patients (n=147) with symmetrical pain symptoms in distal extremities to gabapentin-GR, given once or twice-daily (titrated from 300 to 3,000 mg/day as a single evening dose or as a divided dose [1,200 mg morning/1,800 mg nocte]), or placebo. The reduction in average daily pain score was significantly greater with gabapentin-GR once-daily compared to the placebo (p=0.002); 34.8% of gabapentin-GR patients achieved ≥ 50% reduction in average pain score compared with 7.8% of placebo patients (p=0.001). Although numerically larger, the reduction in pain score with gabapentin-GR twice-daily was not significantly greater than the placebo. The incidence of dizziness and somnolence was also low.

Tricyclic antidepressants

Several clinical trials have shown that TCAs are effective in treating painful diabetic neuropathy. Although they are not licensed for this indication, some international guidelines continue to recommend TCAs as a first-line treatment option.[17-19]

Data from systematic reviews

A systematic review of randomised, placebo-controlled trials of antidepressants in DPN pooled data from eight studies using TCAs (amitriptyline, clomipramine, desipramine, imipramine and maprotiline) with a total of 283 patient episodes.[36] The relative benefit of treatment was 1.9 (95% CI: 1.5−2.3) and the number-needed-to-treat (NNT) for one patient to achieve at least 50% reduction in pain was 3.5 (95% CI: 2.5−5.6). The incidence of adverse events is significantly greater with TCAs than placebo. For minor adverse events, the number-needed-to-harm (NNH) was 3.2 (95% CI: 2.3−5.2) and for major adverse effects (ie, those necessitating drug withdrawal), the NNH was 14 (95% CI: 8.5−38).[36]

Selective serotonin-norepinephrine reuptake inhibitors

Duloxetine

The efficacy and safety of duloxetine in painful DPN has been demonstrated in several randomised, double-blind, placebo-controlled trials of 12 weeks' duration.[37-39] Duloxetine (60 or 120 mg/day) was associated with significantly better improvements in pain outcomes, and was well tolerated. A Cochrane review concluded that the evidence for duloxetine (60 and 120 mg/day) in treating pain in DPN is moderately strong.[27]

Pooled data on safety and tolerability of duloxetine from the 12-week (acute) studies and 52-week extension studies versus routine care has been published.[28] A total of 1,139 patients participated in the acute studies and 867 in the extension studies. During the acute studies, significantly more treatment-emergent adverse events were reported with duloxetine than placebo (p=0.001), the most common of which were nausea and somnolence. In the extension phase,

duloxetine was associated with modest changes in glycaemia compared with routine care. No disease progression was observed for neuropathy, nephropathy or retinopathy.

Venlafaxine

Venlafaxine was shown in a randomised controlled trial (n=244) to reduce baseline visual analogue pain intensity by 32% (75 mg) and 50% (150–225 mg; p<0.001 vs placebo) at six weeks.[29] For the venlafaxine 150–225 mg regimen, the NNT for 50% pain intensity reduction was 4.5, which is similar to NNTs for TCAs and gabapentin.[29]

Desvenlafaxine

Desvenlafaxine at 200 mg and 400 mg was shown in a randomised controlled trial to significantly change the numeric rating scale score (p<0.001 and p=0.027, respectively).[40] The most common treatment-emergent adverse events were nausea and dizziness, but desvenlafaxine was generally well tolerated.

Comparative efficacy of anticonvulsants and antidepressants

A randomised, double-blind, cross-over clinical trial compared the efficacy and safety of pregabalin (75, 150 and 300 mg bid) and amitriptyline (10, 25 and 50 mg nocte) in 51 patients with DPN.[41] Each treatment period was 5 weeks, with a 3-week washout period between treatments. While similar pain relief and improvements in other clinical outcomes were observed between the two treatments, fewer adverse events were reported with pregabalin (25%) than amitriptyline (65%). The optimal dose of pregabalin was 150 mg bid.

In a double-blind, cross-over trial, 58 patients with DPN were randomised to receive duloxetine (20–60 mg nocte) or amitriptyline (10–50 mg nocte) for 6 weeks with a 2-week washout period between treatments.[42] Significant improvements in pain from baseline were observed with both treatments (p<0.001), and other efficacy outcomes were similar between the groups. While the total number of adverse events reported in each group was similar, more patients reported dry mouth with amitriptyline (55%) when compared to duloxetine (24%; p<0.01).

An open-label, randomised study compared duloxetine monotherapy (n=138), pregabalin monotherapy (n=134) or combination of duloxetine and gabapentin (n=135) in patients with inadequate response to gabapentin.[43] After 12 weeks of treatment, the mean change in pain rating was -2.6 for duloxetine and -2.1 for pregabalin. This demonstrates the non-inferiority of duloxetine to pregabalin (treatment difference 0.49; 95% CI -0.05 to 1.04; p=0.08). The non-inferiority comparison between duloxetine monotherapy and duloxetine plus gabapentin, a secondary objective, on the differences between endpoint mean changes in daily pain ratings was also met. The total number of adverse events reported did not differ between groups.

In a randomised, controlled trial of pregabalin (75 mg bid), carbamazepine (200 mg bid) and venlafaxine (150 mg/d) in patients with painful DPN (n=257), the mean visual analogue scale scores at baseline were 82.3, 74.5 and 74.5, respectively, with significant reductions to 33.4, 39.6 and 46.6, respectively, after 35 days of treatment.[44] While significant reductions were observed in all groups (p=0.0001), pregabalin was associated with greater reductions in pain than carbamazepine and venlafaxine. In all groups there were improvements in sleep, mood and work interference outcomes.

A systematic review and meta-analysis of studies including antidepressants (amitriptyline, duloxetine and venlafaxine) and anticonvulsants (pregabalin, gabapentin and valproate) found that duloxetine, gabapentin, pregabalin and venlafaxine were superior to placebo (odds ratios 2.12, 3.98, 2.78 and 4.43, respectively; insufficient data on valproate were available for analysis).[45] The ranking order for efficacy was gabapentin, venlafaxine, pregabalin, duloxetine/gabapentin combination, duloxetine, amitriptyline and placebo. For safety, the ranking order was placebo, gabapentin, pregabalin, venlafaxine, duloxetine/gabapentin, duloxetine and amitriptyline.

μ-Opioid receptor agonists

Tramadol

Tramadol (at an average daily dose of 210 mg) was shown in a randomised controlled trial (n=131) to be significantly more effective at 6 weeks in relieving pain (p<0.001) and improving both physical (p=0.02) and social functioning (p=0.04) than placebo.[46] No benefits were seen in sleep disturbance. In a 6-month extension of this study, mean pain relief scores were well maintained.[47]

A randomised, open-label trial compared the efficacy and safety of a combination of tramadol/acetaminophen

(37.5/325 mg titrated to tid dosing and up to eight tablets/day, as required) versus gabapentin (300 mg titrated to 3,600 mg/day, as required) for 6 weeks.[48] The study included 163 patients with painful symmetric neuropathy in the lower limbs and mean pain-intensity score ≥4 on a numeric rating scale. The mean reductions in pain intensity at the final visit were similar between the groups (-3.1 ± 2.0 for tramadol/acetaminophen; -2.7 ± 2.1 for gabapentin, p=0.744). The rates of adverse events were similar between the two treatments, except for nausea/vomiting (8.9% for tramadol/acetaminophen versus 1.2% for gabapentin, p=0.030).

Caution should be taken in prescribing tramadol at the same time as an SNRI because of the risk of serotonin syndrome, a potentially serious drug interaction.[18]

Tapentadol

Tapentadol is a combined μ-opioid receptor agonist and norepinephrine reuptake inhibitor. In a pooled analysis of two studies using extended-release (ER) tapentadol (100−250 mg bid)[49], pain intensity worsened upon switching from open-label tapentadol ER treatment to placebo during the double-blind maintenance period but was relatively unchanged with continued tapentadol ER treatment. Furthermore, significant between-group differences were observed in other outcomes such as physical functioning, bodily pain and social functioning.

Combination therapy

Some studies of combination therapy have been conducted in painful DPN, as described above, but overall there is a need for more clinical trials.[17,19] Nevertheless, combination therapy, targeting different sites in the pain pathway or neurotransmitter modulation, may be a helpful option in a stepwise treatment approach if initial first-line agents are only partially effective and/or dose escalation is limited because of adverse events.[18,19] Combination therapy may result in better tolerability as lower doses of individual drugs may be used when combined with other drugs.[19]

Other pharmacological treatment options and novel therapies

A single application of capsaicin 8% patch was shown in an open-label study to achieve a 31% mean reduction in pain rating among patients with DPN (n=91).[50] Overall 47% responded to treatment (≥ 30% pain decrease). The most common adverse events were mild or moderate treatment site burning and pain.

Local application of topical agents to the lower limb should only be performed under clinician supervision, as capsaicin and herbal remedies may irritate the skin and lead to infection. Topical capsaicin merits consideration as adjuvant therapy for diabetic neuropathy that is chronically painful and difficult to treat.

