

NEWS LETTER

Egyptian Hypertension Society



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THE PRESIDENT'S MESSAGE

THE EHS NATIONAL GUIDELINES FOR MANAGEMENT OF HYPERTENSION

NEED FOR NATIONAL GUIDELINES

This year (2003) the EHS is reporting a new set of guidelines for management of hypertension in Egypt and developing countries. Hypertension guidelines from rich industrial countries may not be applicable in developing and economically disadvantaged communities. The high prevalence rates of poverty and illiteracy and the inadequate health care system with limited access to medical insurance will limit resources and make optimal management difficult. Resources more than science dictate the type of care that can be provided. According to World Bank data the GNP per capita for the year 1995 varied from as low as \$260 in Nigeria, \$340 in India, \$790 in Egypt to \$26980 in USA and \$39640 in Japan. Another reason for the need of national guidelines is the racial, genetic, life style and environmental differences. Genetic differences between white Caucasian, Black, Hispanics, South Asian and Chinese are present regarding hypertension mechanisms, type and extent of complications, response to dietary therapy and to antihypertensive drugs. Differences in plasma rennin activity, aldosterone, kallikrein and dopamine B-hydroxylase were found between blacks and whites. Due to population structure, developing countries have a greater proportion of young and middle aged individuals. The last factor may influence decisions regarding initiation and aggressiveness of therapy. Furthermore, there are important differences between different populations regarding life style particularly dietary salt and alcohol consumption. Also, the prevalence of risk factors for hypertension and atherosclerotic cardiovascular disease such as obesity, diabetes and cigarette smoking varies.

PREPARATION OF GUIDELINES

On Nov. 15, 2001 the president of EHS invited a working group of 21 EHS members to discuss the plan, design and logistics of developing new guidelines for hypertension management. Four groups were formed each chaired by a moderator and each group was assigned a number of chapters. Every member of the group was asked to prepare a manuscript on a special subject. Deadline for manuscripts was April 4, 2002. All members of the working group met several times. In January 11, 2002 the writing policy and contents of individual chapters were approved. A writing group was formed and had its first meeting on June 2002. All members of the working group met several times and a prefinal document was ready by September 2002. The final document was discussed and approved in 4-days meeting in Luxor on December 6-9 2002.

SCIENTIFIC INSPIRATIONS

Some now view, *HYPERTENSION* as the imprint of our personality trait.

This is because young adults who display specific personality traits, such as high levels of impatience or hostility or a persistent sense of being pressured for time, have a higher risk of developing hypertension 15 years later. Thus the development of effective strategies that recognise and manage such harmful psychosocial tendencies "could have important implications for prevention and management of hypertension and CVD."

JAMA 2003;290:2138-2148.

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Address : 1 Diwan St, Garden City, Cairo, P.O. 11562, Egypt



Phone : (+202) 7948877 – 7948879

Fax : (+202) 7948879

E-mail : ehs@link.net

Web Site : www.ehs-egypt.net


→ **Cont Main Features of EHS Guidelines** ▶ **Minimal vs Optimal Care**

Guidelines have to make a comparison between what is possible (minimal care) and what is ideal (optimal care). The limited resources of the health care system in developing countries will dictate that many of the recommendations developed in the wealthy industrial countries, have to be tailored and modified. It becomes imperative to direct drug treatment to individuals in the high and very high risk before considering their use in the lower risk patients. The EHS guidelines are introducing the new concept of minimal versus optimal care. The choice will depend upon available resources. Minimal care includes the least expensive diagnostic and therapeutic approaches while not compromising significantly the quality of care. For example, when it comes to assessment of high cardiovascular risk in a hypertensive subject, a minimal care policy will include only age, gender, family history, past history of atherosclerotic cardiovascular disease, smoking and body weight. Optimal care will require in addition lipid profile, blood sugar, ECG, serum creatinine and hs-CRP. The minimal care approach will depend on minimal laboratory investigations relaying more on careful history and physical examination. A longer period of blood pressure monitoring before initiating drug therapy and higher threshold of blood pressure are recommended. It should be realized that even a small reduction in blood pressure is worthwhile if absolute targets prove difficult to achieve. Drugs for first choice are thiazide diuretics.

