



WHL · NEWSLETTER

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

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Editorial

Blood pressure measurements obtained during pregnancy



Dr. Volker Homuth

Hypertension (HT) in pregnancy affects about 8% of all pregnancies and is the most common cause of maternal and fetal mortality and morbidity worldwide¹. Generally several forms are differentiated from one another. These forms are chronic essential HT occurring in a patient

who then becomes pregnant, gestational HT occurring in a pregnancy, but without proteinuria or signs of organ dysfunction, and pre-eclampsia, namely HT and proteinuria after the 20th week of gestation. In developed countries, the maternal mortality attributable to pre-eclampsia has declined. Pre-eclampsia primarily affects fetal well-being through intrauterine growth retardation, preterm birth, low birth weight, and perinatal mortality. Especially preterm birth increases the burden of immaturity, particularly developmental and neurological retardation².

An additional sequel of pre-eclampsia is an increased cardiovascular risk that affects the offspring and the mother. In terms of the offspring, the association may have to do with the fact that “low birth weight for gestational age” infants have increased risk of developing HT, diabetes, and premature cardiovascular disease, compared to infants not falling into this category^{3,4}. Most important in the management of pre-eclampsia is the early recognition of its presence. Fundamental to early detection are frequent blood pressure (BP) measurements and the determination of proteinuria.

The BP criterion for pre-eclampsia is the documented presence of values in excess of 140/90 mm Hg. BP measurements must be conducted in

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Special Feature

From the IFHA – International Forum for Hypertension control in Africa: Recommendations for prevention and control of hypertension and cardiovascular risk factors in Sub-Saharan Africa

The Need for a Common Set of Recommendations for Sub-Saharan Africa (SSA)

Available data from a few countries in Sub-Saharan Africa (SSA) highlight the increasingly importance of Non Communicable Diseases (NCD) in this region; and very few countries have taken steps to develop relevant policy programs to address this issue. It is likely that SSA is the only part of the world where cardiovascular diseases (CVD) are the least detected and treated in primary health care settings. Countries in SSA should be encouraged to establish country-specific recommendations for prevention and management of NCD (as already recommended by the World Health Assembly and the WHO Regional Committee for Africa) and much would be learned from a periodic review of such SSA recommendations.

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a standardized fashion in the sitting position. Supine measurements may be confounded by uterine compression of the inferior vena cava. The cuff must be adequate and appropriate in size. The examiner should rely on the Korotkoff V phase to determine the diastolic pressure, namely the complete disappearance of sounds⁵. During normal pregnancy, the diastolic BP decreases by 7–10 mm Hg, while the systolic value stays the same or decreases to a lesser degree. With the development of pre-eclampsia, BP increases and the expected diurnal variation is perturbed or even reversed with a nocturnal increase in BP. Thus, early morning values are less valuable and cannot be considered reliable for excluding the diagnosis.

A common confounding variable is the failure of the clinician to notice “white coat” elevations in BP. White coat HT is common during pregnancy and is responsible for almost one-third of women diagnosed with HT during pregnancy on an outpatient basis⁶. White coat HT in these women leads to faulty diagnosis and the erroneous prescribing of antihypertensive medications or unnecessary admissions to the hospital. Antihypertensive medications are not innocuous under these circumstances, but can lead to worsening of utero-placental perfusion and other side effects. Ambulatory 24-hr BP measurements have done much to minimize this faulty diagnosis and have decreased inappropriate prescription of medications. However, the devices used for this purpose should be verified in a cohort of pregnant women. Such verification has been provided for numerous ambulatory 24-hr BP devices⁷. However, for devices intended for home self-measurement, this verification is generally not yet available. Automated oscillometric BP measuring devices are commonly applied to allow the patients to follow their own BPs at home during pregnancy. These devices also are helpful in ruling out white coat HT and are valuable in determining the presence of or progression of pre-eclampsia, particularly in the second trimester of pregnancy. Frequent measurements at home, not possible in the office, may permit early detection of pre-eclampsia. The condition may develop rapidly in a fulminant fashion requiring only days or even hours. However, adequate patient education is extremely important for reliable measurements. Particularly for home devices, documented verification in a cohort of pregnant women is mandatory.

Such devices are now commonly sold in pharmacies “over the counter” and may not meet necessary standards. An example is the oscillometric devices which determine the BP at the wrist joint. These devices cannot be recommended. Verification of the device should be performed by an independent group. For example, several devices have been evaluated by the British Hypertension Society (BHS), the Association for the Advancement of Medical Instrumentation (AAMI), and the “Gütesiegel der Deutschen Hochdruckliga”. The manufacturer should not conduct the verification. A controlled study in a cohort of pregnant women should be conducted to compare the device in question with conventional BP measurements. Such studies could be the basis of guidelines regarding the value of home BP measurements during pregnancy.

