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Editorial

2018 is the AHKDN ten year anniversary. In China proverb「十年樹木，百年樹人」 "Ten years to grow a tree but a hundred years to nurture people" . Therefore, we should learn in advance. The decade is worth to celebrate. This edition of newsletter focuses on Diabetes Eye Care. Let us treasure this opportunity to learn from our expert to share their knowledge and experience regarding the management and the care for our diabetic patients.

Best wishes to you all in the year of the Dog.

Prevention of Diabetic Retinopathy

Dr. CHOI Cheung Hei
Deputy Chief of Service
Department of Medicine
Queen Elizabeth Hospital

Introduction

Diabetic retinopathy (DMR) is one of the commonest neurovascular complications in both type 1 and type 2 diabetes, and unfortunately is also the most common cause of blindness in people between 20 to 74 years old. Systemic review and meta-analysis from different countries showed that the prevalence of DMR is around 35.4% overall and 7.5% for proliferative DMR (PDMR). Epidemiological studies revealed that in general, hyperglycemia, nephropathy, poorly controlled hypertension, hyperlipidemia, family history and pregnancy for type 1 diabetes are common risk factors. The risk of blindness increases significantly if patients develop diabetic macular edema (DME), retinal detachment and pre-retinal or vitreous hemorrhage. As the old wisdom teaches us that 'prevention is always better than cure', our most important tasks are the prevention of DMR development and progression, by means of early identification of susceptible patients, early risk factors intervention, and early referral to ophthalmologist.

What can we do now?

A. Active screening

The first thing we need to educate our patients is that DMR does not have any symptoms until late stage, that's why active screening is so pertinent. Our patients should understand the importance of self-screening of visual acuity (e.g. Snellen VA chart) and visual distortion (e.g. Amsier grid test), and report to us immediately for any significant changes, so that we can have timely referral to ophthalmologist for immediate treatment. Regarding to active screening by fundi examination or photography, two very heat topics arouse much interest recently are 1) how frequent for DMR screening are cost-effective? And 2) can we rely on artificial intelligence to read the retinal photos? Different studies including the DCCT/EDIC research group and the Liverpool ISDR group concluded that individualized schedule for DMR on the basis of patient's characteristics are more cost-effective than fixed screening schedule for all patients. For example, the DCCT/EDIC research group proposed that patients with T1DM should have fundi screening every 4 years if they are free of DMR but every 3 months if they have already developed severe non-proliferative DMR. Recently, with the uprising of artificial intelligence (AI) in almost all fields, some researcher also make use of the self-learning abilities of AI design and test the precision of recognizing abnormal retinal photos. Studies showed that after feeding in large numbers of retinal photos with different degrees of retinopathy, the computer can achieve very good precision on reading the new patient's retinal photos, almost equal to the precision obtained by the trained healthcare workers. I think in the foreseeable future, AI can be used in order to shoulder off part of our manpower problems with ensured reasonable accuracy.

B. Risk factors management: glucose, blood pressure (BP) and lipid control

1. Glycemic control and DMR

I am sure you all know the classical long term study of DCCT and UKPDS. In general, these studies demonstrated that better glycemic control as reflected by lowering of HbA1c would decrease significantly the development and progression of DMR and macula edema, and prevent blindness.

One percent decrease of HbA1c would lead to 35% decrease of DMR development; 15 to 20% decrease of DMR progression; 25% decrease of vision threatening DMR; 10 to 25% decrease of DME development; 30% decrease of laser treatment; and 15% decrease of blindness.

One most updated meta-analysis had been published few months ago in Lancet, in which the authors obtained individual participant data from four randomized controlled trials with quite heterogeneous T2DM patients, and showed that more intensive glucose control could improve the primary eye outcome and probably also reduce the macula edema and cataract extraction. Subgroup analysis showed that the protective effect was more significant in men.

With the advances of continuous glucose monitoring, we can now examine the effects of glucose variability more precisely. People now suspect that the variability is closely linked to complications like DMR and as expected more and more papers will be published in this topic in near future, in which this may become a good target for DMR prevention.

One common and interesting question is whether early glucose control reduces DMR in future, so called the legacy effect as found in macrovascular disease prevention. In the famous China Da Qing study, 6 years of intensive lifestyle modification in patients with impaired glucose tolerance reduced the development of DMR over a 20 years period. In the post-hoc analysis of Swedish Obese Subject study, bariatric surgery in obese patients was associated with reduced risk of microvascular complications including DMR in all subgroups, but the greatest relative risk reduction was observed in patients with pre-diabetes at baseline. More importantly, the risk was reduced regardless of whether patients progressed to DM or not at 15 years. So there is plenty of evidence to show that early glucose control by whatever means do help in the prevention of DMR.