A 5% lidocaine patch may be considered in the treatment of DPN, as suggested by results of a systematic review of 23 studies.[51] The 5% lidocaine patch was associated with pain reduction that was comparable to that achieved with amitriptyline, capsaicin, gabapentin and pregabalin. Intravenous lidocaine infusion may be useful for providing short-term relief in patients with chronic DPN.[52]

Non-pharmacological management

Physical stimulation techniques

Transcutaneous electrical nerve stimulation (TENS) may be effective in some patients with painful DPN. A meta-analysis of three randomised controlled trials showed that reduction in pain score was significantly greater with TENS than placebo at 4 and 6 weeks, but not at 12 weeks.[30] However, subjective improvement in overall neuropathic symptoms was significantly greater at 12 weeks' follow-up. In contrast, microcurrent TENS did not show any superiority.[53] Percutaneous electrical nerve stimulation (PENS) has been associated with reduced pain, improved physical activity and quality of sleep, and reduced requirement for non-opioid analgesic medication in diabetic neuropathy.[54] Sympathetic blocks may be of benefit to patients with refractory DPN.[55] Spinal cord stimulation (SCS) is a more invasive technique, but has been used for the past 30 years for the management of various chronic neuropathic pain conditions.[56]

Pain management programmes

A randomised, controlled pilot study of a cognitive behavioural therapy (CBT) approach for painful DPN has demonstrated that patients who received CBT (n=12) had significant decreases in pain severity and pain interference at 4-month follow-up compared with baseline, while those patients who received routine care (n=8) did not achieve any improvements in pain measures.[32] No significant changes were observed in depressive symptoms in either group.

Key messages

1. Painful diabetic peripheral neuropathy (DPN) is a relatively common diabetic complication, presenting with symptoms such as tingling, burning, sharp, shooting and/or lancinating pain. The toes and distal foot are usually first affected. Symptoms may progress proximally to involve the feet and legs.
2. The goals of treatment are to relieve pain, prevent further tissue damage and to educate patients on their condition. Good glycaemic control is essential, and a multidisciplinary approach to management is recommended.
3. First-line pharmacological agents include $\alpha_2\delta$-ligands (eg, pregabalin or gabapentin), tricyclic antidepressants (eg, amitriptyline), or selective serotonin-norephinephrine reuptake inhibitors (eg, duloxetine).
4. Non-pharmacological treatment options include physical stimulation techniques, pain management programmes, including psychological and behavioural therapy, dietary supplements, as required, and other complementary therapies.

Complementary therapy

A balanced diet with vitamin supplementation, if necessary, is important for diabetic patients. A randomised, double-blind trial compared three micronutrient treatment regimens over 4 months in 75 diabetic patients: micronutrients (zinc, magnesium, vitamins C and E); micronutrients plus vitamin B (B_1, B_2, B_6, biotin, B_{12} and folic acid); or placebo.[57] Neuropathic symptoms improved in both supplement groups, suggesting that micronutrient supplementation might ameliorate DPN symptoms.

Vitamin D deficiency is an independent risk factor for diabetic peripheral neuropathy.[58] A case control study of diabetes patients with diabetic neuropathy (n=33) versus those without (n=29) found that serum vitamin D levels were inversely correlated with intensity and presence of nerve conduction velocity impairment.[59] In a recent prospective, placebo-controlled trial in 112 patients with DPN and vitamin D deficiency, vitamin D supplementation for 8 weeks improved vitamin D status and was associated with a reduction in neuropathy symptoms versus placebo ($p<0.001$).[60]

Acupuncture may also provide pain relief in some patients with DPN. A study comparing 42 patients treated with acupuncture (one session per day for 15 days) with 21 cases exposed to sham acupuncture found that there were improvements in some motor nerve measures and sensory function with acupuncture.[31] Acupuncture was more effective than sham for treating numbness and spontaneous pain of the lower extremities and rigidity in the upper extremities than sham. However, use of acupuncture, particularly on the lower limb, may lead to skin aggravation and infection and should be performed with caution.

Systematic reviews on the efficacy of Chinese herbal medicine for the treatment of DPN have not found any conclusive evidence to support the effectiveness and safety of topical[61] and Chinese herbal medicines.[62]

Conclusion

The prevalence of painful DPN in the diabetic population is high, and efforts should be made to diagnose patients with neuropathic pain symptoms early. While a cure for DPN may not be available, this painful condition can be managed with good glycaemic control and pain management techniques. Based on published clinical evidence and international guidelines, first-line agents for DPN include $\alpha_2\delta$-ligands, TCAs and SNRIs. There is no particular preference among the first-line agents, the choice of which depends on physician' experience and patient' tolerance as well as financial considerations. If a reasonable trial of a first-line agent does not relieve pain effectively, consider combination therapy with or switching to another first-line agent. Tramadol can be considered as a second-line treatment option. Patients with insufficient pain relief after a trial of first-line agents should be referred to a multidisciplinary pain clinic for further treatment options.

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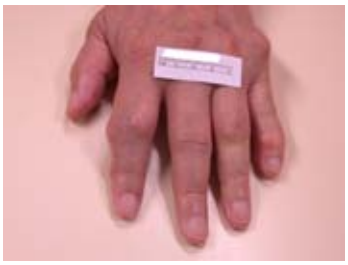
This 76 year old gentleman with chronic eczema was found incidentally to have asymptomatic swelling involving both hands for years

King-man Ho 何景文

Readers are invited to participate in the Clinical Quiz. A prize draw, sponsored by Pfizer Corporation Hong Kong Limited, will be undertaken among the successful entries. For entry into the draw, simply answer the question, fill in the reply slip and return it to the College by 23 May 2016. Each reader is allowed to submit one entry only. The name of the winner and the answer will be published in the June 2016 issue.



Clinical history:

This 76 year old gentleman with chronic eczema was found incidentally to have asymptomatic swelling involving both hands for years.

What was the clinical diagnosis?

A. Gouty tophi
B. Rheumatoid nodules
C. Xanthomata
D. Heberden's nodes

The Hong Kong Practitioner
Clinical Quiz – March / 2016

Answer :

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Tel. No. : _____

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Date : _____

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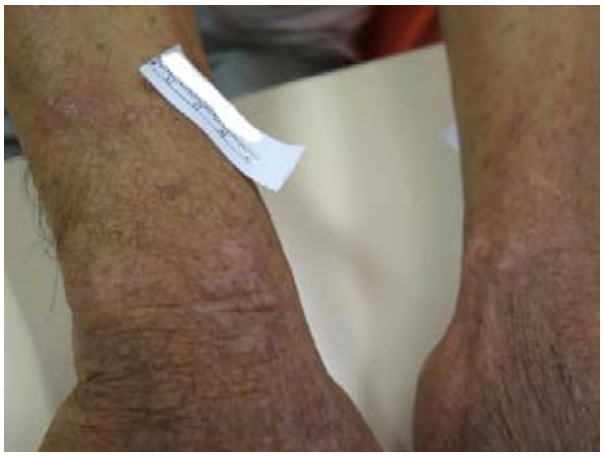
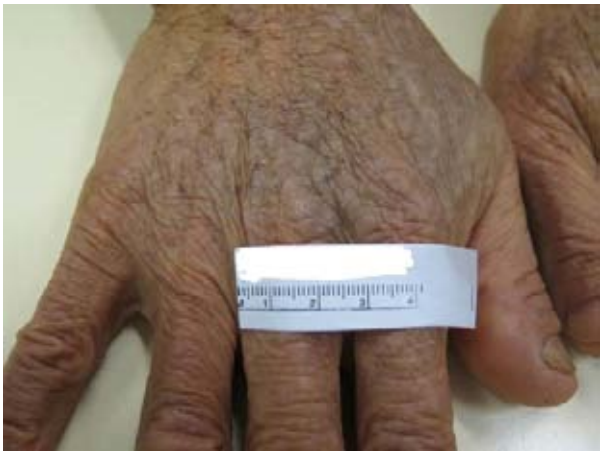
Answer to last month's Clinical Quiz





Question:

This interior renovation worker presented with itchy scaly rash on his hands and forearms recalcitrant to various treatments. He then also developed itchy facial rash. He undertook patch test and was shown to be positive to potassium dichromate, thiuram mix, and fragrance mix.

Answer:

B. Allergic contact dermatitis to potassium dichromate

Clinical examination of this gentleman revealed symmetric lichenified hyperpigmented hyperkeratotic plaques involving the hands up to mid forearms. A sharp cut-off to delineate diseased and normal skin was not present. The clinical diagnosis of hand dermatitis/eczema was made. Hand eczema is a common dermatological condition encountered in the outpatient settings. Hand eczema can be endogenous and exogenous caused by allergic contact dermatitis or irritant contact dermatitis. Most cases are pertained to irritant contact dermatitis related to continual exposure to irritant substances. Chronic hand eczema is characterised by dryness, cracking, thickening of skin, hyperkeratosis with accentuation of skin creases i.e. lichenification. Dryness and fissuring are prominent features in chronic dermatitis caused by contact allergy to chromate. Both hands ware usually affected to more or less the same degree of severity. Acute flaring may be triggered after excessive exposure to irritants or the culprit allergen(s) such as too much wet work. Vesicles, weeping and redness, itchy and painful may be present during acute flaring. Depending on the nature of exposure, the eczematous rash may extend up to the forearms.

