

and this benefit was stronger among those with higher baseline CHADS₂ scores [Connolly SJ et al. *Circulation* 2009]. Further evaluation of this strategy is merited to establish the effect of dronedarone on stroke prevention.

Though warfarin may be efficacious for stroke prevention in AF, it does have some shortcomings, including adherence issues, high bleeding rates, and management challenges. Novel therapies, such as combination anticoagulant regimens and newer oral anticoagulants, may provide a safe and effective alternative to warfarin treatment. Antiarrhythmic medications may also offer practical solutions to stroke risk reduction and AF management. However, it is important to balance the options carefully to ensure that the therapeutic benefit outweighs the cost.

CV Health in the Caribbean

Risk factors that contribute to the development of cardiovascular disease (CVD) include smoking, hypertension, dyslipidemia, obesity, and impaired glucose tolerance. Many of these risks can be reduced with lifestyle modification (eg, improved diet and exercise); yet, the burden of disease remains high, particularly in the developing world. In an effort to address the global health challenge of CVD, the US National Institute of Medicine (IoM) released a report, illustrating the global evolution of this epidemic and offering recommendations to manage this growing problem.

C. James Hospedales, MD, MPH, Pan American/World Health Organization, discussed these preventive measures and policy approaches, suggested by the IoM, as well as potential barriers. Limited knowledge concerning the feasibility and effectiveness of CVD prevention policies and programs represents a challenge in this area. The lack of financial resources and infrastructure in low and middle income countries poses other obstacles that must be addressed. Competing health and development priorities also hinder regional and global support for these initiatives. Therefore, the IoM recommends building the knowledge base, creating local solutions that can benefit from global support, organizing resources, and forming collaborations to meet resource needs to overcome these challenges. The ultimate goal of the IoM report is to implement successful CVD programs and policies that will lead to a 2% annual reduction in death rates that are related to major chronic diseases.

Dr. Hospedales challenged the Caribbean Cardiac Society to help with this initiative as a leadership organization to advocate for cost-effective national and local policies

that promote health (ie, tobacco taxes and dietary salt reduction programs). Clinicians may strengthen the quality and breadth of these programs by educating clinical staff, joining national committees that promote CVD prevention (ie, Healthy Caribbean Coalition), and supporting local hospital initiatives. Concentration on a healthy workplace and the implementation of preventative models within individual practices may also encourage community support. Details regarding the IoM global CVD report are available at www.iom.edu/globalcvd.

In Barbados, CVD has been a leading cause of illness and death since 2003, with heart attack and stroke responsible for one-third of all deaths on the island. The economic burden of chronic noncommunicable diseases (CNCDs), such as CVD, compounds the problem and with CNCDs, treatment often does not result in a cure. Angela Rose, MSc, University of the West Indies Chronic Disease Research Centre (CDRC), Cave Hill, Barbados, discussed the impact of CVD on health in Barbados.

There are poor outcomes from CNCDs in Barbados. For example, one-third of patients who suffer an acute myocardial infarction (MI) die within 2 weeks. One-third of patients following an acute stroke die within 4 weeks. Additionally, CNCDs account for ~50% of disability-adjusted life-years in the Caribbean, resulting in a large reduction in labor supply and productivity, as most of those affected are of working age. The poorest people are at highest risk for CNCDs. Unfortunately, they are also less financially able to manage the burden of disease. The good news is that 80% of CNCDs are preventable with lifestyle and diet modifications. Therefore, prevention is crucial to ease the treatment issues that are currently faced in the Caribbean.

The Barbados National Registry (BNR) for CNCDs is an initiative of the Barbados Ministry of Health (MoH). The recently launched BNR is a national surveillance system comprising three population-based surveys and registries that are focused on stroke, acute MI, and cancer. Preliminary data have revealed an unmet need for preventative action and standardized interventions to disrupt the spiraling burden of CNCD in this region.

Another MoH funded initiative being implemented by the CDRC is the “Health of the Nation” study, a population-based survey which will evaluate the impact of acute MI and stroke on quality of life and the economy in the hopes of formulating a plan for future health care programs. MI and stroke survivors will be followed in order to evaluate regional access to rehabilitation services and improve diagnostic approaches. Medication compliance and the sources of risk factors will also be assessed to assist in the development of future intervention protocols. Ms. Rose

concluded that CVD may be a “looming disaster” for Barbados as we are currently focused on treatment (ie, the of the disease cycle). Prompt measures are needed to change this focus to more preventative measures. The Barbados MoH is starting to effect this change through its surveillance and research study efforts, which will provide valuable information for future action.

Emerging Options for the Management of Atrial Fibrillation

Atrial fibrillation (AF) is a major public health burden that affects 7 million patients in the US and Europe, and a growing number of patients worldwide. In this session, Augustus O. Grant, MD, Duke University School of Medicine, Durham, North Carolina, USA, focused on new treatment options for the management of patients with AF.