Another common question is whether new DM drugs are better than the old one. Recently there are two important studies on the new class of drug GLP-1 agonist, both semaglutide (SUSTAIN study) and liraglutide (LEADER study) significantly improved glucose control and cardiovascular and renal outcomes. The problem is that in the SUSTAIN study, semaglutide significantly increased retinopathy with hazard ratio of 1.76, and in LEADER study, liraglutide also showed slight non-significant increase of retinopathy. Whether this is by chance, or related to rapid glucose control like in pregnancy that may worsen the eye transiently or other mechanism, we don't know yet. We have to keep an eye on this and use this drug very cautiously in patients who already have severe DMR. This adverse effect is not observed in other new class of drugs like SGLT2 inhibitor or new insulin analogues.

In summary, regarding the relationship between glycemic control and DMR prevention, better and early glycemic control is still of prime importance, glucose variability may also play a part. There may be some adverse signal for GLP1 agonist which we need to keep an eye on it.

2. BP control and DMR

In recent Cochrane review, lowering of BP below 140 mmHg can reduce DMR development modestly (RR 0.80) but only borderline effect on progression (RR 0.88). The effects of individual drug are quite controversial. Although in Network meta-analysis, ACEI seems to be better than the others in preventing DMR progression, the superiority is not definite statistically. On the other hand, ACEI is better than CCB on inducing significant DMR regression.

3. Lipid control and DMR

In general, meta-analysis showed that hyperlipidemia is associated with DME but not DMR. Interestingly, both the FIELD and ACCORD-EYE studies showed that fenofibrate, a PPAR alpha agonist used to lower down triglyceride, can have beneficial effects on eyes, especially for those with high triglyceride at baseline. It had been written down in different international guidelines that fenofibrate should be considered in patients with significant DMR.

So beyond glycemic control, strict BP control below 140/90 is desirable, ACEI may be considered in high risk patients even if they are normotensive, just like in the prevention of nephropathy. Also we may consider adding fenofibrate in patients with high risk for DMR especially with high triglyceride level.

What can we do in future?

A. Integrated personal 'omics' profile for precision medicine

In clinical practice, occasionally we encounter some T1DM and T2DM patients with quite good HbA1c (<6.5%), BP and lipid control, but still develop significant DMR, and the unfathomable question from our patients is 'why me'?

We come to a rapid developing field: personalized medicine. The idea is that with better understanding

of the pathophysiology and the advances of technology, every patient can be further categorized by means of his/her special characteristics, some people call them the integrated personal 'omics' profile (iPOP). The four pillars of personalized medicine (or the iPOP) are the study of genomic, epigenetic, metabolomic and microbiomic. Hopefully we can use the data to determine very precisely which patients are at high risk and the response to different treatment as well.

Different genetic variants have been statistically found to be linked to DMR, like the UCP1 and UCP2 polymorphism. At this juncture, it is still premature to say that any one of them will be highly predictive, but with the advances in GWAS and in this big data era, new information in this area may eventually prove to be useful in clinical practice.

The other rapid evolving field is epigenetic modification, particularly microRNA. For example, researcher found that miRNA 181b can improve insulin resistance by blocking PHLPP2 and hence improve glucose uptake in adipose tissue. Other miRNA relevant to DMR, like overexpression of miRNA 200b normalized VEGF expression in the eye and prevent glucose induced increase permeability and angiogenesis in rat DMR model.

Another area is metabolomics, by studying different combination and dynamic changes of amino acids and protein in different body fluids and even in different cells, we can estimate the risk of DM and hopefully DMR in future.

Last but not the least is the study of microbiome. Our GI colleagues are very excited and skillful in using feces to treat diseases like Clostridium difficile infection and inflammatory bowel diseases. Actually you can sell your feces in good terms through the internet provided that you are healthy. In fact in animal study, introducing some engineered strain of microbiome in obese mice can increase metabolic rate with pronounced loss of adiposity. We have to see in future whether this is also useful in preventing complication like DMR.

B. New preventive measures

Intravitreal injection of anti-VEGF is now the mainstay of treatment of not only DME but also significant proliferative DMR. Different topical agents like topical somatostatin, brimonidine, and GLP-1 agonist etc are now under systemic and robust investigation through large institution like the EUROCONDOR, hoping to provide adequate neuroprotection and hence to prevent the development of DMR. Dietary marine omega-3 fatty acids is shown to have protective effect on middle-aged and older individuals with T2DM in the PREDIMED trial, but whether this can be translated into clinical practice requires further investigation.