In summary, BP measurement during pregnancy remains an extremely important part of prenatal care. However, the measurements are commonly erroneous. The measurements made by physicians or the physician’s staff, are oftentimes casual and not standardized. White coat HT is a common sequel. Measurements made by the patients themselves raise questions in terms of their training and in terms of the quality and verification status of the device employed. Improvements in both areas require additional training of personnel, physicians and nurses (midwives) alike. Mercury manometric measurements of BP are becoming a phenomenon of the past and will be replaced by automated, verified, devices⁸. The advantages of self-measurement, compared to measurements in the outpatient clinic, or compared to 24-hr ambulatory determination require additional clinical investigation.



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For references see last page. A complete list is available on the WHL website or from the editorial office in Berlin. *continued on page 4*

WHL Feature continued

The present recommendations for prevention and control of hypertension and cardiovascular risk factors in the SSA are in keeping with the recommendations of other major organizations. Important key points of our recommendations refer to:

1. BP measurement and clinical evaluation

BP detection and confirmation
Recommended devices
Evaluation – history, clinical examinations, routine laboratory investigations.

2. Management of high blood pressure and cardiovascular risk factors

Treatment goals
Lifestyle modification
Pharmacological treatment

3. Prevention of hypertension

Primordial prevention
Community Program for BP control
Secondary prevention

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Details of the recommendations and literature references will be available on the WHL website or from the editorial office in Berlin. ■

Report from Member Leagues

Control of obesity and hypertension in Bangladesh



Dr. R K Khandaker

Cardiovascular diseases (CVD) are an emerging health problem in Bangladesh. Surveys indicate that 15–20% of the adult population (18 years and above) in Bangladesh suffers from hypertension (HT). Literature attributes 70% of strokes, 24% of myocardial infarction and heart failure, and 11% of renal failures to HT in Bangladesh.

In June 1999, the **National Hypertension Committee** established an HT clinic in Dhaka, Bangladesh, to provide clinical care to the population with respect to HT and heart disease. Of the 857 HT patients registered in the clinic (from June 1999 to June 2003), 53% were male, 33% were smokers, 16% were diabetic, and roughly 5.6% were obese.

The Government of Bangladesh is providing HT treatment and preventive education through cardiac units in 14 different institutions through the National Institute of Cardiovascular Diseases and 13 Medical College Hospitals. To augment the work of the Government, the **National Heart Foundation of Bangladesh** is providing primary care and preventive education nationally, with the affiliation of philanthropic medical organizations, in 23 of the 64 administrative districts of Bangladesh.

The National Heart Foundation holds annual HT and CVD health camps in 23 districts. The focus of the camps is to provide treatment and preventive education related to HT and heart disease to the general population. Further, during the duration of the camp the regional medical doctors, nurses and other affiliated medical personal are trained in the detection and treatment of CVD and HT. A key feature is the prevention of HT by lifestyle modification and obesity control.

The National Heart Foundation, with the financial help of the World Health Organization, provides formal education (short courses ranging from one week to one month) in CVD treatment to doctors, both employed by the Government and the private sector. The National Heart Foundation also disseminates information related to the prevention of HT and CVD by holding informative discussion sessions in radio and television, by writing articles in the newspaper and scientific journals, and conducting national and international seminars.

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People

Professor Xavier Girerd has been elected President of the **French National Committee for the Control of Arterial Hypertension**. Secretary General is Dr. Jean-Jacques Mourad, Service de Médecine Interne, Hôpital Européen Georges Pompidou, 20 Rue Leblanc, 75908 Paris Cedex 15, France.
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Impressum

The objectives of the WHL are to promote the detection, control and prevention of arterial hypertension in populations. The World Hypertension League (WHL) is a federation of leagues, societies and other national bodies devoted to this goal. Individual membership is not possible. The WHL is a division of the International Society of Hypertension (ISH), and is in official relations with the World Health Organization (WHO).

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Calendar

WHL Regional Meeting with the Chinese Hypertension League

October 16–18, 2003
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World Congress on Cardiovascular Health: Preventing the Global Pandemic in Developing Countries

December 7–10, 2003
Accra, Ghana
Information: ISHIB; 2045 Manchester Street, NE, Atlanta, GA 30324-4110, USA
Fax: (+1) 404 875 6334
E-mail: ishib2003@ishib.org
Website: www.ishib.org

20th Scientific Meeting of the International Society of Hypertension

February 15–19, 2004
Information: Meeting Secretariat Soma
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Fax: (+55) 11 3062-1710
E-mail: hypertension@somaeventos.com.br
Website: www.hypertension2004.com.br

44th Annual Conference on Cardiovascular Disease, Epidemiology and Prevention

March 3–6, 2004
San Francisco, CA
Information: Scientific Conferences
American Heart Association
7272 Greenville Avenue
Dallas, TX 75231, USA
E-mail: scientificconferences@heart.org
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WHL Regional Meeting with the Czech Society of Hypertension: Community Control of Hypertension in Central and Eastern Europe

April 24, 2004
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