Cardiovascular Disorder

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Ischaemic heart diseases and cerebrovascular diseases including stroke are the third and fourth principal causes of death in Singapore, accounting for a quarter of all deaths on an annual basis. They are also the third and tenth most common causes of hospitalization locally. The enormous morbidity and mortality impose a huge strain on our healthcare cost. Optimal control of cardiovascular risk factors such as hypertension, hyperlipidemia and diabetes are key to reducing end organ complications. A family physician skills course on Cardiovascular Disorder is timely, as management guidelines have changed since our last skills course in 2011 on cardiometabolic update.

The upcoming Family Practice Skills Course on Cardiovascular Disorder and this issue of the Singapore Family Physician will touch on the latest management guidelines in blood pressure; lipids disorders; the use of statins in chronic kidney disease; diabetes care; and heart failure including workshops on blood pressure variability, updates in 'Lipids management' guidelines, use of statins and heart failure. The College of Family Physicians and the Institute of Family Medicine would like to put on record our thanks to Pfizer Pte Ltd., Singapore for sponsoring the skills course, the authors for contributing to this issue of the Singapore Family Physician and speaking for the Skills Course.

Unit 1 on Cardiovascular Disorder: Updates from Singapore Perspective – by A/Prof Goh Lee Gan covers an extensive review of current literature on cardiovascular disorders. The need to reduce cardiovascular disorders in Singapore and worldwide cannot be over-emphasized and a few broad strategies should be noted. Firstly, population validated risk assessment tools should be used, such as the modified Framingham Risk Score. Secondly, therapeutic lifestyle changes are important as primary prevention and have proven effectiveness to reduce cardiovascular risk. Thirdly, the new 2013 ACC/AHA guidelines detailed recent paradigm shifts in cholesterol treatment and is further elaborated in Unit 3. Blood pressure targets in diabetics have also been updated with the 2014 Expert Panel of the National Institutes of Health and the American and International Societies of Hypertension recommending a blood pressure goal of <140/90 mmHg. Finally, optimal levels of 4 health behaviors (body mass index, physical activity, nonsmoking status, and diet quality) and reduction of 3 disease factors (total cholesterol, blood pressure, and fasting blood glucose) should be promoted in each patient.

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Unit 2 on Blood Pressure Variability, Morning Blood Pressure surge and Home Blood Pressure Monitoring covers an important topic that family physicians need to advise their patients. The notes for this unit will be disseminated on the course day itself and published in the subsequent issue of the Singapore Family Physician.

Unit 3 on Updates in "Lipids Management" guidelines – by Prof Tai E Shyong covers the recent change in the way blood lipids are treated. In place of LDL-C targets, the intensity of statin therapy (based on the ability of a particular dose of a drug to lower LDL-C) is now calibrated to the level of cardiovascular risk as recommended by the American College of Cardiology and the American Heart Association. The article also covers the role of niacin and fenofibrate in light of recent trial evidence and the benefits of lipid lowering in patients with chronic kidney disease which could be considered in future risk stratification of patients to receive lipid lowering therapy.

Unit 4 on Use of statins in chronic kidney disease (CKD) – by Dr Reginald Liew covers the important considerations when prescribing statins to patients with chronic kidney disease. These considerations include the dose and choice of statin, stage of the CKD and risk profile of the patient. The article also reviews the important studies supporting the clinical use of statins in CKD to reduce cardiovascular risk, and the safety profile of high dose statins.

Unit 5 on What's new in diabetes care – by Dr Ester Yeoh reviews the latest guidelines and new developments in diabetes management in the recent 1-2 years. Her article covers the latest evidence on the efficacy and risk of a new class of glucose-lowering agents, the sodium-glucose cotransporter 2 (SGLT2) inhibitors and that of continuous subcutaneous insulin infusion (CSII) and continuous glucose monitoring (CGM), particularly in patients with type 1 diabetes. Importantly, a patient-centric and individualized approach is emphasized as diabetic patients are heterogeneous. Each patient may present with unique challenges (physical, social and psychological) to achieving optimal glycemic control. In addition, the care of the diabetic patient should include comprehensive risk factor reduction, including smoking cessation, healthy lifestyle habits, blood pressure control, lipid management and in selected patients, the addition of antiplatelet therapy.

Unit 6 on The Failing Heart: New modalities of treatment – by Dr David Sim touch on the evolving novel therapeutic strategies for the treatment of heart failure. In addition to standard pharmacological therapy such as beta blockers and renin angiotensin aldosterone antagonists, new pharmacological therapy include aldosterone antagonist, sinus node inhibitor, Angiotensin Receptor Neprilysin Inhibitor (ARNI). When pharmacological therapy has failed in advanced

heart failure, the left ventricular assist device has emerged as a bridge to cardiac transplantation and destination therapy (i.e. for patients ineligible for cardiac transplant).

The ten readings selected by A/Prof Goh Lee Gan from current literature related to cardiovascular disorder will reinforce the various modules on the skills course. The first two readings are on screening for coronary artery disease in asymptomatic individuals and different methods to estimate lifetime cardiovascular risk. Subsequent readings emphasized the strategies and management to obtain optimal control of cardiovascular risk factors such as medication adherence, dietary approaches, obesity prevention and primary and secondary prevention of cardiovascular disease. Finally, an interesting review suggest that higher-protein diets provide improvements in appetite, body weight management, cardiometabolic risk factors, or all of these health outcomes. Dietary compliance was found to be the primary contributor in these studies and reinforced the importance of dietary interventions in chronic disease management.

This issue of the Singapore Family Physician concludes with 1 PRISM article by Dr Jean Jasmin Lee, a family physician practicing at the KK Women and Children's Hospital. In her article, Dr Lee wrote about a couple with obesity and diabetes that was referred to her for management but also found to have issues of infertility and sexual dysfunction. Family physicians can address the majority of these sexual problems in primary care by providing patients with information, making brief and practical interventions to improve intimacy and giving appropriate reassurance about the normal physiology of the human sexual response. Dr Lee gave an overview of the comprehensive approach family physicians can take to evaluate both partners – history, physical examination and initial workup. This can exclude medical conditions causing infertility and sexual dysfunction at the primary care level and many couples may not require referral. Family physicians can integrate a psychosocial and sexual history into the initial medical workup of infertile couples. The PLISSIT (Permission, Limited Information, Specific Suggestions, Intensive Therapy) model is useful in initiating discussion regarding sexual problems and it is important to be open, empathic and non-judgmental in our approach. The College would like to encourage residents and family physicians to contribute original articles and case studies with valuable learning points to the PRISM section of the Singapore Family Physician. Patient details should be de-identified and consent obtained for publication of the case study.