DM nurses play the pivotal role on preventing DMR

1. Education should be provided to every patient from the very beginning, especially to increase their awareness that DMR is asymptomatic even in quite late stage, and therefore regular self-screening and active screening provided by us are important.
2. We need to identify those patients who have higher risk of developing DMR, e.g. poor glycemic and BP control and those with significant family history etc and provide them with more vigilant monitoring.
3. We must make sure that patients with significant DMR should have timely referral to ophthalmologist for early intervention and regular follow-up.
4. We need to take this opportunity to screen other microvascular and macrovascular complications since they are more prevalent in patients with severe DMR.
5. We may need to consider screening the family members of those patients who have severe DMR.

Conclusions

Our DM nurses play the pivotal role of preventing DMR development and progression of our T1DM and T2DM patients. No patient should be exempted from good education, regular screening and appropriate treatment of glucose, blood pressure and lipid. Hopefully in future, we can have better tools to identify and predict high risk patients and provide even more personalized prevention and treatment.

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8th AHKDN AGM Outstanding Achievement Award

A Structured Exercise Program for Pakistani People with Diabetes: a pilot

Ms Ng Mei Po
(Advanced Practice Nurse in Diabetes, United Christian Hospital)



Introduction

Diabetes is one of the top ten killers in Hong Kong (Department of Health, 2015). Type 2 diabetes, accounting for over 95 percent of diabetes cases in Hong Kong, is associated with an increased risk of premature mortality, of which cardiovascular disease (CVD) is the most common cause of death (Emerging Risk Factors Collaboration, 2011). Ethnic minority constitutes a risk factor for Type 2 diabetes as well as greater risk for mortality (Sheehy, Pandhi, Coursin et al., 2011). Indeed, CVD is one of the top three killers in Hong Kong, of which many of such deaths are associated with diabetes (Department of Health, 2015).

South Asians are at an increased risk of CVD compared with Caucasian, which may be related to their low level of physical activity and high body weight (Joshi, Islam, Pais., et al, 2007; Samad, Fatima & Asma, 2007). Indeed, CV risk factors increase with higher waist-hip ratio and obesity (Forouhi, Sattar, Tillin, McKeigue & Chaturvedi, 2006). Physical inactivity is more prevalent among South Asian population (Kumar, Meyer, Wandel, Dalen & Holmboe-Ottesen, 2006; Tremblay, Byran, Perez, Ardern & Katzmarrzyk, 2006). International research shows that physical inactivity, central obesity and prevalence of diabetes of South Asians are closely related (Gupta & Brister, 2006); and that factors such as lacking knowledge about the health effects of physical inactivity, socioeconomic status, language barriers and religious beliefs are related to the physical inactivity behavior in South Asians with diabetes (Renzaho, Mellor, Boulton & Swinburn, 2010; Caperchion, Kolt & Mummery, 2009).

Research with Hong Kong Pakistani patients with diabetes (PPD) is scant. The literature search identified only one published study. It shows that Hong Kong PPD often have higher HbA1c levels and lower high density lipid levels (Chen & Chan, 2014). However, there a lack of comprehensive diabetes management strategy for ethnic minorities in Hong Kong. Among the South Asian patients attending diabetes care and education in the writer's work place, eighteen are Pakistani.

The writer had participated, in 2011, in a multidisciplinary team to provide a dialogue-based group education program to a group of PPD. An evaluation of the program showed that these PPD valued diabetes education, enjoyed group activities and would like to extend the dialogue-based program to include other components such as physical exercise (Ng, Cheung, Chan et al., 2013). The writer considered it as her professional responsibility to identify and fill service gaps. Therefore the writer, after obtaining support and approval from her nursing and medical colleagues, initiated and implemented the following program to meet the expressed needs of this group of PPD.

Aim and objectives

The writer aimed to develop and pilot a structured exercise program with a view to lowering the risk of CVD of PPD. Specifically this initiation has four objectives:

(1) To develop a culturally relevant exercise program.
(2) To increase participants' physical activity.
(3) To evaluate the impact of the exercise program on participants' physical (body weight, body mass index, systolic an diastolic blood pressure) and biochemical (HbA1c and lipid profile) measurements.
(4) To assess participants' perceptions of the program.

