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Inaugural Clinical Conference of GHESKIO Centers on Cardiovascular Disease



Summary
Recommendations of the Working Groups
May 21, 2019

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Summary

On May 21, 2019, in Port-au-Prince, GHESKIO organized the Inaugural Clinical Conference on Cardiovascular Diseases in collaboration with the Ministry of Public Health of Population (MSPP), the Haitian College of Cardiology, the Haitian Foundation of Diabetes and Cardiovascular Diseases (FHADIMAC) and the Weill Cornell Medicine. The objectives of the conference were:

1. To establish a collaborative working group between Haitian and American cardiologists and internists focusing on clinical care and research on hypertension;
2. Produce guidelines on the management of hypertension for use in the cardiovascular clinic of the GHESKIO Centers;
3. Define research needs for cardiovascular diseases in Haiti.

As reiterated in the opening remarks pronounced by the Ministry of Health, represented by Dr. Reynold Grand Pierre, followed by Dr. Marie Marcelle Deschamps from the GHESKIO Centers Directorate, cardiovascular diseases remains the main cause of mortality among adults in Haiti. Speakers touched on the following topics throughout the conference program:

- The History of the US Hypertension Guidelines - Past, Present and Future - Dr. Suzanne Oparil
- Treatment of Hypertension in Special Populations - Dr. Ken Jamerson
- Hypertension Challenges in Haiti - Dr. Gerard Pierre
- Cardiac Insufficiency - Dr Rodolphe Malebranche
- Hypertension and salt - Dr. Mark Pecker
- Community-based hypertension care. - Dr. Monika Safford

In addition, the conference attendees broke into three working groups to develop primary-care guidelines for hypertension diagnosis, hypertension risk reduction and counseling, and hypertension treatment. Each group presented results for conference agreement.

Agenda

GHESKIO Inaugural Cardiovascular Clinical Conference

May 21st, 2019

Karibe Convention Center | Ginger Room

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|---------------------|---|
| 8:30 AM – 9:00 AM | Conference Registration and Welcome Coffee |
| 9:00 AM – 9:15 AM | Opening Remarks from the Haitian Ministry of Health
Dr. Pierre-Marie Reynold Grand Pierre, Director of the Family Health Unit, Haitian Ministry of Health |
| | Opening Remarks from the Directorate of the GHESKIO Centers
Dr. Marie Marcelle Deschamps, Deputy Director, Les Centres GHESKIO |
| 9:15 AM – 9:30 AM | Conference Objectives
Dr. Molly McNairy, Weill Cornell Center for Global Health |
| 9:30 AM – 10:30 AM | History of US Hypertension Guidelines: The Past, Present and Future
Dr. Suzanne Oparil, University of Alabama |
| | Hypertension Management in Blacks
Dr. Kenneth Jamerson, University of Michigan |
| 10:30 AM – 10:45 AM | Discussion and Questions |
| 10:45 AM – 11:00 AM | Hypertension Challenges in Haiti
Dr. Gérard Pierre, Haitian College of Cardiology |
| 11:00 AM – 11:15 AM | Cardiac Insufficiency at the State University of Haiti Hospital (HUEH)
Dr. Rodolphe Malebranche, Haitian College of Cardiology |
| 11:15 AM – 11:45 AM | Metabolic Diseases and Their Management Guides
Dr. René Charles, Haitian Foundation for Diabetes and Cardiovascular Diseases (FHADIMAC) |
| 11:45 AM – 12:45 PM | Working groups:
Review of GHESKIO's proposed guidelines for the following topics on hypertension and report on recommendations to the group |

a. Measurement and Diagnosis of Hypertension

- Facilitators: Dr. Pierre, Dr. Oparil

b. Lifestyle and Dietary Recommendations

- Facilitators: Dr. Charles, Dr. Shapiro

c. Hypertension Treatment Algorithms

- Facilitators: Dr. Malebranche, Dr. Jamerson, Dr. Pecker

1:00 PM – 1:45 PM

Lunch

1:45 PM – 2:30 PM

Hypertension and Salt Regulation

Dr. Mark Pecker, Cornell Hypertension Center

2:30 PM – 3:00 PM

Community Partnerships for the Management of Hypertension

Dr. Monika Safford, Professor of Medicine, Chief of Division of General Internal Medicine, Weill Cornell Medicine

