World Health Day 2013: Control blood pressure, prolong life

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This year's World Health Day (WHD) is a global initiative to raise awareness of hypertension and to reduce hypertension through initiatives by governments, health workers, civil society, the private sectors and families and individuals. Brunei Darussalam marked WHD 2013 with a Health Forum and a Healthy Lifestyle Campaign launched by the Honourable Minister of Health of Brunei Darussalam, Pehin Orang Kaya Johan Pahlawan Dato Seri Setia Awang Hj Adnan Bin Begawan Pehin Siraja Khatib Dato Seri Setia Hj Md Yusof on 13th April and 14th April 2013 respectively.

The Health Forum focused on a medical perspective (delivered by Dr Dk Siti Nur'Ashikin Pg DP Hj Tengah, Consultant Neurologist, Raja Isteri Pengiran Anak Saleha Hospital), a dietary perspective (delivered by Madam Rokiah Hj Md Don, Head of Dietetics, Ministry of Health Malaysia) and the religious aspects (delivered by Ustaz Hj Anwari Hj Rawee, Pusat Dakwah Islamiah/Religious Centre). The forum was followed by a question and answer session. Invited to this event were other governmental organisations, non-governmental organisations, school principals including the catering school of the Technical College, the Women's Council, etc. The launching of the Health Lifestyle Campaign included an aerobics session, a health exhibition and the award of certificates to various food and beverage establishments that participated in this campaign. The health programme was open to members of the public and focussed on healthy eating and lifestyle advice including a demonstration of low sodium foods and healthy cooking demonstrations. To follow on from this will be a health screening programme that will be launched in stages across health centres.

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Key Facts

Hypertension contributes to the burden of heart disease, stroke and kidney failure and premature mortality and disability. It disproportionately affects populations in low- and middle-income countries where health systems are weak with nearly 80% of cardiovascular deaths occurring in these countries. Cardiovascular diseases accounted for 17 million deaths worldwide in 2008, of which complications of hypertension caused 9.4 million. Worldwide the projected mortality trend is for a steady rise in cardiovascular disease far greater than mortality trends for cancer, diabetes and infectious diseases (Figure 1). [1]

Brunei Darussalam is not exempt from this global epidemic. Indeed, deaths from heart disease, cerebrovascular disease and hypertensive diseases have featured in the top seven causes of death from 2007 to 2011 (Table 1).

Normal blood pressure is defined as a systolic pressure of 120 mmHg and a diastolic pressure of 80 mmHg. Some studies have advocated blood pressure lowering to systolic of 105 mmHg and di-

however this is not universally recommended. Importantly, hypertension (and hence treatment threshold) is now defined as being equal to or above 140 mmHg systolic and 90 mmHg diastolic. Worldwide in 2008, 45% of those aged over 25 years had hypertension.

Unfortunately hypertension rarely causes symptoms in the early stages and many people go undiagnosed. However, there are significant health and economic gains attached to early detection, adequate treatment and good control of hypertension. Treating the complications of hypertension entails costly interventions such as cardiac bypass surgery, carotid artery surgery and dialysis, draining individual and government budgets. Personal awareness of blood pressure is recommended for all adults. A diagnosis should only be made after several consecutive high blood pressure readings. Usually the first reading will be discarded and an average taken of subsequent readings. The National Institute of Clinical Excellence (NICE) produced guidance in 2011 recommending that ambulatory blood pressure monitoring (ABPM) is offered to confirm a diagnosis of hypertension because of both diagnostic and prognostic superiority. [2] Despite an initial early cost outlay with ABPM, this is far outweighed by subsequent cost savings from misdiagnosis, either falsely elevated blood pressure (white coat hypertension) or inadequately treated hypertension.

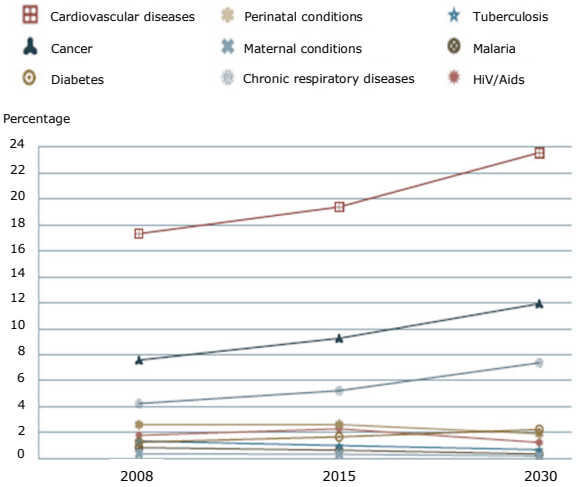

Fig. 1: Worldwide projected mortality trends from 2008 to 2030 for major non-communicable and communicable diseases (Data from WHO).