Methods

Social cognitive theory (SCT) has been acknowledged as one of the leading health behavior change theories to explain and predict changes in physical inactivity (Marcus, King, Clark, Pinto, & Bock, 1996; Keller, Fleury, Gregor-Holt & Thompson, 1999). SCT-based programs to enhance physical activity behavior may include these strategies: providing opportunities and social support, promoting mastery learning through skills training and approaching behavior change in small steps, providing opportunities for goal setting and training in problem solving, and correcting misperceptions and presenting outcomes that have functional meaning (Marcus et al., 1996; Keller et al.,1999). These SCT-strategies were adopted in development of the exercise program.

Because the writer and her colleagues, apart from anecdotal evidence accumulated from clinical experience, have little knowledge of the physical inactivity

behavior in PPD, a three-stage approach in the development of the program was adopted.

The first stage was a need assessment survey to better understand how to positively influence their physical activity behavior. All PPD were invited to participate to identify their usual physical activity habit, including the duration, frequency, intensity, kind of exercise, any preferences and barriers to perform exercise when they attended follow up in the Centre. To minimize language and culture barriers, we employed male and female interpreters to assist data collection and the exercise program with male and female PPD, respectively.

All PPD expressed that they seldom exercised. For the male PPD, they were employed as manual workers and found it tiring to do physical exercise apart from work. But they would like to perform physical activity for muscular strengthening and strong looking. For the female PPD, they were all staying at home as housewife. They found themselves busy with household chores and found physical activity as a luxury. It was also a cultural taboo to exercise outdoors with onlookers or exercise together with male in the same room. However, they would like to perform physical activity to shape up their female figure. All PPD expressed their preference to exercise in a group setting. Moreover, it is a cultural taboo to perform any physical exercise during Ramadan, a major festival, in which Pakistani people keep fasting during daytime for a month. Most PPD do not have sport shoes. Male patients wear leather shoes and female patients wear sandals.

The second stage was the design of the exercise program based on the need assessment. Two certified physical trainers (1 male and 1 female) were employed to design the content of the exercise program with the writer. The program had four sessions three month apart lasting for nine months. Individualized exercise regime was designed for each of the PPD according to their physical ability and preference to maximize their tolerance and adherence. Four and three exercise sets were designed for male and female PPD, respectively. These exercise sets were recorded in an exercise record book for PPD as a take-home tool in the first session. The content of the exercise record book included the information on steps of each of the exercise sets, healthy exercise tips, the latest body weight, the ideal body weight, HbA1c and blood pressure level. PPD were expected to fill out pre- and post-exercise blood glucose level, achieved exercise pattern in the last 3 months, difficulty, any solutions to difficulty, and support resources in the book. They are reminded to bring back the book for review in every session. Male and female PPD had their sex specific record book.

The third stage was the implementation. PPD were recruited to join the program taking place at the Centre. The schedule of the four sessions was 28/7/2015, 20/10/2015, 19/1/2016 and 19/4/2016. Although PPD had gained the knowledge about benefits of physical activity including weight control and tapering CVD risk when they attended the dialogue-based program in 2011, the knowledge was reiterated again upon invitation. Sixteen PPD agreed to join.

PPD were separated into male (N = 8) and female (N = 8) group with their respective sex-matching physical trainers and interpreters. They met every 3 months before medical consultation. Each of the four sessions lasted for 60 to 90 minutes.

At the beginning of each session, the writer performed physical assessment. In addition, in the first session, the writer explained the use of the record book and then in the subsequent three sessions, the writer checked the exercise adherence according to the record book. Before the first session, physical trainers assessed and discussed with each participant to decide on which exercise sets were most appropriate and preferred. In the first session, trainers again explained each step of the individualized exercise sets, including the duration, intensity and frequency.

The achievement of objective two was assessed by comparing participants' pre-post program physical activity pattern. The achievement of objective three was examined by comparing the pre-post program physical and biochemical measurements,

Two focus groups were conducted after the completion of the program to collect the perceptions of the program from male and female participants, respectively.

Participants' physical and biochemical measurements were obtained at the baseline/first, second, third, and fourth session. Quantitative data were analyzed using SPSS statistical package, Version 22 with repeated and mixed model ANOVA to see whether participants' physical and biochemical measurements had changed over time and to examine if there were any differences between male and female groups. Qualitative data were analyzed using latent content analysis.