3:00 PM – 3:45 PM

Working Groups:

Group discussion to reach consensus on guidelines and next steps
Facilitators: Dr. Warren Johnson and Dr. Gérard Pierre

3:45 PM – 4:30 PM

Future Research Priorities

Dr. Molly McNairy, Weill Cornell Center for Global Health

4:30 PM –

Conference Closure

Dr. Marie Marcelle Deschamps, Les Centres GHESKIO

Participants

Haitian Ministry of Health

- Dr. Pierre-Marie Reynold Grand Pierre, Director of the Family Health Unit, Haitian Ministry of Health

Haitian College of Cardiology

- Dr Gerard Dieudonné Pierre, President
- Dr Philippe Hughues Carrenard
- Scheyla Charlot
- Dr Brisma Jean-Pierre
- Dr Rodolphe Malebranche
- Dr Jean Robert Mathurin
- Dr. Jacques M. Pelletier
- Dr Claude Sam
- Dr Michel Théard

Haitian Foundation for Diabetes and Cardiovascular Diseases (FHADIMAC)

- Dr René N. Charles, President
- Dr. Keddy Moise, Head of Medical Clinic and Quality of Care

Weill Cornell Medicine

- Dr Daniel Fitzgerald, Director for the Center of Global Health
- Dr. Warren Johnson B.H. Kean Professor of Tropical Medicine
- Zena Basin
- Dr. Justin Kingery , Instructor of Medicine
- Dr Molly McNairy, Assistant Professor of Medicine
- Vanessa Rivera, BS, Research Assistant
- Grace Seo, BS, Research Assistant
- Dr Martin Shapiro, Professor of Medicine
- Dr. Katey Walsh, Instructor in Medicine
- Ms. Louise Walshe, Research Nurse

International Guests

- Dr. Kenneth Jamerson, Professor of Medicine, University of Michigan
- Dr. Suzanne Oparil, Professor of Medicine, University of Alabama
- Dr. Mark Pecker, Professor of Medicine, Weill Cornell Medicine
- Dr. Monika Safford, Professor of Medicine, Chief of Division of General Internal Medicine, Weill Cornell Medicine
- Dr Garly Saint-Croix, University of Miami

The GHESKIO Centers

- Dr Marie Marcelle Deschamps, Deputy Director
- Anaëlle Canez, Project Administrator

- Gennika Guirand, Executive Assistant
- Dr Bernard Liautaud, Physician, Head of Training
- Ms. Fabyola Preval, Research Nurse, Cardiovascular Disease Research Unit
- Dr Vanessa Rouzier, Physician, Head of Pediatrics
- Dr Rose Irène Verdier, Physician, Head of Clinics
- Dr. Jean Joscar Victor, Physician, Head of Cardiovascular Disease Research Unit

Haitian Global Health Alliance

- Scott Morgan, Executive Director

Proposed Primary-Care Guidelines VERSION 1.0

Recommendations and Comments from the Diagnosis of Hypertension Working Group 1

Group Members

- Dr. Suzanne Oparil, Professor of Medicine, University of Alabama
- Dr. Justin Kingery , Instructor of Medicine, Weill Cornell Medicine
- Vanessa Rivera, BS, Research Assistant, Weill Cornell Medicine
- Ms. Louise Walshe, Research Nurse, Weill Cornell Medicine
- Ms. Fabyola Preval, Research Nurse, Cardiovascular Disease Research Unit, Les Centres GHESKIO
- Dr. Jean Joscar Victor, Physician, Head of Cardiovascular Disease Research Unit, Les Centres GHESKIO

