

NEWS LETTER

Egyptian Hypertension Society



الجمعية المصرية لإرتفاع ضغط الدم

Volume 8

September 2003

ISSUE NO.3

THE PRESIDENT'S MESSAGE

THE BIRTH OF A NEW MEDICAL JOURNAL

Creating a medical journal in a developing country should not be a caprice or taken lightly. When the idea of a scientific journal for the Society was raised few years ago, I was skeptical. I thought it was premature for our young Society to have its independent journal and at that stage a quarterly newsletter is more than enough. Again when the subject was discussed at a recent EHS board of directors meeting, I hesitated realizing the burden and responsibility for this endeavor. I reflected upon a number of questions. Is our Society in need of a special journal? Will the scientific medical community in Egypt accommodate an additional periodical?

Who will be interested among his busy practice to consider reading a local medical journal in addition to the well-known international periodicals such as the Lancet, the New England Journal of Medicine, the Circulation, etc.? Do we generate enough scientific material of good quality, which is worth publishing in a separate hypertension and cardiovascular risk journal? How will the Society cover the costs for editing, printing, publication and distribution? Finally, who will take the difficult responsibility of editing the journal? While reflecting more on previous questions, contrary to expectations, I became less hesitant and gradually started to feel positively for this new journal.

Our Society needs its special scientific periodical. This will possibly be its most visible regular activity. It fulfils the main goal of our group when we thought of establishing the Egyptian Hypertension Society, nine years ago, physician education. The medical scientific community in this country needs a respectable, responsible journal, which presents a serious literature, critically reviewed and achieving international standards. Unfortunately, most of the current medical journals in Egypt lag behind the international community and survive at the margin of world medical science. It is unrealistic and beyond our resources at this stage to compete with the highly respectable international journals, however, most of these journals are not within the reach of the majority of the Egyptian readers. In a recent survey among Egyptian physicians, we found that in this country physicians get their information not from medical journals, but mainly from representatives of drug industry. It is important that our new journal besides publishing original contributions will provide a space for educational material covering problem solving, review articles, current concepts, medical progress, editorials, clinical practice and special articles.

The generation of high quality scientific material is a major problem in the developing world and will be a source of difficulty for the new journal. Scientific research does not come high on the list of priorities in the medical community. On the other hand, the large number of scientific institutions in Egypt and other Arab Countries in a population approaching 300 million should be an important source of scientific material .

→ Cont.

SCIENTIFIC INSPIRATIONS

Some now view, **HYPERTENSION** as a *nutritional-hygienic disease*; i.e. Long-term caloric intake in excess of energy expenditures, chronic supra-physiological intake of dietary sodium, excessive alcohol consumption, and psychosocial stressors.

J Am Soc Nephrol. 2003 Jul;14(7 Suppl 2):S92-8.

Others predict that in a year or 2, it's going to be hard to go to a meeting of **HYPERTENSION** without having *inflammation* tripping off of everyone's tongues in a very fluent way.

CME@webmd.net.- March 200.

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→ **Cont** An ambitious goal for the new journal is to stimulate medical research through provision of a new venue for publication and opening a window for the international community to inspect serious activities in the developing world.

Hypertension and other cardiovascular risk factors are emerging as major health problems in Egypt and many developing countries, a specialized journal covering these two areas can provide a new service to the medical profession in this part of the world.

The question of costs for printing and publication though, seems an important issue in a developing country, suffering serious economic setbacks turned to be the least significant problem. When I contacted Dr. Ahmed Zaghoul, Director of Astra-Zeneca in Egypt, he immediately approved sponsoring the necessary costs. The finance issue was solved over a phone call.

One factor, which helped changing my attitude, was the name of the first editor. Dr. Hussein Rizk, secretary general of our Society volunteered full of enthusiasm to take the difficult task of editing the new Journal. Dr. Hussein Rizk's, encyclopedic knowledge, seriousness, honesty and dedication among other virtues helped to booster my positive feelings for the new journal.

The Society, Dr. Rizk and my self are facing a serious challenge, the creation, birth and more importantly the survival of a new medical journal in our region. It is not a dream that the new journal will bring pride to our Society and to our country. It is not a dream that if successful, it will reach beyond the local Egyptian community to the Arab countries, Middle East, Mediterranean area and the whole world.

M. Mohsen Ibrahim, M.D.

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



TURNING CONCEPTS

" PREHYPERTENSION "

The new category, *prehypertension*, [SBP 120-139 or DBP 80-89 mm Hg] presented in the JNC7, is consider by some as a turning concept, being a ringing bell that tells us to take care about our life style. It gives a warning that if those continue on with; sedentary life, excess caloric, Na intake, alcohol consumption or tobacco smoking...etc, they will wined up of being hypertensives.

Defenders claim that this class was designated for 2 reasons:

1. Blood pressure[BP] increases steadily with age and most individuals will develop hypertension during their lifetime nless broad and effective preventive measures are implemented. This was clear in the Framingham Heart Study suggested that cleared individuals who are normotensive at age 55 years will have a 90% lifetime risk of developing hypertension.
2. A number of studies have indicated that the mortality rate for MIs, strokes, and other vascular disease increases progressively with a rise in BP levels, starting at 115/75 mmHg. i.e there is a doubling of the risk for CVD for every 20/10-mm Hg increment rise across the entire BP range, starting from that level.