Results

A culturally specific structured exercise program for PPD was developed. It was then implemented with 16 PPD (8 Male and 8 Female) participating in the program. Their mean age was 50 (SD 13.8) years. All male patients were employed full or part-time in manual occupation. All female patients were housewife. They were diagnosed

diabetes for an average of 12.4 (SD 7) years. Two and 14 patients were on dietary control alone and oral hypoglycemic agents, respectively. For the 14 patients using oral agents, 12 received insulin therapy. Only 7 out of 16 PPD completed the 4 sessions of the program, with 8 and 1 attended two and three sessions, respectively.

Pre-post program comparison with the frequency of physical activity shows that most participants (75%) engaged in more frequent physical activity. Baseline assessment indicated that they seldom performed any physical exercise apart from those related to their job or household work. By the end of the program, 12 of the 16 participants returned the record book for a review. Seven of the 12 participants performed the exercise daily for 5 to 30 minutes per episode, while the other 5 participants performed the exercise three times a week for 10 to 20 minutes per episode.

Comparison of physical and biochemical measurements were performed between baseline/first, second, third, fourth session. Results indicate significant differences ($p < 0.5$) in body weight and body mass index from baseline to the fourth session of the exercise program, suggesting an increase in body weight over the nine months. No significant differences were found in other physical and biochemical variables across the program. Gender was used as a between subject factor in the repeated measure ANOVA. Results show no significant gender differences in any of these variables over time. It is not surprising to have no significant differences with such a small sample. However, due to some missing values of the measurements, it is difficult to identify a trend in any of physical and biochemical outcomes, except body weight and body mass index. Focus group findings provide possible explanation on weight gain.

Post-program focus groups were held three months after the program. Thirteen out of 16 patients (7 male and 6 female) who had joined the program participated in a focus group, lasting for 45 minutes. Two focus groups were conducted with male and female participants using the same interview guide. Unless specified otherwise, the following seven categories of findings emerged from the data from both male and female participants.

1. **High satisfaction with the individualized exercise sets and guidance of certified physical trainers**

   All participants perceived the design of the individualized exercise sets and guidance of physical trainers to decide on which sets as most appropriate for each of them as the most valuable component of the program. They perceived the coaching from trainers as most helpful.



2. **High value of group interaction with peers**

   They enjoyed the group interaction with each other participants, which they perceived as energizing the activity and promoting self-management behavior by learning from each other's problems and solutions.

3. **Enhanced physical and mental wellbeing**

   The most common perceived benefits were about enhancement of physical and mental wellbeing. The exercise was perceived as "refreshing' and they "feel more active afterwards".

4. **Pictorial illustration of exercise steps in the take-home record book**

   The record book was perceived positively, although most of them did not understand the written English. They found the pictorial illustration of exercise sets in a step-by-step manner very helpful in recall the learning.

5. **Timing and frequency of sessions**

   Of note is that male participants found the timing of the session as causing tiredness and tension, with one of them saying "I feel stressed and tense during exercising as I have to go back to work after the follow up clinic". It might also due to their manual working nature that they became tired by the time they got back to work. They preferred moving the sessions to weekends and attended the follow-up clinic separately.

   Female participants, however, had no problem with the timing but preferred more frequent exercise sessions, suggesting two to three per week. They also suggested organizing an exercise room in the Centre for daily exercise. Their preference of doing exercise in the Centre was due to limited space at home and a cultural taboo to exercise in public area such as a park.

6. **Influence of the exercise venue**

   Participants admitted that previously they seldom performed exercise at home, but after starting the program they had gradually built up exercise habit at home due to the encouragement from trainers

and influence from those peers who performed almost daily at home. Some participants found doing exercise alone at home boring and difficult to sustain. One female participant pointed out that she felt safe when she exercised in the Centre if she felt sick, especially hypoglycemic attack. Other group members agreed that this was also their concern.

7. **Self-Monitoring of Blood Glucose (SMBG) and snack taking**

   Although participants were well versed with the need to do SMBG before and after the exercise activity at home to avoid potential hypoglycemic attacks, they admitted that they seldom did so because of the cost of test strips. Instead, they would eat more snacks. They also ate when they felt tired after exercising. This finding offers possible explanation for weight gain with increased level of physical activity.

Discussion

A culturally relevant structured exercise program was developed. It was based on SCT-strategies (Marcus et al., 1996; Keller et al., 1999) and need assessment with PPD. Focus group findings support that the program was well received by PPD. Systematic review shows that well planned education programs have a positive impact on diabetes knowledge and self-care skills, including exercise habit (Norris, Engelgau, & Venkat Narayan, 2001).