M. Mohsen Ibrahim, M.D.

Prof. of Cardiovascular Medicine – Cairo University.
President of The Egyptian Hypertension Society.

 **LOOKING UP IN THE GUIDES** ▶

 Unlike the JNC 7, the European Guidelines refrain from recommending specific classes of antihypertensive drugs as initial treatment. However they do recognize that there is evidence to support variable effects of specific drug classes on special subsets of patients.

From the JNC7, JAMA. 2003;289



TURNING CONCEPTS

"GETTING STARTED: IS IT BY ONE OR BY COMBINATION ?"

The JNC 7 has just a little change in concept as to mono vs combination as a initial step and views that;

If BP exceeds the targets of 140/90 mm Hg or 130/80 mm Hg by at least 20/10 mm Hg (in other words, $\geq 160/100$ mm Hg or $\geq 150/90$ mm Hg)

Then treatment can be initiated with combination therapy (either a fixed combination or two drugs prescribed separately).

Defenders, claim that it is very important to get off to a good start in treating hypertension. Reducing BP quickly can raise patients' confidence in their treatment and have the added benefit of reducing doctor visits and other costs and inconveniences. No wonder the JNC 7 Committee supports a 20/10 mm Hg rule above the target pressure to initiate this. Thus their decision to endorse this in links to the Stage 2 BP threshold of 160/100 mm Hg adds authority to practice. They further suggest that a diuretic usually be part of the combination. Many view that this is a good advice, because combining diuretics with agents such as ACE inhibitors, ARBs, and β blockers certainly adds to their antihypertensive efficacy. And that even adding CCBs to these other drugs is just as efficacious; and like the diuretics, they provide useful clinical outcomes benefits.

Offenders, are minority that object to starting with a combination. They reason that, if side effects occur, it may not be clear which drug is responsible and how best to adjust the treatment. Their further concern, is that those patients with Stage 2 hypertension whose BP could be controlled with a single agent, albeit a low probability, will not get the opportunity to receive that more simple therapy.

However, this recommendation by JNC 7, met the least debate and is likely to become a very popular practice. Regardless of anything, it reinforces the message that control of BP is the most important initial priority in managing hypertension.

J Clin Hypertens 2003; 5(4):282-286

Drug	Conditions Favoring Use
Diuretics (thiazide)	CHF; elderly; ISH; hypertensives of African origin
Diuretics (loop)	Renal insufficiency; CHF
Diuretics (antialdosterone)	CHF; post MI
Beta-blockers	Angina pectoris; post MI; CHF (up-titration); pregnancy; tachyarrhythmias
CCBs (dihydropyridine)	Elderly; ISH; angina pectoris; peripheral vascular disease; carotid atherosclerosis; pregnancy
CCBs (verapamil, diltiazem)	Angina pectoris, carotid atherosclerosis; supraventricular tachycardia
ACE inhibitors	CHF; LV dysfunction; post MI; nondiabetic nephropathy; type 1 diabetic nephropathy; proteinuria
ARBs	type 2 nephropathy; diabetic microalbuminuria; proteinuria; LV hypertrophy; ACE inhibitor cough
Alpha-blockers	BPH; hyperlipidemia

WHAT'S NEW!!!

ANTIHYPERTENSIVE POTENTIALITIES OF;

Eplerenone, the selective aldosterone blocker, was first approved by the FDA for the treatment of hypertension in 2002 and this October for improving the survival of congestive heart failure patients following an acute heart attack.. Recently, its utility [as 200 mg daily] when combined with enalapril [10 mg daily] was further proven as it significantly reduced LV mass (-27.2±3.39 g, P = .007) & SBP (-28.7 vs -23.6 mm Hg, P = .033) beyond that achieved by eplerenone alone.