The clues to suspect allergic contact dermatitis as a cause of hand eczema in this gentleman are extension of the eczematous process up to mid forearms that was quite discernible from normal skin albeit without a sharp demarcation, and his facial involvement. It was unlikely that he transferred enough amount of irritant to his face to cause dermatitis. On the other hand, only a small amount of allergen was required to elicit allergic contact dermatitis to his face that was not uncommon while engaging in interior renovation work.

Patch test is required to elucidate the causative allergen(s). In order to establish a diagnosis of allergic contact dermatitis to a particular allergen, three conditions have to be satisfied. These are: 1) the clinical presentation is compatible with contact dermatitis to chromate – in this case hand eczema extended up to mid forearms; 2) he had history of contact to cement (which contains chromate) with his hands and from time to time soaked his hands to dilute and mix buckets of cement during his interior renovation work; 3) he had positive patch test to chromate. Simply speaking, there was a source of allergen, a process of contact to the culprit allergen, and the disease developed in the body area of contact to the allergen. In such circumstances, a positive patch test to chromate is said to be clinically relevant.

Contact dermatitis to chromate in manufacturing plant for cement and construction site may also present with severe eczema involving the feet dorsum, as the wet cement may soak the distal sleeves of the working trousers/ jean and remain in contact with the feet for prolonged periods. Irritant contact dermatitis in these workers may

complicate the clinical scenario as they are subjected to exposure to a higher concentration of cement in these settings. Severe acute irritant contact dermatitis and even cement burn are well described.

Although the patient was also tested positive to fragrance mix, the lack of prolonged and intensive exposure to fragrance (i.e. without a source and process), the positive result was not clinically relevant. On the contrary, if a beautician presenting with the same clinical features, the positive patch test to fragrance mix may be clinically relevant.

The same principle applies to the interpretation of the positive patch test to thiuram, commonly present in black rubber gloves. Thus if a dish washing worker presents with the same clinical features, then the positive test would be clinically relevant. Workplace visits and work process assessments may be required to answer all these questions in an otherwise typical case of work related allergic contact dermatitis but without a clear identifiable allergen from history.

Avoidance is the single most important long-term management strategy for contact dermatitis related to chromate. Treatment of contact dermatitis to chromate is the same as for any other acute or chronic dermatitis/eczema. Potent topical corticosteroids may be used to tie over the acute crisis. The attending doctor should also watch out for secondary bacterial infection and treat accordingly. Counselling on general skin care such as proper and liberal use of emollient and soap substitute, and avoidance of contacting chromate containing products in the workplace or living environment are required. Dermatitis elicited by contact allergy to chromate may persist even after the patient ceases to expose to chromates. Some may have chronic severe dermatitis despite a change in occupation. Therefore it is important to counsel the index patient and to manage his expectation on prognosis. The patient may be referred to the occupational health clinic of the Labour Department for detail counselling on avoidance or protection of the allergen in the workplace. ■

The December 2015 Clinical Quiz is **No Winner**

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in the Department of Family Medicine and Primary Care
(Ref.: 201600129)

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A review on the management of constipation in adult in primary care setting

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Summary

Constipation is a common complaint in general practice. Although the majority is due to functional constipation, it is important to identify and treat constipation appropriately as it may cause mood problems and impose significant economic burden to the society. The mainstay of treatment is lifestyle modification. Pharmacological treatment can be considered if conservative treatment fails. Patients should be referred to specialists for further assessment if simple treatment fails or if red flag symptoms are present.

摘要

便秘是基層醫療醫生經常遇見的問題，雖然多數患者都是功能性便秘，但是由於便秘不僅可能導致患者情緒困擾，同時帶來沉重的社會經濟負擔，因此適當診斷和治療便秘非常重要。主要的治療方法是改變患者的生活方式，若效果欠佳可考慮用藥物治療。當治療無效或出現一些危險的徵狀時，病人就應轉介給專科醫生作進一步的檢查。

HK Pract 2016;38:28-35

Introduction

Constipation is a common clinical problem encountered in general practice, accounting for around 2.5 million doctor visits in the United States[1] and around 0.5 million general practitioner visits in the United Kingdom annually.[2] The prevalence of constipation varies between regions, ranging from 32.6% in Beijing, 14.0% in Hong Kong, and 8.2% to 52.0% in the United Kingdom.[3-5] Women are affected by constipation more often than men.[3] Constipation is also commonly seen in patients older than 65.[6] As the aging population is increasing, an increase in the prevalence of constipation in the future is expected. In the United States, the direct medical costs for constipation accounted for 230 million per year.[7] Constipation is also associated with loss in work productivity. It is estimated that constipation accounted for 13.7 million days of work absence in the United States each year.[8] Moreover, higher anxiety and depression scores are noted in patients with constipation and this adversely affect patients' social life.[5] Therefore, it is important for family physicians to identify the problem and manage constipation appropriately.

Definition

The meaning of constipation can be interpreted differently by patients and physicians. The definitions can range from self-perceived constipation to explicit criteria for research purposes. There is a widespread belief that daily bowel opening is essential for general well-being.[9] However, a population based interview in East Bristol showed that only 33% of female and 40% of male reported daily bowel opening.[10] In general, constipation means reduced frequency of stool passage from what is regarded as normal pattern by the patient. The American College of Gastroenterology Chronic Constipation Task Force defines constipation as unsatisfactory defaecation with infrequent stool, difficult stool passage, or both, for at least 3 months.[11] A consensus group of gastroenterologists in Canada defines constipation as combination of symptoms with fewer than three stools per week, hard or lumpy stool and difficult stool passage for at least six months.[12] Rome III criteria[13] is frequently used for research

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purposes, with constipation diagnosed when two or more symptoms out of six are present for at least 3 months:

- Straining during 25% of defaecations
- Lumpy or hard stools in at least 25% of defaecations
- Sensations of incomplete evacuation in at least 25% of defaecations
- Sensations of anorectal obstruction or blockage in at least 25% of defaecations
- Manually facilitating defaecation in at least 25% of defaecations
- Fewer than 3 bowel movements per week

Causes

Causes of constipation can be classified into primary (normal transit constipation, slow transit constipation and pelvic floor dysfunction) and secondary causes (**Table 1**). Normal transit or functional constipation, where no definite cause is found, is the commonest type in clinical practice[14] and accounts for 60% of patients with primary constipation.[15] Slow-transit constipation and pelvic floor dysfunction accounted for the rest. Slow-transit constipation represents a delay or disturbance in the sequence of colonic peristalsis as a result of an imbalance between inhibitory and excitatory neurotransmitters in enteric nervous system. In pelvic floor dysfunction, failure of evacuation is caused by inappropriate contraction of pelvic muscles or anatomical mal-alignment during

Table 1. Secondary causes of constipation[8]

Primary structural abnormalities	• Anorectal disorder (anal fissure, thrombosed haemorrhoids) • Colonic strictures (diverticulosis, ischaemia, radiation therapy) • Colonic mass with obstruction (Colonic/Rectal cancer) • Idiopathic megarectum
Endocrine and metabolic conditions	• Diabetes Mellitus • Hypercalcaemia • Hyperparathyroidism • Hypokalaemia • Hypothyroidism • Pregnancy • Uraemia
Neurological conditions	• Cerebrovascular accident • Multiple sclerosis • Parkinson's disease • Hirschsprung's disease • Spinal cord tumors
Smooth muscle and connective tissue disorders	• Amyloidosis • Scleroderma
Psychological conditions	• Anxiety • Depression • Somatisation • Irritable bowel syndrome
Drugs	Antacids, Anticholinergics, Antidepressants, Antihistamines, Calcium channel blockers, Diuretics, Anti-parkisonian drugs, Opiates, Nonsteroidal anti-inflammatory agents, Antidiarrhoeal agents, Iron supplement, psychotropic sympathomimetics

defaecation. Identification of secondary causes is crucial as some of them are life-threatening or disabling but are amendable to treatments.

Assessment

Most primary care patients with constipation do not require investigations. A comprehensive history and physical examination are adequate for the initial assessment. Further workups should be considered for those who are not responsive to therapies or who present with red flag symptoms.