The program is in line with the evidence that using SCT-strategies enhances physical activity behavior (Marcus et al., 1996; Keller et al., 1999). The analysis shows that the program was successful in building a regular exercise pattern in 75 percent of participants. The program provided opportunities and peer support for participants to exercise, promoted mastery of the exercise sets through skills training with each of the small steps of the exercise sets, provided opportunities for PPD to set their individual goal about their exercise pattern, and provided opportunities and coaching in identifying problems and their solutions about exercising at home (Marcus et al., 1996; Keller et al., 1999). Apart from being a theory-based program, the need assessment findings informed the format of the program into male and female groups with the sex-matching physical trainers and interpreters exercising in separate rooms. The methodology of developing programs based on theory and need assessment may be used as a blue print for future education program development for ethnic minority groups to ensure its cultural relevancy.

From PPD perspective (focus group findings), the program has strengths, including individualized exercise regime, guidance of certified physical trainers, peer support, and pictorial illustration of the steps of exercise in the take-home record book. The program also has areas for improvement according to PPD perspective. The timing of exercise sessions may be altered to suit male PPD working schedule. The frequency of exercise sessions may be increased to suit female PPD expressed needs. It is suggested that collaboration may be sought with community centres to co-organize exercise programs in the community. Crossing the hospital-community boundary is found to be an element of advanced nursing practice (Shiu et al., 2012).

Baseline assessment shows that PPD seldom performed regular physical activity. The analysis shows that the program was successful in building a regular exercise pattern in most participants but in a gradual manner. This may be related to some missing sessions of PPD in the program. Our clinical experience indicates that missing medical appointments is common among PPD. It is related to the cultural practice of Pakistani people to go back to their home-town to stay for months once a year or during family events. More effort should be made to explore strategies to enhance their regular follow-ups and participation in education programs. This has implications for further research.

Of note is that, from PPD perspective, the gradual building up of the exercise habit was due to the encouragement and support of physical trainers as well as modeling the behavior of those peers who exercised daily. This finding again supports the importance of adopting SCT-strategies (Marcus et al., 1996; Keller et al., 1999) in program implementation.

Pre-post program comparison showed no significant impact of the program on the physical and biochemical markers of PPD, except body weight and body mass index. However, this was only a pilot with a small sample. Achieving significant differences in pre-post comparison was not the writer's purpose, rather the writer aimed to explore issues for further study. Findings of this study should be considered as preliminary, contributing to the next stage of research and program development. Indeed, the strength of this program lies with the prospective data collection over nine months and in-depth data obtained through need assessment and post-program focus groups. Quantitative and qualitative data triangulated to shed light on the impact of the program on body weight of PPD. Because of the fear of potential hypoglycemic attacks, PPD increased snack intake frequency and amount along with increased physical activity, which might contribute to weight gain. PPD did not perform pre-post exercise SMBG as instructed to check the

potential of hypoglycemia because of financial burden arisen from test trips. This has implications for enhancing education on hypoglycemia management, snack choice and financial support for test strip.

One particular point to note is the policy of using interpreters in HA, which poses both support and challenges. We may arrange in advance the need of interpreter when ethnic minority patients attend service. This is a great support to overcome language barrier. However, the policy is that interpreters are allocated on a roster as a means of employment fairness. It is common to have a different interpreter in each of the arranged encounters. It posed a challenge to the writer because although interpreters were fluent in both English and the target language, they had limited diabetes self-management knowledge. We had to make a great effort to explain clearly our clinical and exercise messages to each of the interpreters, and had to trust them with accurate translation.

To sum up, several recommendations may be drawn from this program to guide advanced nursing practice.

1. Develop education program for ethnic minority groups should be based on theory and client perspective to ensure its cultural relevancy.

2. Seek collaboration with community centres to co-organize exercise programs for PPD in the community.

3. Conduct research to explore culturally appropriate strategies to enhance regular follow-ups and participation in education programs of PPD.

4. Enhance education on hypoglycemia management, snack choice and seek financial support for SMBG test strip for PPD with financial difficulties.

5. Seek to refine the HA policy of interpretation service for the best possible benefits of ethnic minority patients.

Conclusion

The writer would like to conclude the report of this advanced practice project by suggesting that it has demonstrated originality, an impact to the practice of diabetes nursing, a contribution to improve current practice in diabetes patient care and education, a contribution to new knowledge development in diabetes nursing.