N Engl J Med. 2003;348:1309-1321

Bosentan, the first endothelin receptor antagonist approved by FDA for management of pulmonary arterial hypertension, has the potentiality to alter the outcome of many other diseases, as hypertension, cerebrovascular disorders, HF, IHD,... However, it is unlikely to be approved for such indications as it needs close monitoring as it can induce liver dysfunction, anticipate numerous drug interactions, being a CYP3A4 and CYP2C9 inducer and is teratogenic.

Heart Dis 2003;5(2):161-9

HYPERTENSIVE POTENTIALITIES OF;

Cadmium, is a non-essential element yet one of the most dangerous occupational and environmental poisons. It has high rates of soil to plant transference and certain plant species accumulation that contributes to its non-occupational population exposure via the diet. It then accumulates in liver and kidney whereby a 30-50 ug per day exposure have been linked to increased risk of bone fracture, cancer, kidney dysfunction and hypertension. The simultaneous intake of diet containing an inappropriate amount of calcium causes increase in its absorption and accumulation. Vice versa, its interactions with calcium may interfere with the biological functions of Ca^{2+} ions, and is behind renal,vascular dysfunction and hypertension.

Arch Toxicol. 1998;72(2):63-73

MOLECULAR REASONINGS;

DRINKING TEA : BENEFICIAL, HAZARDOUS, OR WHAT?

Epidemiological studies first in Netherlands, then in world wide population-based studies, demonstrated an inverse relationship between black tea drinking and CVD mortality. A growing level of interest in this area prevailed whereby 45 human studies (epidemiological vs intervention) as yet published; addressed the impact of tea on BP, platelet aggregation, blood cholesterol and plasma homocysteine concentrations, and *ex vivo* low density lipoprotein (LDL) oxidation ...etc

For instance long-term regular ingestion was proven to have a beneficial BP lowering effect whereby a 250-mL (1-cup) increase in tea intake was associated with a 2.2-mm Hg lower SBP and a 0.9-mm Hg lower DBP in a study in elderly women. While, flow-mediated dilation of the brachial artery was improved to approximately 41% (in normal subjects) and 56% (in patients with CVD) in another study. A third group even found a 15% decrease in soluble P-selectin following daily ingestion of 5.5 cups of tea for four weeks in healthy subjects.

These positive findings were attributed to the presence of poly-phenols (4-O-methyl gallic acid), particularly catechins. A typical cup of tea contains around 140 mg total flavonoids, of which 10 mg are catechins, 15 mg theaflavins, the rest being complex thearubigins. These would favourably affect tissue redox status, improve endothelial-derived nitric oxide bioavailability through enhancing synthesis, and prevention of rapid decay, via their antioxidant or estrogen-like potentialities.

No wonder, upon nullifying risks, a cup increase of intake would achieve a population-wide decrease of 2-3 mm Hg in BP that can contribute to a 17% decrease in risk of hypertension, 6% in the risk of CAD, and a 15% in the risk of stroke.

On the contrary, data from UK have pinpointed to an apparent positive relationship between tea drinking and CVD mortality. The paradox was reasoned to be related to the socioeconomic state of the consumers being those of higher [in most developed countries] vs of all socioeconomic states and particularly of lower socioeconomic attributes that themselves exhibit a higher prevalence of major CVD risk factors (smoking, hypertension, obesity and low levels of physical activity).

The message from this, is that tea drinking *per se*, may only be demonstrably CV protective only when in association with an overall healthy socio-lifestyle circumstances. The action to that, is our needs to identify the impact of everything in Egypt, not only with respect to tea, but to the global life modality patterns we live!!! as no one expects that any single food or drink item, personal trait, or socioeconomic state to improve health on its own.

J Agric Food Chem 2000;48:2848-52.

J Nutr. 2003; 2883-2886.