Accordingly, about 22% of the adult population will fall into this prehypertension category and that only lifestyle changes to prevent the development of hypertension is recommended for these individuals. These include weight reduction, exercise, adoption of the Dietary Approaches to Stop Hypertension (DASH) eating plan, salt reduction, and limiting alcohol intake. Quitting smoking is also recommended for overall cardiovascular health. .

[Medscape Cardiology](#)05/19/2003

Offenders, questioned such new classification, believing that this new category will simply create anxiety in the general population i.e."creating more patients by fear."

They believe, that what JNC7 calls prehypertension, may be hypertension in diabetic patients or in patients after a stroke or MI, whereas it may be still considered normotension in patients with no additional risk factors. Thus, this category does not define anything; it only guesses at what might happen. because all those patients are not necessarily going to become hypertensive or develop CV morbid events. It is those latter, that should be the focus of all the therapeutic efforts, instead of creating a potential problem, with physicians now having to deal with almost 50% of the overall population, a situation that will reduce the impact of the message about treating hypertension.

They quoted the late Geoffrey Rose definition who referred to hypertension as "that level of BP at which and about which detection and treatment do more good than harm" and accordingly the critiques at the ASH [May 14-17, 2003], and ESH [June 13-17, 2003], were set.

To this point of time. the debate is still going on.

Compelling Indication	Initial Therapy Options
Heart failure	Thiazide-type diuretic, β-blocker, ACE inhibitor, ARB, aldosterone. antag.
Post MI	β-blocker, ACE inhibitor, aldosterone antagonist
High CVD risk	Thiazide-type diuretic, β-blocker, ACE inhibitor, CCB
Diabetes	Thiazide-type diuretic, β-blocker, ACE inhibitor, ARB, CCB
Chronic kidney disease	ACE inhibitor, ARB
Recurr. stroke prevention	Thiazide-type diuretic, ACE inhibitor

LOOKING UP IN THE GUIDES

Patients with hypertension and comorbid conditions are recommended to start treatment with those drugs that have been shown in clinical trials to be particularly beneficial for such conditions.

From the JNC7, JAMA. 2003;289

WHAT'S NEW

ANTIHYPERTENSIVE POTENTIALITIES OF;

Aspirin, regularly taken before bed in patients with mild untreated hypertension causes a significant reduction in mean ambulatory BP [decrease of 6.2 / 4.1 mm Hg in SBP/DBP]. This chronotherapeutic benefit of aspirin is as yet unexplained.

Hypertension. 2003 Jun;41(6):1259-67

Grape seed extract, when added to the diet, blunt hypertension in postmenopausal women, may be through being a phytoestrogen. It is suggested that by this, it can express caveolin-1 [protein regulating caveolar function] that is necessary for sensing the shear stress of blood by the endothelium and responding to it by producing NO, to lower the BP.

FASEB meeting, San Diego, USA, April 11-15, 2003.

Dark chocolate, consumption of 100 mg daily [containing 500 mg polyphenols and 480 kcal energy] significantly reduced SBP by a mean of 5.1 mm Hg and DBP by 1.8 mm Hg after 2 weeks. This effect does not exist if you take milk, or milk chocolate. The beneficial effect may be through the polyphenols present in high concentration in the dark type which has a potent antioxidant effect; enhancing NO release and preventing its rapid quenching in a way that lowers BP. This denotes that "the bitterer the better!"

JAMA. 2003;290:1029-1030.

Nature. 2003;424:1013

HYPERTENSIVE POTENTIALITIES OF;

Air pollutants, (particulate matter with aerodynamic diameter < 10 micrometers [PM10], CO, SO₂, and NO₂) were associated with 0.6, 3.4, and 3.7 mm Hg increase in SBP, DBP and in 24-hour mean BP respectively. This is not the only negative effect of air pollution exposure; proarrhythmic alterations in cardiac autonomic tone, high serum CRP levels, and alterations in blood rheology favoring coagulation have been identified indicating that they must be considered as risk factor for CV complications.

Eur Heart J. 2003;24(Suppl):353. Abstract 1851.

MOLECULAR REASONINGS;

OBESITY / HYPERTENSION LINK

Obesity (BMI 30) is an increasingly prevalent risk factor for the development of hypertension and CVD. Unraveling the molecular links has shown that beyond the genetic setups and predispositions, the behavior of adipocytes deserve some consideration specially the visceral subtypes.

At their cross-road, so many adipocytokines [TNF- α , NF κ B, interleukins, CRP, resistin, PIA-1 increase - adiponectin decrease], peptides [Ag-II, endothelin, leptin increase - ANP decrease] and metabolites [FFA, TG, small dense LDL, uric acid increase] have all been implicated in hypertension.

- **Directly**, the impact of these, is an increase in pressor burden with accentuation of vasomotor responses and alteration in all vascular structural components characteristic to the hypertensive phenotype.