Recommendations

1. We recommend blood pressure be taken in the non-dominant arm three times with at least one minute between each reading after sitting in a quiet room for at least 5 minutes.
2. We do not require being alone for blood pressure measurement, only that the room be quiet.
3. We do not feel bilateral blood pressure measurement is necessary.
4. We recommend blood pressure measurement be taken in the standing position, at least one minute after standing, in patients ≥ 60 years of age to rule out postural hypotension.
5. We would err toward the current GHESKIO diagnostic threshold of 140/90 as we presume a large proportion of the population will have $< 10\%$ ASCVD risk. We recognize that ASCVD risk scoring is not likely feasible in the general clinic population. We also recommend that this should be continually reframed / reevaluated in the world literature context.
6. We recommend a diagnostic threshold of 130/80 for patients with CKD/DM/CAD. We recommend 140/90 for all other patients, including the elderly.
7. Out of office blood pressure measurement is recommended, if feasible. For research studies, it is also reasonable to add ambulatory blood pressure for selected groups.
8. We recommend the diagnosis of hypertension be made only after a follow-up visit, unless blood pressure is $> 180/100$ or the patient has an elevated blood pressure with symptoms, which may be considered diagnostic of probable hypertension at the first visit. The physician can treat the patient with medication on the same day as diagnosis or begin with lifestyle counseling.

Recommendations and Comments from the Hypertension Counseling Working Group 2

Group Members

- Dr Martin Shapiro, Professor of Medicine, Weill Cornell Medicine
- Dr. Monika Safford, Professor of Medicine, Chief of Division of General Internal Medicine, Weill Cornell Medicine
- Zena Basin, Weill Cornell Medicine
- Dr. Katey Walsh, Instructor in Medicine, Weill Cornell Medicine
- Grace Seo, BS, Research Assistant, Weill Cornell Medicine
- Dr René N. Charles, President, Haitian Foundation for Diabetes and Cardiovascular Diseases (FHADIMAC)
- Dr. Keddy Moise, Head of Medical Clinic and Quality of Care, Haitian Foundation for Diabetes and Cardiovascular Diseases (FHADIMAC)
- Scott Morgan, Executive Director , Haitian Global Health Alliance
- Gennika Guirand, Executive Assistant, Les Centres GHESKIO

Recommendations

1. Partnerships with micro and macro-level stakeholders are need for hypertension prevention and treatment:
 - a. Partnerships with the Haitian government: public health campaign
 - b. Partnerships with schools for long-term educational interventions
 - c. Public/media actors involved in population-based education campaigns
2. Continue to use community intervention programs tied to clinical services that target specific populations, utilizing the strong partnership GHESKIO already has with the community it serves
 - a. Use CHWs and utilize home visits to check medications, observe dietary behaviors, motivate patients and keep patients engaged in care without having to go to clinic
 - b. Use additional resources such as RN, community groups, successful patients, etc.
3. Money is a barrier but not an absolute barrier. Great gains in health have been achieved at GHESKIO and in Haiti without excess resources. Financial resources should be considered in low-resource settings for long term HTN care
4. Clinic staff should re-enforce counseling at each visit that salt is harmful, and medication is essential for blood pressure control.

Recommendations and Comments from the Hypertension Treatment Working Group 3

Group Members

- Dr Gerard Dieudonné Pierre, President, Haitian College of Cardiology
- Dr Philippe Hughues Carrenard, Haitian College of Cardiology
- Dr Rodolphe Malebranche, Haitian College of Cardiology
- Dr Jean Robert Mathurin, Haitian College of Cardiology
- Dr. Jacques M. Pelletier, Haitian College of Cardiology
- Dr Claude Sam, Haitian College of Cardiology
- Dr. Warren Johnson B.H. Kean Professor of Tropical Medicine, Weill Cornell Medicine
- Dr Molly McNairy, Assistant Professor of Medicine, Weill Cornell Medicine
- Dr. Kenneth Jamerson, Professor of Medicine, University of Michigan
- Dr. Mark Pecker, Professor of Medicine, Weill Cornell Medicine
- Dr Marie Marcelle Deschamps, Deputy Director, Les Centres GHESKIO
- Dr Bernard Liataud, Physician, Head of Training, Les Centres GHESKIO