Br J Cardiol 2003; 10(4):281-286.

DIAGNOSTIC CONSIDERATIONS; CEREBRAL BLOOD FLOW [CBF]

In elderly hypertensives, cognitive and memory impairment is secondary to the vascular remodeling that reduce CBF in some but not all brain regions. This was assessed in varied studies by correlative neuropsychology tests [determining baseline memory & cognitive abilities] along with doppler ultrasound carotid artery examination, anatomic magnetic resonance imaging (MRI), and quantitative functional imaging using positron emission tomography (PET) with O^{15} as the positron emitter to assess respective involvement of brain areas. However, though such sophisticated diagnostic utilities could not be enrolled in routine testing, yet they point to the therapeutic need of elderly to antihypertensive drugs that are most likely to increase CBF specifically those that address vascular changes, such as CCBs, ACE inhibitors or ARBs.

Presented at 57th Ann. Fall Conf. & Sci. Sessions of Council for High BP Research in Assoc. with Council on Kidney in CVD; September 23-26, 2003; Washington, DC.



FROM OUR CORRESPONDENCE ► We have before announced that we are awaiting for communications that highlight research trends conducted in; Egyptian Local Institutes, Arab Countries, Middle East Province, or any part of the World linked to the problem of hypertension in the relevant territories. Till now no responders are on line and nobody has just clicked the net [ehs@link.net] and addressed it [**to the editor**]. Lets hope that this time, things will work. work.



* During last few months the EHS has started a **Cardiovascular Protection Forum** intended to promote every aspect and way that can help in prevention of cardiovascular disorders in our localities. The 1st meeting was held in Alexandria in September, its principle speaker was Prof. Dr. Mohsen Ibrahim who addressed “Assessment of cardiovascular risk” while the 2nd meeting was held in Cairo, its principal speaker was Prof. Dr. Mohamed Sobhy, who addressed "The International Guidelines for Prevention of Atherosclerotic Cardiovascular Disease”. The recommendations will be finally gathered and issued.

* The EHS is organizing its **8th Annual Scientific Meeting** from 7-9 April 2004, at Presidential Guards Club in Cairo. This year's chairman of meeting Dr. Soliman Gharieb, Prof. of Cardiology Cairo University stated that the meeting will highlight core researches on hypertension management and will shed light on their local application to achieve the best control rates among our Egyptian hypertensives. The meeting will also tackle problems of daily practice and will provide possible guides as to how and when to treat, common risk factors (e.g. stress, obesity, lipid profile abnormalities, patient non-compliance to therapy”.



CALENDAR:

 LOCAL MEETINGS		
3 rd meeting of EHS Cardiovascular Protection Forum	Movenpick Hotel, Luxsor, Egypt, December 25-26, 2003.	Secretary; Miss Rehab Mohamed Tel (202) 794-8877 - Fax (202) 794-8879
4 th meeting of EHS Cardiovascular Protection Forum; in reference to "Prevention of hypertension"	Conrad Hotel, Cairo, Egypt, 29 th January, 2004.	Secretary; Miss Rehab Mohamed Tel (202) 794-8877 - Fax (202) 794-8879
5 th meeting of EHS Cardiovascular Protection Forum; in reference to "Screening for sub-clinical disease in asymptomatic patient"	Helnan Hotel, Port Said Egypt, 18-20th March, 2004.	Secretary; Miss Rehab Mohamed Tel (202) 794-8877 - Fax (202) 794-8879
 INTERNATIONAL MEETINGS		
20 th Scientific Meeting of the International Society of Hypertension	São Paulo, Brazil, 15 - 19 February, 2004	
76 th Scientific Sessions of the American Collage of Cardiology	New Orleans, Louisiana USA, 7 – 10 March, 2004,	Heart House,9111 Old Georgetown Road, Bethesda, MD 20814-1699.Phone: (800) 253-4636, ext. 694 or (301) 897-5400 Fax: (301) 897-9745 .