The development and implementation of a culturally relevant structured exercise program for PPD is the first of its kind in Hong Kong. The writer will seek opportunities to publish and present the findings in local and international journals and conferences. The methodology of program development and the findings may contribute as the beginning of a new knowledge development for diabetes colleagues working with Pakistani as an ethnic minority group locally and internationally. Particularly, findings of this program including the exercise pattern of PPD at baseline, their cultural taboos about performing physical exercise and cultural norms about foot wear will impact on the diabetes practice with PPD. The implementation of the recommendations will contribute to improving current diabetes practice as well as shedding light on new research knowledge development in diabetes nursing.



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Activities: Jun to Dec 2017

Education Seminar & Training

9th AHKDN Annual Symposium & Annual General Meeting was held on 17th June 2017
Watch Out: Diabetic Kidney Disease 謹「腎」為上

9th AHKDN Annual Symposium

Keynote Speech (1)
Speaker: Dr Andrea Luk
Associate Professor, CUHK
Topic: New Perspectives in Management of Diabetic Kidney Disease



Keynote Speech (2)
Speaker: Ms Law Pui Yee
Dietitian, PYNEH
Topic: Nutrition Principles and Recommendations for Treatment on Diabetic Kidney Disease



Total 85 participants including 61 members and 24 non-members attended the informative lectures.



9th AHKDN Annual General Meeting





Business report and financial report were given by President Ms. Veronica Hung and Treasurer Ms Ho Sau Yee in sequence. 47 members attended the AGM meeting and adopted the report.

The 22nd AHKDN Educational Seminar was held on 23rd September 2017

Topic: Updates in the Diagnosis and Managements of Diabetic Retinopathy
Speaker: Dr Luk Oi Jing, Fiona
Specialist in Ophthalmology
Honorary Clinical Assistant Professor
Department of Ophthalmology and Visual Science (CUHK)
MBChB(Sheff), MRCSEd (Ophth), FCOpphthHK, FHKAM(Ophthalmology)



Evidence-base Practice (EBP) Training Workshop

EBP project of Diabetes Nursing (2016-2018) had been conducted since December 2016.



The 3rd EBP workshop was held on 10th June 2017 with 29 participants and led by Professor Winnie So



The 4th EBP workshop was held on 8th July 2017 with 27 participants and Dr Tsoi Cheung Hei

The 5th EBP workshop was held on 14th October 2017 with 29 participants and led by Professor Winnie So

On 28th September 2017, AHKDN co-organized with Diabetes HongKong on "Ambulatory Glucose Profile" Academy lecture



Diabetes Conversation Map (DCM) AGM was held on 25th November 2017 with 56 participants.

Speaker: Mr. Peter Chan (Social worker)



Promoting Health Awareness in Community Education

Community Exercise Workshop – Chair Dance (舞動健康)

The 1st log exercise workshop was held at Tuen Mun Hospital on 22nd April, 6th May and 22nd July 2017





The 2nd log exercise workshop was held at The Boys' and Girls' Club Association of Hong Kong (香港小童群益會) in Wan Chai on 10th June, 24th June and 2nd September 2017





Diabetes Children Activities

AHKDN co-organized with Youth Diabetes Action for Youth Camp on 26th August 2017.
54 participants diabetes children joined the camp.

Community Program on Diabetes

AHKDN co-hoisted DM Lay Education Program 2017 at East Meet West Symposium on 1st October 2017





Nomination

Local Symposium

The 10th Annual Scientific Meeting of Hong Kong Association of Renal Nurses cum the 5th Asian Nephrology Nursing Symposium (ANNS) 2017 – Optiumizcing Renal Care on 9th to 10th September 2017. 3 members were nominated to attend the symposium.

East Meets West Symposium 2017 on 1st to 2nd October 2017. 10 members were nominated to attend the symposium.

QMH Update on Diabetes Management Course on 14th to 15th October 2017. 10 members were nominated to attend the course.

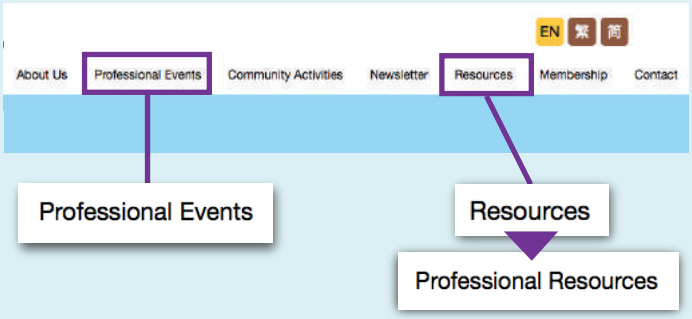
International Congress

IDF 2017 Congress in Abu Dhabi, UAE was held on 4th to 8th December 2017. 11 members were nominated to join the meeting.