History

Patients may have their own perceptions of constipation. It is important to clarify the meaning of constipation with them. The validated Chinese constipation questionnaire was developed for diagnosing functional constipation.[16] It consists of 6 items:

(1) severity of false alarm,
(2) less than 3 defaecations per week,
(3) severity of incomplete evacuation,
(4) severity of lumpy or hard stools,
(5) number of laxatives used, and
(6) severity of abdominal bloating

and each severity is graded by a five-point Likert scale from asymptomatic to very severe symptoms. A cut-off point of 5 is used to diagnose functional constipation, with sensitivity and specificity both at 91%. The onset and duration of constipation are important as an acute onset of symptoms is usually associated with secondary causes. Prolonged straining, unusual posture during defaecation and special manoeuvers, such as pressure on the perineum or in the vagina and digital anal evacuation, are suggestive of pelvic floor dysfunction. Assessment of lifestyle risk factors including low fiber diets and lack of physical activity and drug history is crucial. A family history of colorectal cancer should not be missed. Symptoms of endocrine and neurological diseases should be assessed if suspected. Red flag symptoms, such as per-rectal bleeding, weight loss, change in bowel habit and refractory to conservative treatment warrant early investigations. Relevant psychosocial history should also be explored because certain psychological diseases may cause constipation, while constipation itself may lead to psychological stress.

Physical examination

This is essential to identify the secondary causes of constipation. General assessment of nutrition status, body weight and pallor should be documented. Abdominal tenderness, any mass and organomegaly should be sought. Rectal examination for perianal lesion, sphincter tone and rectal mass may provide clues to the diagnosis. In addition, thyroid and neurological examination may be considered according to the clinical information obtained in the history.

Laboratory investigations

Routine investigations including blood tests, x-rays or endoscopy are not necessarily recommended for those patients without red flag symptoms.[17]

Further investigations should be considered when secondary causes are suspected or when the constipation is not responsive to conservative treatment. The initial laboratory tests may include complete blood picture, serum electrolytes, fasting glucose and thyroid function test to rule out the possibility of endocrine or metabolic causes. Other diagnostic tests can be considered for patients with associated alarming clinical features such as age over 50, per rectal bleeding, significant weight loss, family history of inflammatory bowel disease or colonic cancer, acute onset of constipation in old patients, anaemia or positive faecal occult blood test.[18] For patients with refractory constipation and symptoms suggestive of slow transit and pelvic floor problem, referral to a gastroenterologist for specialised radiologic and physiologic studies (**Table 2**) would be warranted.

Treatment

Lifestyle modification

Treatment of constipation should be guided by the causes identified. Fiber is effective in treating constipation and is considered as the initial management.[19] Increasing fiber and water intake will increase stool frequency and decrease laxative use.[20] Bran is an insoluble fiber; and an intake of 20g per day can increase frequency of bowel motion, faecal weight and decrease bowel transit time.[21] Ten to 20 minutes after breakfast, patients are advised to defaecate

Table 2. Investigations for refractory constipation

Colonic transit test	• Radio-opaque markers in capsule is swallowed by patient and has abdominal x-ray 120 hours later • Retention of > 20% of markers indicates prolonged transit (normal colonic transit is < 72 hours) • If more markers retained in lower left colon and rectum, may indicate defecatory disorder
Anorectal manometry	• To assess anal sphincter, pelvic floor and associated nerves • Absence of anorectal inhibitory reflex may indicate adult-onset or short-segment Hirschsprung's disease • High anal pressure at rest and anal pain may indicate anal fissure or spastic pelvic floor/sphincter dysfunction (anismus) • Rectal hyposensitivity may indicate neurological disorder or increased rectal capacity due to prolonged retention of stool
Balloon expulsion test	• To quantify the magnitude of additional passive forces needed to expel the balloon if spontaneous evacuation is not occurred • Useful screening test for major evacuation dysfunction
Barium defecography	• To assess functional/anatomic evacuation of defecation
Dynamic electromyography of anal sphincter	• To assess pelvic floor spasticity

because spontaneous colonic motility is greatest during this period. The effect of exercise on constipation is still controversial. Moderate physical activities may result in a lower prevalence of constipation.[22] A lifestyle modification programme with increasing exercise, fluid and fiber intake is associated with reduction in use of laxative and improvement in quality of life.[23] However, another study revealed that increasing physical activity may not improve the symptoms of constipation but it may improve overall well-being instead.[24] In general, exercise should be recommended as it improves quality of life and has various health benefits.

Pharmacological treatment for functional constipation can be given if lifestyle modification fails. The aim is to help patients to achieve regular bowel habit. World Gastroenterology Organisation[25] and American Gastroenterological Association[26] recommend the use of supplementary fiber or bulk laxative as the first line of pharmacological treatment. Adding osmotic laxative can be considered if the response to the initial therapy is suboptimal and stimulant laxative can be used as the next step. Newer medications, for example 5-HT_4 receptor agonist, may be used by gastroenterologists to treat constipation if the patient does not respond to laxatives. A Canadian consensus group[27] advises a gradual increase in dietary fiber or fiber supplement as the initial step followed by osmotic laxative. Stimulant laxative is regarded as rescue medication. The Italian Association of Hospital Gastroenterologists and Italian Society of Colo-Rectal Surgery[28] share similar recommendations on the treatment algorithm of functional constipation as the above organisations. In patients with symptoms suggestive of pelvic floor dysfunction, biofeedback is the first choice of treatment. For those having functional constipation with poor treatment response, colonic transit test can be arranged and surgical treatment can be considered if refractory slow transit constipation is confirmed. The treatment algorithm is summarised in **Figure 1**.

Conventional laxatives

Conventional laxatives including bulk laxatives, osmotic laxatives and stimulant laxatives are effective in improving stool consistency and facilitating colon motility.

Bulk laxatives

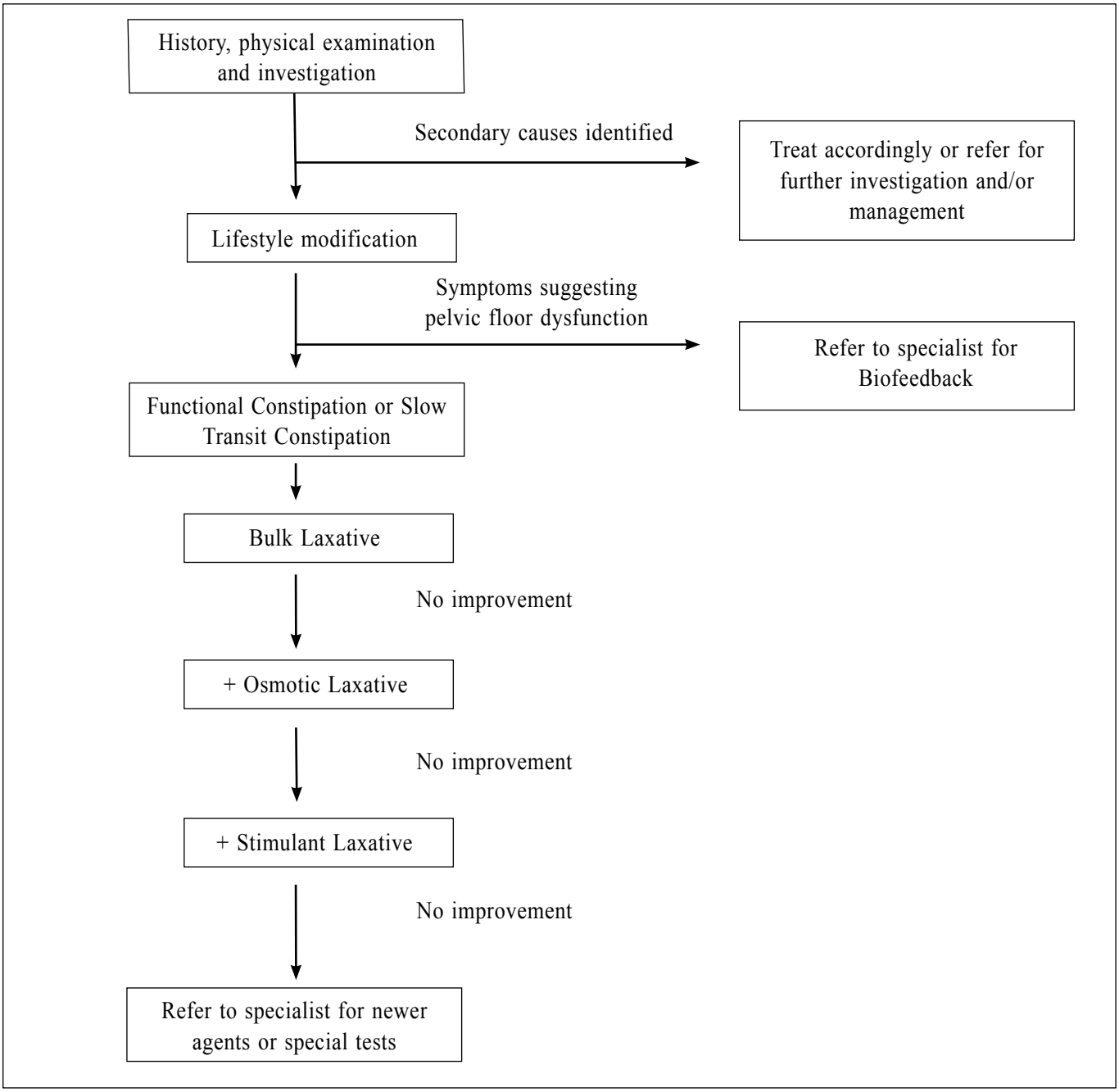
Fiber is the first line treatment for constipation. Bulk laxatives, also known as fiber supplements, should be considered if dietary modification fails, as they have

been shown in trials to be more effective than placebo in reducing symptoms of constipation and increasing the mean number of stools per week.[29] However, for patients with slow-transit time or pelvic floor dysfunction, constipation may not be improved with dietary fiber. The common side effects of bulk laxatives are abdominal distention, excessive gas production and abdominal cramping.