- **Indirectly**, many of these adipocyte bi-products interplay on different central and peripheral insulin receptor signaling to shut down their autophosphorylation or their substrate anchoring and relay through different interlocking mechanisms that, will all in all, culminate, in development of insulin resistance, hyperinsulinaemia, glucose intolerance with or without progression into overt diabetes aside the existing dyslipidaemia. This in conjunction with the hyperleptinaemia, compensatory hypercortisolaemia,.... and concomitant activation of the SNS, the RAS, all delineate the neurohumoroendocrinal derangements in obesity that contribute to hypertension.

Haemodynamically, the consequent disruption of renal α_2 adrenoceptors and leptin receptors, implicated in renal pressure natriuresis, and the alteration in intraglomerular filtration pressure and autoregulation, will induce glomerular hyperfiltration and microalbuminuria, that will together contribute to the hypervolaemic state characteristic of such obese hypertensives.

With this molecular insight, there isn't a lot you can do about your age, race or heredity, but definitely there is plenty to offer in cutting the bonds linking risk factors as obesity to hypertension. So, weight reduction, aside controlling the BP and correcting the metabolic abnormalities, is one way to get through. The weight reduction, being achievable by behavior modification, diet, and exercise or by the use of anti-obesity medication. The BP reduction being via selection of antihypertensives with favorable metabolic profiles, whereby ACEISs, ARBs, CCBs, moxonidine and α -blockers, can all lower BP without worsening the metabolic abnormalities. What remains in this, is the lack of specific guidelines, that addresses the efficacy of such agents in reducing mortality in such obese hypertensive subsets. While awaiting for such guidelines to sprout, a new avenue is now being challenged that targets the metabolic-inflammatory juncture by agonists to PPARs or blockers to TNF- α , NF κ B...i.e with the realm of turning the molecular understandings to real therapeutic protective tools.

DIAGNOSTIC CONSIDERATIONS; BP MEASUREMENTS

In children, the use of oscillometric technique, underread SBP compared with auscultation with a mercury column.

Though home BP monitoring appears to help hypertensive patients to lower their BP, but the problem is that they often are incorrectly calibrated and sized, resulting in inaccurate readings.

The ambulatory BP monitoring can be applied to highlight the optimal time for antihypertensive medication to yield the best of its BP lowering. This new chronotherapeutic relevance is now reconsidered in many studies



FROM OUR CORRESPONDENCE

► From now onwards, 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. Just click the net [ehs@link.net] and address it [**to the editor**].



Last month has witnessed two important events, that the society has long dreamed of ;

* The first was the issue of the society's scientific medical journal, after many years of wise hesitance, that calminated into a judicious decision, which figured that, it is now optimum enough to encompass the need of our medical society for a respectable, responsible journal; providing space for educational material that raises serious local issues and poses relevant solutions to fit in original contibutions, that are critically reviewed and achieves international standards. The wisdom of nominating the knowledge, seriousness, honesty and dedication of Prof. Dr. Hussein Rizk, the secretary general of the Society, to be the first editor and the willingly ease of covering the finance by Dr. Ahmed Zaghoul, Director of Astra-Zeneca in Egypt, boosters strong feeling and hope that one of our society's dream is coming true.

N.B. Intructions for submission are on the web or can be achievable through other communication links to the society.

* The second pride to our society was establishing a web site that will introduce the society into the electronic era of administrative services such as registration for courses, application for membership, announcements for grants, current and coming scientific programs. This is beyond being; an educational tool to introduce literature service, book reviews, lectures, debates, guidelines and a link between the different members of the society within and the international community and organizations world wide. It will further be our window of the varied activities of the society and of its individual members. The efforts and dedication of its new editor Prof. Abdel Moniem Ibrahim, Professor of Physiology, Cairo University, has paved the way for this second dream to come true. The society, invites all members and guests to visit; www.ehs-egypt.net and is asking them to provide us with their suggestions, comments and remarks for the well fare, success and progress of this new activity.



CALENDAR:

 LOCAL MEETINGS		
1 st meeting of EHS Cardiovascular Protection Forum	Palestine Hotel, Alexandria, Egypt, 20th September, 2003.	Secretary; Miss Rehab Mohamed Tel (202) 794-8877 - Fax (202) 794-8879
1 st Hypertension Day.	Cairo Sheraton Hotel, Cairo, Egypt, 25th September, 2003.	Secretary; Mrs Amany Kandeel Tel (202) 794-8877 - Fax (202) 794-8879
2 nd meeting of EHS Cardiovascular Protection Forum	Hyaat Regency Hotel, Cairo, Egypt, 30th October, 2003.	Secretary; Miss Rehab Mohamed Tel (202) 794-8877 - Fax (202) 794-8879
 INTERNATIONAL MEETINGS		
76 th Scientific Sessions of the American Heart Association	Orlando, Florida, USA. 9-12 November 2003.	AHA Scientific & Corporate Meetings, 7272 Greenville Ave. Dallas, TX 75231-4596, USA. Fax: +1-214/706-5262 E-mail: sessions@heart.org