Management Measures

The WHO has advocated six preventative measures to address the main behavioural risk factors: unhealthy diet, excess salt intake, harmful use of alcohol, physical inactivity, obesity and tobacco use. Salt reduction initiatives can make a major contribution to prevention and control of high blood pressure.

Table 1: The top seven leading causes of death in Brunei Darussalam between 2007 and 2011.

No/Year	2007	2008	2009	2010	2011
1	Cancer (malignant neoplasms) 215 (18.3%)	Heart Diseases (including Acute Rheumatic Fever) 211 (19.3%)	Cancer (malignant neoplasms) 215 (18.4%)	Cancer (malignant neoplasms) 252 (20.9%)	Cancer (malignant neoplasms) 256 (20.7%)
2	Heart Diseases (including Acute Rheumatic Fever) 177 (15.1%)	Cancer (malignant neoplasms) 201 (18.4%)	Heart Diseases (including Acute Rheumatic Fever) 185 (15.8%)	Heart Diseases (including Acute Rheumatic Fever) 186 (15.4%)	Heart Diseases (including Acute Rheumatic Fever) 183 (14.8%)
3	Diabetes Mellitus 140 (11.9%)	Diabetes Mellitus 97 (8.9%)	Diabetes Mellitus 100 (8.5%)	Diabetes Mellitus 100 (8.3%)	Diabetes Mellitus 116 (9.4%)
4	Cerebrovascular Diseases 87 (7.4%)	Cerebrovascular Diseases 93 (8.5%)	Cerebrovascular Diseases 97 (8.3%)	Cerebrovascular Diseases 99 (8.2%)	Cerebrovascular Diseases 86 (7.0%)
5	Hypertensive Diseases 57 (4.9%)	Influenza & Pneumonia 53 (4.9%)	Septicaemia 52(4.4%)	Bronchitis, Chronic & Unsuspected Emphysema & Asthma 47 (3.9%)	Bronchitis, Chronic & Unsuspected Emphysema & Asthma 50 (4.0%)
6	Transport Accidents 55 (4.7%)	Bronchitis, Chronic & Unsuspected Emphysema & Asthma 39 (3.6%)	Bronchitis, Chronic & Unsuspected Emphysema & Asthma 43 (3.7%)	Septicaemia 39 (3.2%)	Hypertensive Diseases 49 (4.0%)
7	Bronchitis, Chronic & Unsuspected Emphysema & Asthma 51 (4.3%)	Transport Accidents 33 (3.0%)	Hypertensive Diseases 41 (3.5%)	Hypertensive Diseases 38 (3.1%)	Transport Accidents 42 (3.4%)

Pharmacological measures are required if lifestyle measures are ineffective. Guidelines such as the NICE guidance advocate a target blood pressure of less than 140/90 mmHg. Whilst there are no clear guidelines specifically for Asian patients, most guidelines advocate the use of calcium channel blockers (CCBs) as first line agents mainly because they are metabolically neutral, cost-effective and reduce blood pressure variability. Subsequent agents include angiotensin-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs) and thiazide diuretics. Resistant hypertension is diagnosed when optimal doses of three of these drugs fail to control blood pressure. Normally at this point, patients should be referred for specialist management.

Novel treatments that have received attention are renal sympathetic denervation and carotid baroreceptor stimulation. Whilst these are both invasive procedures, aiming at disrupting sympathetic over-activity, safety and efficacy profiles are encouraging. In carefully selected patients such as those with resistant hypertension, these may be promising treatments.

Fig. 2: Six preventative measures advocated by the World Health Organisation.

Conclusion

Hypertension is currently one of the most worrying and challenging public health threats worldwide and in Brunei Darussalam. Vertical programmes focusing on hypertension control alone are not cost effective. There need to be integrated noncommunicable disease programmes implemented through a primary health care approach which are an affordable and sustainable way for countries to tackle hypertension. Prevention and control of hypertension is complex, and demands multi-stakeholder collaboration, including governments, civil society, academia and the food and beverage industry.

REFERENCES

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