Osmotic laxatives

Osmotic laxatives are substances which are not absorbed or poorly absorbed by the gut in order to create an osmotic gradient and draw water into the intestinal lumen. Polyethylene glycol (PEG), lactulose and magnesium salts are commonly used in our locality. PEG is safe for patients with renal or cardiac dysfunction as it does not affect electrolytes. It is also associated with additional bowel motions per week in a meta-analysis.[30] Lactulose is a sugar-based laxative; it not only provides osmotic effect by sugar molecules itself but also acts as a substrate for colonic bacteria which produce acid metabolites for additional osmotic

Figure 1: A summary of the proposed treatment algorithm for constipation in primary care setting [25-28]



Key messages

1. Constipation is a common medical problem and may negatively impact on patients' psychological health and quality of life.
2. In clinical practice, the aetiology may be unknown in most patients, thus empirical treatment should be given after secondary causes have been ruled out.
3. Dietary modification and physical activities are the first line of management.
4. Laxatives can be considered for patients who are unresponsive to conservative treatment and newer agents can be tried if the response is suboptimal.
5. Referral for further investigations may be warranted if there are red flags, refractory symptoms or suspected secondary causes.

effect in the colon. Several old placebo-controlled trials showed that lactulose increases stool frequency.[31-33] PEG is more effective with fewer side effects than lactulose.[34] However, osmotic laxatives can lead to bloating, diarrhoea, electrolyte disturbances, volume overload or dehydration.

Stimulant laxatives

When bulk laxatives and osmotic laxatives are ineffective, stimulant laxatives can be considered. Anthraquinones, e.g. Senna, and diphenylmethanes, e.g. Bisacodyl are the commonly used stimulant laxatives. They not only increase bowel motility by stimulating the colonic mucosa nerve endings but also prevent water absorption in gut by interfering with water and electrolyte transport on the intestinal mucosa. The onsets of action for Senna and oral Bisacodyl are around 6 to 8 hours and 6 to 12 hours respectively. Suppository Bisacodyl will be effective within 60 minutes for quicker relief. Oral Bisacodyl was shown to increased stool frequency, improved stool consistency and decreased symptoms of constipation in a clinical trial.[35] However, there are potential risks of habit forming and abuse and it may cause electrolyte disturbance if used inappropriately. Possibility of intestinal mucosa nerve ending damage by stimulant laxatives had been a concern but evidence is lacking.

New pharmacological treatment modalities

Advanced pharmacological treatments for constipation had been investigated, including serotonin 5-HT_4 receptor agonist and colonic secretagogue.

Serotonin 5-HT_4 receptor agonists

Serotonin stimulates the 5-HT_4 receptors in enteric neurons to regulate bowel motility. Tegaserod was previously used for chronic constipation by increasing bowel movement, but it was suspended in the United States market since March 2007 because of the increased risks of myocardial infarction, unstable angina and stroke. Prucalopride has a higher affinity to 5-HT_4 receptors than to 5-HT_1 receptors on blood vessels. It has been shown to increase the number of complete spontaneous bowel movement, improve health related quality of life as well as patient satisfaction.[36-37] Prucalopride has been approved in Europe in 2009 as a symptomatic treatment of chronic constipation in women whom laxatives are failed to provide adequate relief.

Colonic secretagogues

Lubiprostone selectively activates intestinal chloride channels which increase fluid secretion and in turn accelerates small intestinal and colonic transit.[38] A double-blind randomised controlled trial has demonstrated its superiority over placebo in increasing spontaneous bowel movements among patients with chronic constipation.[39] Although it has been approved by the FDA in 2006, it is not yet available in Hong Kong. Another secretagogue, Linaclotide (registered in Hong Kong in November 2015), is a Guanylin receptor agonist which also induces fluid secretion in bowel lumen and has been shown to significantly reduce bowel symptoms in patients with chronic constipation.[40]

Other pharmacologicals

Probiotic that contains strains of Bifodobacterium, Lactobacillus and E Coli improves frequency of bowel opening and stool consistency in a systemic review of 5 randomised controlled trials.[41] Hemp seed pill is a Chinese herbal medication that increases bowel movements in patients with functional constipation.[42] Biofeedback is effective in managing pelvic floor dysfunction. A randomised trial showed that biofeedback improved symptoms of pelvic wall dysfunction significantly and was superior to PEG.[43] By reflecting

the function of anal sphincter and pelvic floor muscle through visual or auditory clues to patients, it facilitates them to learn to control and coordinate the pelvic floor and abdominal muscles.

Rererrals

Referral to specialist for further investigation is advised if there are red flag symptoms or standard treatments are unresponsive. Although there is no common consensus to define response to treatment, the lack of improvement despite full doses and good drug compliance after 4 weeks warrant further investigations.

Conclusions

Constipation is a common medical problem and may negatively impact on patients' psychological health and quality of life. In clinical practice in most patients, the aetiology may be unknown. Empirical treatment is advised after secondary causes have been ruled out. Dietary modification and physical activities is the first line of treatment for functional constipation. Laxatives can be considered for patients who are unresponsive to conservative treatments. Referral for further investigations may be warranted if the patients are refractory to treatments or secondary causes are suspected. ■

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What's on the web for family physicians - Dermatology and Venereology

Alfred KY Tang 鄧權恩，Loi-yuen Chan 陳來源

New Zealand DermNet

http://dermnet.org.nz/index.html

This is the website of the New Zealand Dermatological Society. Skin conditions are arranged in alphabetical order in its A-Z topic index. Apart from information for the public, there are various CME activities for physicians. Summaries and guidelines of different skin conditions are published and CME online are available. A collection of hundreds of photo quizzes on dermatological topics is available at **http://www.dermnetnz.org/doctors/quizzes**, which is ideal for family physicians who wish to have some self assessment on his own dermatology knowledge.

Hong Kong Journal of Dermatology & Venereology

http://www.hkjdv.org

Local journal officially published by The Hong Kong Society of Dermatology & Venereology and The Hong Kong College of Dermatologists. The Journal is published quarterly and indexed in EMBASE/ Excerpta Medica and Science Citation Index Expanded (SCIE). The content consists of review articles, original articles, journal watch, quiz and reports on dermatology meetings of local relevance. Abstracts and full text are available free of charge. The search engine allows users to search for keywords or author's name to locate the journal articles he is interested in.

Alfred KY Tang, MBBS (HK), MFM (Monash)
Family Physician in Private Practice
Loi-yuen Chan, MBBS (HK), MRCP (Irel), FHKCP, FHKAM (Medicine)
Specialist in Dermatology & Venereology

Correspondence to : Dr Alfred KY Tang, Shop 3A, 2/F, Hsin Kuang Shopping Centre, Wong Tai Sin, Kowloon, Hong Kong SAR, China.
E-mail:alfredtang@hkma.org

American Academy of Dermatology

https://www.aad.org/search/?k=guideline&startIndex

The American Academy of Dermatology (AAD) is one of the largest organisations of dermatologists in the world. Their website covers different aspect of dermatology with guidelines which are both practical and useful to dermatologists and family physicians. Publications of the organisation, such as the Journal of the American Adademy of Dermatology (JAAD), Dermatology World, are also available online. A section for public has information on different skin problems in an A-Z index and video library of skin conditions are also available.

Centers for Disease Control & Prevention: Sexually transmitted Diseases

http://www.cdc.gov/std/

The Centers for Disease Control and Prevention (CDC) is the leading national public health institute of the United States. This website provides a comprehensive review and up-to-date treatment regimens of various sexually transmitted diseases (STD). Current editions of publications, including the STD Guidelines 2015 are available online. CDC has also launched an mobile app, the 2015 STD Treatment (Tx) Guide app, which is an user friendly reference that brings information from the STD Treatment Guidelines and MMWR together, and features a streamlined interface for healthcare providers to access treatment as well as diagnostic information. The free app is available for Apple devices and Android devices.

Dermatopathonline.com

http://dermatopathonline.com/

This is a website on dermatopathology. Besides basic concepts in dermatopathology and normal

histology of the skin, it covers information on inflammatory conditions, tumours, morphological clues and case study. The contents are well illustrated, including differential diagnoses and clues etc. It is especially useful for those who are interested in dermatopathology.