The goals of AF therapy include symptom reduction, improvement in quality of life, prevention of stroke and systemic arterial embolism, restoration of atrial transport function, reversal of the remodeling process, reduction in hospitalizations, and prolonged survival. Several treatment options are available to help patients achieve these goals, including rate-controlling drugs, antiarrhythmic agents, and antithrombotic therapy. Some patients may also be candidates for cardiac ablation.

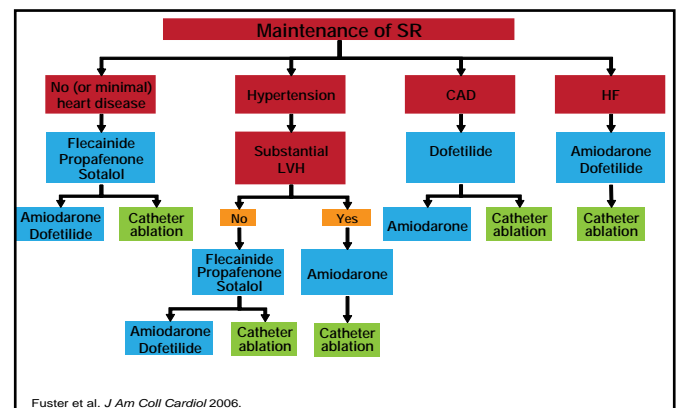
Treatment of AF typically begins with the selection of a rhythm control or rate control strategy. The Atrial Fibrillation Follow-up Investigation of Rhythm Management (AFFIRM) trial showed that patients who were assigned to rhythm control therapy tended to have a higher 5-year mortality than those who were assigned to rate control therapy (23.8% vs 21.3%; $p=0.08$) [Wyse DG et al. *N Engl J Med* 2002]. Patients who were treated with a rhythm control strategy also had a higher risk of hospitalization (80.1% vs 73.0%; $p<0.001$) and were more likely to experience adverse drug effects than those who were managed with rate control therapy.

Initial treatment strategies should be adapted to the unique needs of the individual patient. The benefits of a rate control strategy may not apply to all patients with AF, particularly younger patients without heart disease, patients in whom prior rate control therapy has failed, or patients with normal left ventricular function or no risk of stroke. Current guidelines provide algorithms for antiarrhythmic use in specific clinical conditions (Figure 1) [Fuster V et al. *Circulation* 2006].

New antiarrhythmic agents provide new options for improving outcomes in the management of AF. Dronedaron

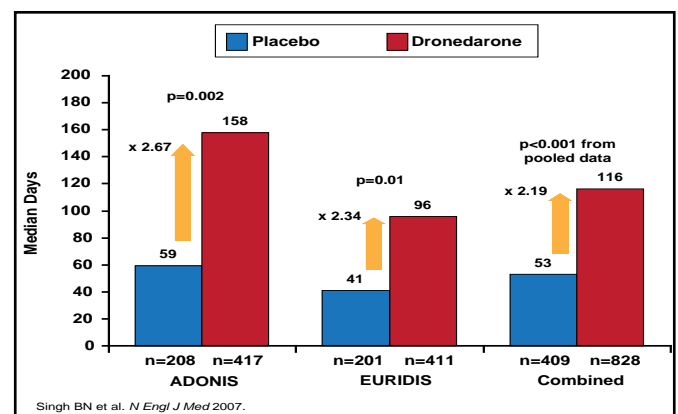
is structurally similar to amiodarone but lacks the iodine moiety. This structural change allows dronedaron to provide similar electrophysiological effects but without the thyroid and pulmonary toxicity that is associated with amiodarone therapy. Data from the European Trial in Atrial Fibrillation or Flutter Patients Receiving Dronedaron for the Maintenance of Sinus Rhythm (EURIDIS) and American-Australian-African Trial with Dronedaron in Atrial Fibrillation or Flutter Patients for the Maintenance of Sinus Rhythm (ADONIS) trials, as well as pooled data from both trials, show that dronedaron significantly delays the time to first recurrence of AF or atrial flutter compared with placebo (Figure 2) [Singh BN et al. *N Engl J Med* 2007]. In A Placebo-Controlled, Double-Blind, Parallel Arm Trial to Assess the Efficacy of Dronedaron 400 mg bid for the Prevention of Cardiovascular Hospitalization or Death from any Cause in Patients with Atrial Fibrillation/ Atrial Flutter (ATHENA), dronedaron significantly reduced the time to first cardiovascular hospitalization or death by 24% compared with placebo ($p<0.001$) [Hohnloser HS et al. *N Engl J Med* 2009].

Figure 1. Options for Maintenance of Sinus Rhythm in Patients with AF.



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Figure 2. Dronedaron Prolongs Time to First Recurrence of AF or Atrial Flutter.



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