News from the World Hypertension League (WHL).
A division of the International Society of Hypertension, and in official relations with the World Health Organization.

No. 111, February 2007

Editorial

Lifestyle modification in overweight hypertensives

A range of non-pharmacological measures have been shown to reduce blood pressure (BP) and other cardiovascular risk factors when applied individually or in combination in randomised controlled trials. Effective lifestyle modifications include weight reduction, moderation of dietary salt intake and alcohol consumption, increased dietary fish or fish oils, diets rich in vegetables, fruit and low fat dairy products and low in saturated fats (as in the Dietary Approaches to Stop Hypertension- DASH diet), smoking cessation and increased physical activity (1). One of the key questions in management of hypertension is the extent to which healthy lifestyle changes can influence anti-hypertensive drug usage and overall cardiovascular risk longer term in people being treated for high BP. There are several difficulties in providing evidence to answer this question. First, it is not easy to decide which of the many lifestyle factors should be targeted. Second, is the likelihood of healthy volunteer bias in subjects recruited to randomised controlled trials; third, is the potential ‘Hawthorn’ effect whereby controls are likely to adopt some of the treatments; fourth, is the difficulty of sustainability of lifestyle changes, and finally, the cost benefits of such approaches as an adjunct to, rather than an alternative to, drug therapy. An attempt to answer the question concerning effects of a multi-factorial lifestyle program on ambulatory BP and drug usage has been made in the ‘ADAPT’ study by Valerie Burke and other of my colleagues in

WHL News

Message from the president

Over the past two decades since its establishment in 1984, WHL has devoted its efforts to popularizing among the world’s populations the latest results of research on hypertension and its management. All my predecessors have contributed their best efforts to this goal. There have been 4 successful art competitions organized by our organization which have sent a clear message to the general population about what is high blood pressure, why you must know your own blood pressure and how you can control it to goal. In recent years and through well-attended Council meetings and regional meetings, we have endeavored to further increase public awareness of the importance of healthy lifestyle and healthy diet in the prevention and control of hypertension. We have established the World Hypertension Day since 2005. With a different slogan each year it involves the greatest possible number of people to join in a common effort to control hypertension more effectively. The theme of this year is "Healthy Diet, Healthy Blood Pressure."

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Western Australia (2). Some of the results, lessons and limitations of the study are outlined below.

Following newspaper advertisements and initial telephone and clinic screening 241 overweight hypertensives on drug therapy were assessed with ambulatory BP and randomised to a 4 month intensive lifestyle intervention or usual care. Measurements were repeated at the end of the 4 month intervention and if 24 hour ambulatory BP were less than 135/85 mmHg drugs were reduced or withdrawn over 4 weeks. Measurements were repeated again after a further 12 months to assess the sustainability of the lifestyle program. The lifestyle program incorporated both educational and behavioural elements and involved six interactive workshops including partners to maximise social support and effectiveness. The control group were offered standard literature regarding lifestyle changes but otherwise were monitored similarly to the lifestyle intervention group.

The nutritional component was designed to effect weight loss of around 5–10% of baseline weight over 4 months by a combination of diet and physical activity. The calorie restricted diet incorporated features of the DASH diet and at least 4 fish meals a week. Smoking cessation was promoted and limitation of alcohol consumption (<2 standard drinks a day) was recommended.

Ninety control and 102 intervention group subjects completed the study. After the 4 month lifestyle program average 24 hour ambulatory BP was reduced over baseline more in the treatment group compared with controls (4.1/1.3 vs 1.0/0.3 mmHg p<0.01), but a year later after withdrawal or reduction of antihypertensives changes were not significantly different.

Complete drug withdrawal was possible more often for men in the lifestyle program at 4 months vs controls (66% vs 44% p<0.05) but not for women (65 vs 64%). At the further 12 month follow up sex differences were not significant; overall, 43% of the lifestyle group and 41% of controls maintained drug withdrawal status while 74% of the lifestyle group and 71% of controls had either reduced or stopped drug therapy.

Both groups lost weight but there were important differences in weight loss and waist circumference between the two groups with a net effect of the lifestyle intervention vs controls of 3.3 kg and 3.3 cm at 4 months (p<0.001), sustained after a further 12 months at 3.0 kg and 3.5 cm.

