

POINTERS ON CARDIOVASCULAR DISEASE, RISK FACTORS, AND CONSEQUENCES

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SFP2010; 36(3): 3

Cardiovascular disease is an important global problem. It has been described as a vascular tsunami of pandemic proportions. (Dahlof, 2010)¹. These are strong words but nevertheless describe the trends well.

The burden of cardiovascular disease in Singapore is sizeable. In 2008, coronary artery disease (CAD) accounted for 20.1% of all deaths, and resulted in 3.5% of all admissions to hospital. (MOH website, 2010)². (MOH website, 2010)³.

A global assessment of cardiovascular risk in asymptomatic people is the first step in prevention. In asymptomatic people, key cardiovascular risk factors to correct are smoking, hypertension, and hyperlipidemia. In the Singapore setting, it has been found that in the risk factors which tend to be under-treated are hypertension and hyperlipidemia. (Goh, 2010)⁴, (Mendis, 2010)⁵, (Chan et al, 2006)⁶.

Recently published clinical trials have had impact on the management of patients with hypertension, dyslipidemia, and patients at high-risk of cardiovascular diseases. Examples are the HYVET study, and the ACCOMPLISH trial on the treatment of hypertension; the ARBITER6-HALT trial, and the JUPITER trial on the treatment of dyslipidemia; and the ONTARGET trial, and the TRANSCEND trial on the treatment of high-risk patients. (Kwok, 2010)⁷.

In the last two decades, data has accumulated to convince the medical community that treating diabetes does not mean treating only glycaemia, but all of the condition's attending cardiovascular risk factors as well. This multi-pronged approach acquires particular urgency in type 2 diabetes, but is no less important in type 1 diabetes as well. Both epidemiological and prospective data show that reducing the risk of myocardial infarction, stroke and peripheral vascular disease requires the treatment of, not only glycemia, but also treating other cardiovascular risk factors. (Lee, 2010)⁸.

Not all diabetic patients with chronic kidney disease (CKD) have diabetic nephropathy as a cause. DM can also cause kidney damage via other disease processes. All patients with type II DM must be screened for possible kidney disease from day one of

diagnosis of DM. Screening for microalbuminuria is the best means of detecting possible early diabetic nephropathy. This can be done with a spot urine (preferably early morning first void) sample. Strict blood pressure control is of utmost importance in retarding diabetic nephropathy and other complications consequent of diabetes. (Lau, 2010)⁹.

The impact of hypertension on the risk of the development of a cardiovascular event or death is directly proportional to the level of blood pressure i.e. its control. In addition, the presence of other risk factors further amplify its risk at any level of blood pressure. For hypertension treatment, the two most important issues are the choice of antihypertensive agents and the target/goal blood pressure attainment. An increasing number of trials have provided evidence that antihypertensive therapy that results in adequate blood pressure control provides some degree of cardiovascular, cerebrovascular and renal protection. (Yong, 2010)¹⁰.

Atrial fibrillation (AF) is the most common arrhythmia in clinical practice. In the past decade, there had been more than 1000 publications in the literature exploring this unique and fascinating arrhythmia, of which many aspects such as genetics and mechanisms, remain poorly understood. The growing interest and awareness of AF mirrors the global ageing population, coupled with new developments in both pharmacological and non-pharmacological therapies make treating this arrhythmia both fascinating and challenging. (Foo, 2010)¹¹.

REFERENCES

1. Dahlof B. Cardiovascular Disease Risk Factors: Epidemiology and Risk Assessment. *A J Cardiol* 2010;105[suppl]:3A-9A.
2. MOH. Principal Causes of Death. <http://www.moh.gov.sg/mohcorp/statistics.aspx?id=5526> (Accessed 2010 July 20).
3. MOH. Top 10 conditions of hospitalisation. <http://www.moh.gov.sg/mohcorp/statistics.aspx?id=5528> (Accessed 2010 July 20).
4. Goh LG. The Burden of Cardiovascular Disease in Singapore. *SFP* 2010;36(3):8-11.
5. Mendis S. The Contribution of the Framingham Heart Study to the Prevention of Cardiovascular Disease: A Global Perspective. *Prog Cardiovasc Dis* 2010;10-4.
6. Chan MY, Woo KS, Wong HB, et al. Antecedent Risk Factors and Their Control in Young Patients with a First Myocardial Infarction. *Singapore Med J* 2006 Jan; 47(6):554-6.
7. Kwok BWK. Recent Trials on Cardiovascular Disease Treatment. *SFP* 2010;36(3):13-4.
8. Lee CH. Diabetes mellitus and optimizing cardiovascular outcomes. *SFP* 2010;36(3):15-8.
9. Lau T. Understanding Patients with Diabetic Nephropathy and its Current Day Management in Primary Care. *SFP* 2010;36(3):19-22.
10. Yong QW. Treating Hypertension and Target Organ Damage. *SFP* 2010;36(3):23-6.
11. Foo D. Atrial fibrillation: An Overview. *SFP* 2010;36(3):27-30.

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