DermQuest

https://www.dermquest.com

DermQuest is an online medical resource for dermatologists and healthcare professionals with an interest in dermatology. The DermQuest website features an extensive clinical image library, video interviews with leading dermatologists, as well as specialists opinion on current viewpoints on hot topics in dermatology, Monthly clinical case and quizzes are also available. **DermQuest Learning** is a portal of interactive, educational modules providing refresher material for residents and physicians. **Therapeutic Strategies** are designed to be a collection of easy-to-use "how-to" articles for the healthcare providers. **Practice Management** offers a series of articles designed to help build a practice that allows you to focus your time and energy on treating patients. The **DermQuest Video Library** contains footage for dermatology for residents and family physicians. These video library include interviews from recent congress meetings, and are divided into different categories - they may relate to a specific condition, procedures and treatment, surgery and cosmetics, practice management, or they may be on a general theme.■

Hong Kong Primary Care Conference 2016
"A Flourishing Community – Our Vision in Primary Care"

4 – 5 June 2016 (Saturday – Sunday)
Hong Kong Academy of Medicine Jockey Club Building,
99 Wong Chuk Hang Road, Aberdeen, Hong Kong

Message from the Organizing Committee

Hong Kong Primary Care Conference
The Hong Kong College of Family Physicians

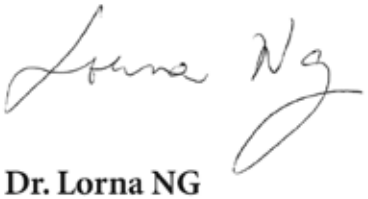
It gives me immense pleasure to invite you on behalf of the Hong Kong College of Family Physicians and 2016 HKPCC Organizing Committee to the 6th Hong Kong Primary Care Conference scheduled on June 4th - 5th 2016 at the Hong Kong Academy of Medicine Jockey Club Building, Hong Kong.

Based on its continuing success, this annual event has become a hallmark in bringing together local and international experts, health care providers including family physicians, nurses and allied health professionals to promote collaborative and networking opportunities in addressing present and future challenges in primary care.

"A Flourishing Community – Our Vision in Primary Care". This year's thought provoking theme will stimulate us to transcend beyond keeping individuals and the community healthy, to embark on the challenge of fulfilling the motto "A Life Worth Living" leading to a community that flourish. As the foundation of the 21st century health systems must be more than ever be focused in primary health care, how should we envision to reach this inspiring goal?

Aside from offering an exciting array of plenary sessions, workshops, seminars and discussion forum, this conference will continue its well-received competitions in research paper, oral, poster and clinical case presentations.

I welcome you all to yet another inspiring, educational and rewarding experience in this coming conference.



Dr. Lorna NG
Chairman, Organizing Committee
Hong Kong Primary Care Conference 2016

Hong Kong Primary Care Conference 2016
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4 – 5 June 2016 (Saturday – Sunday)
Hong Kong Academy of Medicine Jockey Club Building,
99 Wong Chuk Hang Road, Aberdeen, Hong Kong

Conference Information

Date:	4-5 June 2016 (Saturday-Sunday)
Venue:	Hong Kong Academy of Medicine Jockey Club Building, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong
Official Language:	English
Academic Accreditation:	Applications are in progress and details will be announced later.
Organizer:	The Hong Kong College of Family Physicians
Conference Secretariat:	General: Ms. Crystal Yung / Ms. Erica So Registration: Ms. Cherry Chan / Ms. Natalie Ho Scientific and QA Accreditation: Ms. Crystal Yung / Ms. Wing Yeung Exhibition & Advertisement: Ms. Teresa Liu Publication: Ms. Carmen Tong / Ms. Natalie Ho
Contact Details:	Tel No.: (852) 2871 8899 Fax No.: (852) 2866 0616 Email: hkpcc@hkcfp.org.hk
Supported by:	HKCFP Foundation Fund

Hong Kong Primary Care Conference 2016
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Scientific Programme at-a-glance

Time \ Date	4 June 2016 (Saturday)				
14:00 - 15:00	Registration and Welcome Drinks				
15:00 - 15:30	Opening Ceremony				
15:30 - 16:05	**Plenary I** *(delivered by Prof. Michael Kidd)* Flourishing Communities - How do we Achieve our Global Vision for Primary Care?				
16:05 - 16:40	**Plenary II** *(delivered by Prof. Sophia Chan)* Primary Care Development in Hong Kong				
16:40 - 17:00	Coffee Break and Poster Presentation - Part 1 #				
17:00 - 18:30	**GP with Special Interest** Musculoskeletal Disorders	**Seminar A** Clinical Updates on the Management of Anxiety Disorder	**Discussion Forum** Innovations in Community Palliative Care	**Workshop 1** Insulin Use in Primary Care	**Workshop 4 (Part 1)** Communication Skills Workshop for Consultation in Putonghua 工作坊（四）- 醫患溝通技能訓練（一）（普通話）
18:30 - 21:00	Dinner Symposium				

Time \ Date	5 June 2016 (Sunday)			
08:15 - 09:00	Registration			
09:00 - 10:15	**Workshop 2** Wound Care	**Seminar B** Dietary Approach to Management of Common Conditions in Primary Care	**Free Paper - Oral Presentation** Part 1 #	**Clinical Case Presentation Competition**
10:15 - 10:35	Coffee Break and Poster Presentation - Part 2 #			
10:35 - 11:50	**Workshop 3** Clinical Leadership	**Seminar C** Updates on Management of Chronic Hepatitis B & C	**Free Paper - Oral Presentation** Part 2 #	**Seminar D**
11:50 - 12:30	**Plenary III** *(delivered by Prof. Lam Tai Pong)* Future developments of Family Medicine in Hong Kong			
12:30 - 14:00	Lunch Symposium			
14:00 - 15:30	**Workshop 4 (Part 2)** Communication Skills Workshop for Consultation in Putonghua 工作坊（四）- 醫患溝通技能訓練（二）（普通話）			

 # Active CME/CPD points will be accreditated to presenters.

Disclaimer

Whilst every attempt will be made to ensure all aspects of the conference mentioned will take place as scheduled, the Organizing Committee reserves the right to make changes to the programme without notice as and when deemed necessary prior to the Conference.

Hong Kong Primary Care Conference 2016
"A Flourishing Community – Our Vision in Primary Care"

4 – 5 June 2016 (Saturday – Sunday)
Hong Kong Academy of Medicine Jockey Club Building, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong

REGISTRATION FORM

Title *: Prof. / Dr. / Mr. / Mrs. / Ms. **Institution *:** HA / DH / University / Private Hospital / Private Group / Solo Practice

Surname: _____ **Given Name:** _____ **HKCFP Member ID #:** _____

Occupation: Doctor / Nurse / Student / Allied Health _____ / Others _____

Contact No.: *(Office)* _____ *(Mobile)* _____ *(Fax)* _____

Address: _____

Email^: _____

Remarks:

** Please circle as appropriate.*

 # Please contact the administrative staff Ms. Priscilla Li at membership@hkcfp.org.hk for membership application.

^ Details or updates would be sent by email.

REGISTRATION			Member	Non-member
A) Conference Registration • Registration to the conference is required.			☐ Complimentary	☐ HK$850
B) Workshop and Interest Group Registration • First come first served. • Cheques will be returned to unsuccessful registrants. ****CPD application for participants in progress*				
4 June (Sat)	**17:00 – 18:30**	☐ **GP with Special Interest‡**: Musculoskeletal Disorders	☐ Complimentary	☐ Complimentary
		☐ **Workshop 1‡**: Insulin Use in Primary Care	☐ HK$250	☐ HK$450
5 June (Sun)	**09:00 – 10:15**	☐ **Workshop 2** : Wound Care	☐ HK$250	☐ HK$450
	10:35 – 11:50	☐ **Workshop 3** : Clinical Leadership	☐ HK$250	☐ HK$450
4 June (Sat) & 5 June (Sun)	**17:00 – 18:30 Part I** **14:00 – 15:30 Part II**	☐ **Workshop 4‡**: Communication Skills Workshop for Consultation in Putonghua (工作坊 (四) - 醫患溝通技能訓練) (普通話)	☐ HK$250	☐ HK$450

‡ GP with Special Interest, Workshop 1 and Workshop 4 are simultaneous sessions. Please register for either one only.

COMPLIMENTARY SYMPOSIA *(Please tick as appropriate.)*	COMPLIMENTARY TRANSPORTATION *(Please tick as appropriate.)*	
☐ **Dinner symposium** on 4 June (Sat)	**4 June (Sat)**	☐ Admiralty → HKAM: **14:00** ☐ HKAM → Admiralty: **21:15**
☐ **Lunch symposium** on 5 June (Sun)	**5 June (Sun)**	☐ Admiralty → HKAM: **08:15**

PAYMENT METHOD

Please send completed registration form with crossed cheque(s) payable to "**HKCFP Education Ltd**" to the Conference Secretariat. Please use **SEPARATE** cheques for payment of membership fees (if applicable), conference and workshop(s) registration fees.