The study confirms that a personalised multifactorial lifestyle behavioural program with social support can effectively reduce ambulatory BP in the short term and that weight loss was maintained for at least a year after cessation of the intensive counselling program. There was presumably considerable carry over effect to the control group in that they also lost weight, albeit significantly less than the lifestyle group. Withdrawal or reduction of antihypertensive therapy was possible in the majority of both groups to achieve ambulatory BP less than 135/85 mmHg. However, current practice would be to continue therapy and aim for lower ambulatory BP of 120/80 mmHg, unless the subjects were experiencing significant hypotensive symptoms.

In a recently published 3 year follow up of 140 of the original 192 participants, there were some sustained improvements in the lifestyle group in terms of physical activity, dietary fish and saturated fat consumption (Fig 1), and in lower blood cholesterol levels (3).

Figure 1: Change in consumption of foods (sem) in usual care and program groups between baseline and 3-year follow-up. * p<0.05 for between-group differences.

However, differences between groups in body mass and BP had attenuated (Fig 2) and there were no differences between groups in estimated Framingham risk score or antihypertensive drug usage.
With the fast development of research in hypertension, WHL has tried to hold a Board Meeting, or Council Meeting, or regional meeting concurrently with each ISH Symposium, and thus has never failed to catch up with the cutting-edge knowledge and improve our working strategy accordingly.

In this new century the prevention and management of hypertension has become a major public health problem especially for the middle- and low-income countries. A good number of issues could be considered. Just to name a few:

(1) Pre-hypertension or normal high blood pressure: Is it possible to prevent or postpone the onset of hypertension and diabetes by intervention at this stage?

(2) The call for 5 actions worldwide to improve the blood pressure control rate: Could we cut down the morbidity and mortality rate of CVDs by a large margin through the efforts of care-managers or community doctors?

(3) As one of the players in the field of solving public health problems, how should our organization work with other parties: the government, the disease control departments, the food industry, etc. in order to achieve better results?

As our next Council meeting is scheduled to be held in November this year, I earnestly look forward to your comments and suggestions on how to carry forward our tasks as effectively as always in the years to come.

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People

In June 2006, the board of the French League Against Hypertension has changed: Dr. Bruno Pannier is General Secretary and Professor Jean-Jacques Mourad has been elected President:
Pôle des Spécialités Médicales, Unité Médecine Interne – HTA, CHU Avicenne, 125 rue de Stalingrad, Bobigny 93009, Cedex 09, France.

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The league is undergoing a national campaign “Vivre sans hypertension” (“Live without hypertension”) focusing on primary prevention of hypertension. A pdf version of the dedicated booklet in French is available from the league’s website: www.comiteHTA.org

Calendar

Training Course on Non-Communicable Disease Prevention and Health Promotion
April 15–21, 2007
Isfahan, Iran
Information: Prof. Nizal Sarraf-Zadegan, Isfahan Cardiovascular Research Center (ICRC)
PO Box 81465-1148,
Isfahan, Tehran, Iran
E-mail: sarrafzadegan@med.mui.ac.ir

1st Annual Scientific Meeting of the Egyptian Hypertension Society
April 18–20, 2007
Cairo, Egypt
Information: Mrs. Rehab Mohamed EHS, 1 El-Diwan Street, Garden City, Cairo 11519, Egypt
Fax: (+202) 794-8879; E-mail: ehs@link.net

Joint Scientific Sessions of the Inter-American Society of Hypertension and the Consortium for Southeastern Hypertension Control
May 6–10, 2007
Miami, FL, USA
Information: IASH-COSEHC, c/o Wake Forest University School of Medicine, PO Box 5097,
Winston-Salem, NC 27113-5097, USA
Fax: (+1-336) 716-6644
Websites: http://www.iashonline.org
http://www.cosehc.org

2nd African Scientific Meeting on Hypertension
May 12–13, 2007
Nairobi, Kenya
Information: Dr. Daniel Lemogoum ULB – Erasme Hospital, IFHA Secretariat 808 Lennik road, 1070 Brussels, Belgium
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