AHKDN Website Revamp

The newly designed AHKDN website was launched in November 2017. "Professional Events" and "Resources > Professional Resources " in member zone will be allowed for member only.



Diabetes Centre Round

Integrated DM/ Endocrine and Renal Ambulatory Care Services at Yan Chai Hospital

Annie Leung (Nurse Consultant, DM)







There is a constant increase in the number of end-stage renal failure patients over the past 10 years. In 2016, 1252 new patients joined renal replacement therapy under Hospital Authority. DM accounts for 49% end-stage failure cases.

However, there is lack of coordinated patient journey for DM patients in YCH. Patients who suffer from diabetic nephropathy were followed up in various clinics without input from endocrinologists or nephrologists. Upon review of hospital service development, it is proposed to set up one-stop multidisciplinary ambulatory DM cum Renal service in YCH. DM patients with nephropathy will receive intensive treatment and follow up by endocrinologist and nephrologist. Under this proposal, Integrated DM/ Endocrine and Renal Ambulatory Care Services started service at Yan Chai Hospital in 1st April 2016.

The new Endocrinology and Renal Ambulatory Care Services provides a spacious and comfortable area for nurses and doctors to arrange individual and group education. It targets to provide Diabetes Self-Management Education (DSME), diabetic complication screening, Ambulatory Endocrine Test, pre-dialysis assessment, Continuous Ambulatory Peritoneal Dialysis (CAPD)/ Ambulatory Peritoneal Dialysis (APD) training and post-training services to patients and their family members as well as medical consultation, home visits and secondary prevention of DM nephropathy.

The new design Integrated Services aims to deliver better care and better outcome for people with diabetes, as well as intensively manage patients who have diabetic nephropathy to prevent or retard the development of end-stage renal failure.

Professional Promote

Conference/Seminar	Date	Web-site
8th Emirates Diabetes and Endocrine Congress, (Dubai, United Arab Emirates)	1st - 3rd March, 2018	https://www.medical.theconferencewebsite.com/conference-info/8th-emirates-diabetes-and-endocrine-congress-2018
The International Society Of Gynaecological Endocrinology (ISGE) 18th World Congress, (Florence, Italy)	7th - 10th March, 2018	http://www.isgesociety.com/
Diabetes UK Professional Conference, (London, UK)	14th - 16th March, 2018	https://www.diabetes.org.uk/Events_in_full/Conferences/Conferences_DiabetesUK/Diabetes-UK-Professional-Conference
The 3rd Annual Diabetes, Obesity & Metabolic Disease Conference, (Louisiana, USA)	20th - 22nd April, 2018	http://www.ptmg.com/meeting-details/3rd-Annual-Diabetes,-Obesity-and-Metabolic-Disease-Conference-New-Orleans-LA-356402
The 5th China Congress on Controversies to Consensus in Diabetes, Obesity and Hypertension (CODHy), (Shanghai, China)	11th - 13th May, 2018	www.codhy.com/china/2018/
Diabetes Update 2018, (Boston, USA)	14th - 16th May, 2018	https://diabetesupdate.hmscme.com/
78th Scientific Session of American Diabetes Association(ADA), (Orlando, Florida)	22nd - 26th June, 2018	http://www.diabetes.org
Annual Conference, American Association of Diabetes Educations (AADE), (Baltimore, Maryland)	17th - 20th August, 2018	http://www.diabeteseducation.org
54th Annual Meeting of European Association for The Study of Diabetes, (Berlin, Germany)	1st - 5th October, 2018	http://www.easd.org
12th International Diabetes Federation-Western Pacific Region Congress 10th Asian Association for the Study of Diabetes Scientific Meeting, (Kuala Lumpur, Malaysia)	22nd - 25th November, 2018	http://www.idf.org

Announcement

10th AHKDN Annual Symposium & AGM

A Decade of Diabetes Therapy

十年之葯

Date: 23rd June 2018 14:00 -17:00

Venue: Cityview Hotel

Collection of Academic Achievement

We would like to collect your achievement of academic, publication and oral / poster presentation in the past ten years. The collected information's will be published in the 10th Anniversary AHKDN booklet.

Please send the name of Journal for publication with title, author, year and name of conference for oral / poster presentation with title, author and year to email: **ahkdn.ltd@gmail.com**