CONFERENCE SECRETARIAT

Registration:	Ms. Cherry Chan / Ms. Natalie Ho	**Tel:**	(852) 2871 8899
CME / CNE:	Ms. Crystal Yung / Ms. Wing Yeung	**Fax:**	(852) 2866 0616
Others:	Ms. Erica So / Ms. Teresa Liu / Ms. Carmen Tong	**Email:**	hkpcc@hkcfp.org.hk
Address:	HKCFP, Room 803-4, 8/F, HKAM Jockey Club Building, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong		

Signature: _____ Date: _____

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Full Paper Competition

We cordially invite your participation in the **Full Paper Competition** of the HKPCC 2016. The Competition is a long-standing tradition of HKCFP for promoting and recognizing well-designed, innovative research, which bears potential impact on clinical practice or development of primary care. This year, we will have TWO Awards:

AWARDS

Best Research Paper Award
Best Trainee Research Paper Award

The HKPCC 2016 Organizing Committee will invite renowned scholars as judges to review the participating papers.
Each awardee will be presented **HK$1,000** cash prize and a **certificate** at the opening ceremony of the HKPCC 2016.

ELIGIBILITY AND AUTHOR GUIDELINES

To be eligible for participation in the Full Paper Competition, **the first author of the paper must meet ALL of the following conditions:**

(1) The author must be a member of the HKCFP and register at the Conference;
(2) The author completes the majority of the research and writing for the paper;
(3) The author has not used the paper to apply for other awards.

The participating paper should be a full-length article. It should include a structured abstract of no more than 250 words. The text should contain 2,000 - 3,000 words, organized as **INTRODUCTION, METHODOLOGY, RESULTS and DISCUSSION**. It should consist of no more than 5 illustrations (tables/figures). Only electronic versions are accepted. The full paper should be typed in 12 point size in Microsoft Word format.

For **Best Trainee Research Paper Award**, additional eligibility applies:

(1) The first author must be a trainee of HKCFP or within 3 years of completion of vocational training;
(2) For higher trainees who are submitting their Exit Examination research project for this Competition, they must have submitted their project to the Specialty Board and have passed the research segment of the Exit Examination.

AWARD SELECTION CRITERION

Each paper will be evaluated against the following criteria:

(1) Academic rigor of the paper (e.g. originality, methodology, organization and presentation).
(2) Relevance and impact to primary care (e.g. importance of the topic and the impact of the findings on the practice or development of primary care).

HOW TO SUBMIT

Please download the Full Paper Submission Form from College's Website http://www.hkcfp.org.hk.

By Email – Attach the full paper with the completed "Full Paper Submission Form" and send to hkpcc@hkcfp.org.hk. *All entries will be acknowledged on receipt.*

For enquiry, *please do not hesitate to contact our conference secretariat, Ms. Carmen Tong or Ms. Wing Yeung, at 2871 8899 or by email hkpcc@hkcfp.org.hk.*

SUBMISSION DEADLINE

31 March 2016 (Thursday) for Best Research Paper Award
15 April 2016 (Friday) for Best Trainee Research Paper Award

"We look forward to receiving your research articles!"

Hong Kong Primary Care Conference 2016
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Free Paper Competition

Apart from the Full Paper Competition, we also have the **Free Paper Competition** which sees many pioneering research ideas, pilot studies and thought provoking case studies, commentaries and stimulating discussions. The Free Paper Competition is one of the highlights of the HKPCC and can be in the form of **ORAL** presentation or **POSTER** presentation. We look forward to your active participation in the Free Paper Competition.

AWARDS

Best Oral Presentation Award.
Best Poster Presentation Award.
Both the winners will receive
HK$1,000 cash prize and a **certificate**.

AUTHOR GUIDELINES

(1) The presentation of the free paper can be in the form of **ORAL** presentation or **POSTER** presentation. (The details of oral or poster presentation will be announced later.)
(2) Electronic version is preferred for abstracts. Abstract should be typed in 12-point size in Microsoft Word format. Handwritten abstracts will NOT be accepted.
(3) The abstract must not exceed 250 words, and should be organized as follows: **TITLE, AUTHOR(S), INTRODUCTION, METHOD, RESULTS and DISCUSSION**. Commentaries and discussion papers need not follow the above format apart from the TITLE and AUTHOR(S).
(4) Authors' full names and affiliations must be specified. Surnames should be printed in bold.
(5) All abstracts must be submitted in English. All accepted abstracts must be presented in English.

ELIGIBILITY REQUIREMENTS

To be eligible for participation in the free paper presentation, **the first author of the paper must meet ALL of the following conditions:**

(1) The author must register at the Conference;
(2) The author completes the majority of the research and writing for the paper
(3) The author has not used the paper to apply for other awards.
(4) The Organizing Committee will have the right of final decision on the acceptance of an abstract.
(5) Only **ONE** designated presenter can present the accepted abstract. Co-authors are welcome to register and attend the session of the conference.

AWARD SELECTION CRITERIA

For the **Best Oral Presentation Award**, each oral presentation will be evaluated against the following criteria:

(1) Quality and thoroughness of research methods used to generate findings;
(2) Quality of visual presentation if applied;
(3) Relevance, innovation and impact to primary care.

For the **Best Poster Presentation Award**, each poster will be evaluated against the following criteria:

(1) Quality of visual presentation (poster layout);
(2) Quality and thoroughness of research methods used to generate findings;
(3) Relevance, innovation and impact to primary care.

HOW TO SUBMIT

Please *download the Abstract Submission Form from College's Website* http://www.hkcfp.org.hk.

By Email – Attach the abstract with the completed "Abstract Submission Form" and send to hkpcc@hkcfp.org.hk. *All entries will be acknowledged on receipt.*

For enquiry, *please do not hesitate to contact our conference secretariat, Ms. Carmen Tong or Ms. Wing Yeung, at 2871 8899 or by email hkpcc@hkcfp.org.hk.*

SUBMISSION DEADLINE

31 March 2016 (Thursday)

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Clinical Case Competition

Following the success of the Clinical Case Presentation/Competition in past HKPCCs since 2012, the Organizing Committee of the upcoming Hong Kong Primary Care Conference is honored to organize the competition again this year!

The Presentation can be in the form of individual or group presentation with up to 5 people per group. The details of the Presentation are listed as below. We look forward to your active participation in the Clinical Case Presentation.

COMPETITION OUTLINE

(1) Target participants: Doctors, nurses, physiotherapists, clinical psychologist, occupational therapists, dietitians, podiatrists and any other allied health professionals.
(2) Presentation materials: Any kinds of clinical cases relevant to primary care.
(3) Presentation format: In the form of individual presentation, role-play, drama or any other possible format for 15 minutes. Either individual or group presentation with up to 5 people per group is accepted.
(4) The Organizing Committee has the right for final decision on acceptance of the cases for the presentation.

AWARDS

CPD/ CME / CNE points will be granted to all speakers and group members.

The Best Presentation Award winner will receive **HK$1,000** cash prize and a **certificate**.

ELIGIBILITY REQUIREMENTS

To be eligible for participation in the Clinical Case Presentation Competition, the presenter must meet ALL the following conditions:

(1) The presenter must register at the Conference.
(2) The presentation should be the original work of the participants.
(3) The candidates should have submitted their presentation proposals prior to the Conference.

AWARD SELECTION CRITERIA

Each presentation proposal should state the theme, and outline of presentation, format (e.g. role-play, drama, video), language and rundown.

Each presentation will be evaluated against the following criteria -

(1) Quality of presentation.
(2) Content of presentation: Relevance and impact to primary care, presentation skills and time management, enhancement to patient care in daily practice and useful take home message.

HOW TO SUBMIT

- *The entry should be submitted together with presentation proposal and the completed entry form (downloadable from College website* http://www.hkcfp.org.hk), and emailed to "hkpcc@hkcfp.org.hk". *All entries will be acknowledged on receipt.*
- *The presentation material should be submitted prior to the Conference* ***on or before 20 May 2016 (Friday)***.
- *If you have any questions concerning the "Clinical Case Presentation", please contact our conference secretariat, Ms. Carmen Tong or Ms. Wing Yeung, at 2871 8899 or by email hkpcc@hkcfp.org.hk.*

ENTRY FORM, PRESENTATION PROPOSAL SUBMISSION DEADLINE

8 April 2016 (Friday)

PRESENTATION MATERIAL SUBMISSION DEADLINE

20 May 2016 (Friday)

Hong Kong Primary Care Conference 2016
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The Organizing Committee has the honour of inviting many prestigious speakers at the upcoming HKPCC 2016. We will be introducing our honourable speakers in the coming issues of our announcements.