Recommendations

Hypertension Regimen for Adults

1. First visit: If SBP > 140/DBP > 90, start first-line therapy amlodipine 5 mg daily
If SBP > 160/DBP > 110, start dual first-line therapy with amlodipine 5 mg daily and HTCZ 25 mg daily
 - a. Lifestyle counseling
 - b. Return in 15-30 days for BP check.
 - c. If stable thereafter, return to clinic every 2-3 months depending on patient's ability to travel to clinic
2. Second visit: If SBP > 140/DBP > 90, increase amlodipine to 10 mg
 - a. If SBP > 160/DBP > 110, increase amlodipine to 10 and add 2nd-line agent HCTZ 25 mg daily
 - b. Lifestyle counseling
 - c. Return in 1-2 weeks for potassium check
3. Third visit: If SBP > 140/DBP > 90, add HCTZ 25 mg daily
 - a. If SBP > 160/DBP > 110, add 3rd agent enalapril 10 mg
 - b. Lifestyle counseling
 - c. Return in 1-2 weeks of potassium check

Hypertension Regimen for Diabetics

1. First visit: If SBP > 130/DBP > 80, start first-line therapy Amlodipine 5 mg daily
 - a. Lifestyle counseling

- b. Return in 15-30 days for BP check
 - c. If stable thereafter, return to clinic every 2-3 months depending on patient's ability to travel to clinic
2. Second visit: If SBP > 130/DBP > 80, increase amlodipine to 10 mg
 - a. If SBP > 160/DBP > 110, increase amlodipine to 10 mg daily and add 2nd-line agent Enalapril 20 mg daily
 - b. Lifestyle counseling
 - c. Return in 1-2 weeks for potassium and creatinine check
 3. Third visit: If SBP > 130/DBP > 80, add Enalapril 20 mg daily
 - a. Lifestyle counseling
 - b. Return in 1-2 weeks of potassium check

Hypertension Regimen for Chronic Kidney Disease (CKD)

1. First visit: If SBP > 130/DBP > 80, start first-line therapy furosemide 20 mg bid
 - a. Lifestyle counseling
 - b. Return in 1-2 weeks for labs
2. Second visit: If SBP > 130/DBP > 80, add enalapril 10 mg daily
 - a. If SBP > 160/DBP > 110, add both enalapril 10 mg daily and amlodipine 10 mg daily
 - b. Lifestyle counseling
 - c. Return in 1-2 weeks for potassium and creatinine check

Hypertension Urgency Regimen

1. If SBP > 160/DBP > 110 AND symptoms of Hypertension (dyspnea, chest pain, headache): give patient the following 3 drugs:
 - a. Amlodipine 5 mg x 1
 - b. HCTZ 25 mg x 1
 - c. Enalapril 20 mg x 1

Monitor the patient for 1 hour and if pressure improves, send out on this 3-drug regimen with return in 1 week for laboratory and BP check.

Ongoing questions and comments for discussion:

1. Many participants felt the threshold for HTN treatment among patients with DM, CVD, or age < 55 should be 130/80. IN the US, age 55 and one co-morbid conditions will be high risk (ASCVD risk > 15%) and trigger the lower threshold.

2. Alternative diuretics to hydrochlorothiazide such as chlorthalidone and indapamide were discussed as more potent in lowering blood pressure and preventing CVD events than HCTZ. Some panel members recommended chlorthalidone over HCTZ if costing was the same. If cost was an issue, HCTZ was recommended in higher 50 mg dose in patients who do not respond to 25 mg.
3. There was discussion about use of ARB agent such as losartan rather than ACE inhibitor given ACE inhibitors have higher incidence of serious adverse events such as angioedema. Additionally, group discussed use of longer-acting ACE inhibitor such as lisinopril over twice daily options such as enalapril for adherence.
4. There was debate on use of furosemide as the first-line medication in CKD patients vs enalapril which is considered first-line for the protection of renal function.
5. When should patients return for follow-up care. Returning every 2-3 months for stable patients may be onerous. Younger healthier patients could be seen bi-annually. US panel participants reported seeing patients every 6 months in the absence of CVD complications.