Workshop 1

Insulin Use in Primary Care

Dr Chow Wing Sun

M.H.A. (New South Wales), F.R.C.P. (Edinburgh), F.H.K.A.M. (Medicine), F.H.K.C.P., M.R.C.P. (U.K.), M.B.B.S. (H.K.)
Deputy Director, KK Leung Diabetes Centre
Consultant, Division of Endocrinology, University Department of Medicine

Dr Tse Tsui Yee, Emily

FHKAM (Family Medicine), FHKCFP, FRACGP, MBBS(HK)
Associate Consultant in-charge of Kennedy Town Jockey Club General Out-patient Clinic
Sai Ying Pun DM Joint Clinic Co-ordinator from 2008-2015

Ms Wong Ka Chee Karen

M. Soc.Sc. (Counselling);
B. Nsg.; RN
Advanced Practice Nurse (Diabetes Nurse)
KK Leung Diabetes Centre, Department of Medicine, Queen Mary Hospital

Type 2 diabetes mellitus is a growing public health problem, and poses a heavy economic burden worldwide. Progressive pancreatic beta cell dysfunction is a major pathophysiological characteristic of type 2 diabetes, with patients gradually requiring additional antidiabetic agents and, ultimately, insulin therapy.

According to the recommendation of the American Diabetes Association, add-on basal insulin therapy is the most convenient initial insulin regimen for patients with type 2 diabetes. While there is evidence for reduced risk of nocturnal hypoglycaemia with basal insulin analogs, patients without history of hypoglycaemia or severe hypoglycemia at night time may use intermediate acting insulin safely at a lower cost.

With progressive decline in pancreatic beta cell function, A1c may remain above target despite basal insulin being titrated to achieve an acceptable fasting blood glucose level. The remained options for achieving the glycaemic target would include adding mealtime insulin, consisting of one to three injections of short or rapid-acting insulin before eating, transitioning from basal insulin to twice-daily premixed insulin, or commencing the patient on a glucagon-like peptide 1 (GLP-1) receptor agonist.

The pros and cons of the above insulin regimens, and the practical tips for its initiation and titration will be discussed at our workshop.

Insulin Injection in Out-patient Setting

The advancements in different aspects of insulin therapy have been encouraging over the past decades. Various types of insulin and regimens would be used to meet individual's need. Besides, the improvement in insulin delivery system and injection devices could enhance convenience and hence patients' acceptance for insulin therapy.

During the workshop, barriers to insulin initiation, practical issues regarding different insulin injection devices and technique would be explored. Self-Monitoring of Blood Glucose (SMBG) or Continuous Glucose Monitoring (CGM) is useful to evaluate the efficacy of the insulin regimen, enhance self-care and dosage adjustment. Moreover, problem shooting for insulin therapy and patient's adherence problem would also be discussed.

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Seminar A

Clinical Updates on the Management of Anxiety Disorder

Dr John So

MBBS(HK), MRCPsych, FHKCPsych, FHKAM (Psychiatry)
Honorary Clinical Assistant Professor, Department of Psychiatry, University of Hong Kong

Doctor John So is a private practice psychiatrist. He graduated in The University of Hong Kong in 1995 and became the fellow of The Hong Kong College of Psychiatrists and HKAM (Psychiatry) in 2005. He continued his study in the field and received the Best Part III (Dissertation) Candidate Award from Hong Kong College of Psychiatrists, Central Academic Course in 2004. He has been the Honorary Clinical Assistant Professor of Department of Psychiatry, University of Hong Kong since 2006.

"A Life Worth Living" leading to a community that flourish. This is indeed a very important motto to keep in mind. Anxiety spectrums disorders, on their own or as co-morbid conditions, have never failed to mar people's quality of life and undermine the expression of their potentials. Within the maze of available treatment options, doctors may find clues from the existing treatment guidelines. As one plods through the latter, it is worth understanding the evidence behind.

This seminar is a clinician's attempt to **summaries the clinical guidelines on Anxiety Disorders, and the evidence for the suggested antidepressants and other pharmacological interventions** for first line and augmented treatments.

Dr Sammy Cheng Kin-wing

Ph.D in Clinical Psycholgy(CUHK), MSocSc in Clinical Psychology (HK), B.Soc.Sc. (HK)
Registered Clinical Psychologist, Hong Kong Psychological Society
Immediate past President, Hong Kong Psychological Society (2014-15)
Honorary Assistant Professor, LKS Faculty of Medicine, University of Hong Kong

Dr. Cheng has started working as a clinical psychologist since 1994. He currently works in private practice. He was the president of Hong Kong Psychological Society (HKPS) from 2014 to 2015. Dr. Cheng has multiple publications of books and scientific papers on his field. He is currently the member of Advisory Panel of Clinical Psychology Programme (M.So.Sc,) of Department of Psychology, and the Honorary Assistant Professor of Faculty of Medicine, Family Medicine Unit of the University of Hong Kong.

Five-factor model for anxiety disorders: An evidence-based pragmatic psychological treatment.

In Hong Kong, it is estimated that the prevalence of anxiety disorders is over 10%. While psychological treatment such as cognitive behavioral therapy (CBT) has been well recognized as an effective intervention for various kinds of anxiety disorders, still a simplified conceptualization of CBT for anxiety disorders is needed for an efficient delivery of training to clinicians and treatment to patients. The present brief seminar is aimed to: (1) depict the 5-factor model that allows the clinicians to have an **evidence-based and pragmatic conceptualization for different anxiety disorders**; (2) introduce the **specific treatment strategies for anxiety disorders** in the model; (3) **illustrate the application of these strategies on cases with various anxiety disorders**.

Hong Kong Primary Care Conference 2016
"A Flourishing Community – Our Vision in Primary Care"

4 – 5 June 2016 (Saturday – Sunday)
Hong Kong Academy of Medicine Jockey Club Building,
99 Wong Chuk Hang Road, Aberdeen, Hong Kong

GP with Special Interest – Musculoskeletal Disorders

Speakers & teaching faculties

Dr. Andrew Ip [Chief Speaker], Dr. Chan Kwok Wai, Dr. Stanley Lam, Dr. Ngai Ho Yin, Dr. Ricky Wu, Dr. Au Chi Lap, Dr. Wong Yuk Tak, Dr. Chan Ying Ho

The Hong Kong Institute of Musculoskeletal Medicine (HKIMM) is a non-profit making organization whose long term objective is to promote the education and research in the science and art of musculoskeletal medicine for the ultimate benefit of the public. The missions of HKIMM are to disseminate knowledge and skill of MSK medicine, to encourage and support clinical research, to co-ordinate resources and efforts in teaching of this discipline and to promote the discipline among the public. HKIMM regularly organizes seminars, training activities, certificate courses and fellowship examinations for their members.

Dr. Andrew Ip graduated from University of Hong Kong in 1980. He obtained fellowship of HKCFP and RACGP in 1991. He became a fellow of HKAM (Family Medicine) in 1995. He completed the Master program of Sports and Exercise Medicine of University of Bath in 2006 and the Postgraduate Diploma in Musculoskeletal Medicine of University of Otago in 2008. Dr. Ip is Past President of the HKCFP. He is now the President of HKIMM. He is appointed Honorary Clinical Associate Professor of CUHK.

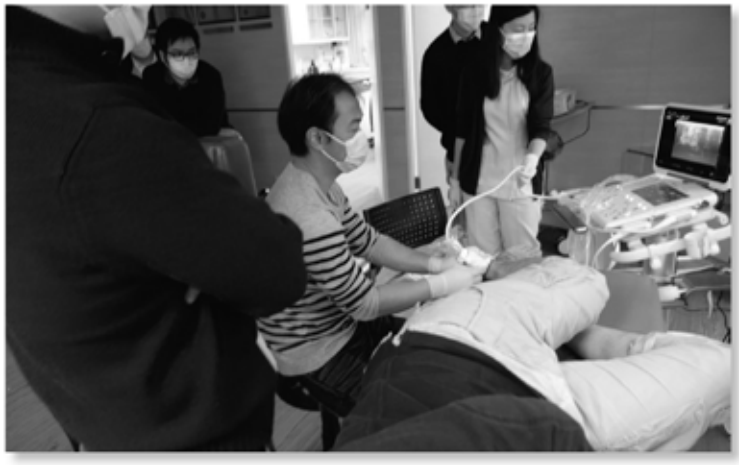
Musculoskeletal disorders are frequently encountered in primary care settings. Patients with musculoskeletal disorders may experience significant comorbidities due to pain and dysfunction. More could be done in the treatment plan to alleviate pain and suffering.

MSK Medicine is an important and developing medical discipline that addresses the pain and dysfunction of the musculoskeletal system that are caused by defective biomechanics due to

- poor posture
- repetitive stains
- injuries
- degenerations and
- deformities

Musculoskeletal Treatment is based on current biomedical and psychosocial knowledge with emphasis on the restoration of body biomechanics, functional rehabilitation and pain management.

This interest group activity is conducted by the teaching faculties of the Hong Kong Institute of Musculoskeletal Medicine (HKIMM), with Dr. Andrew Ip (President of HKIMM) being the chief speaker, followed by demonstration by the teaching faculties and hands-on practice of various skills **such as manual skills, diagnostic ultrasound and therapeutic exercise prescription.**



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References: [DEL1366] Del Prato S, et al. Diabetes Obes Metab. 16: 1239–1246, 2014. [WHI13] White WB, et al. N Engl J Med 2013; 369: 1327–1335.

*SU: sulphonylurea †ACS: acute coronary syndrome

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