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Simple actions focusing on research, prevention and treatment of heart disease in South Africa

Cardiovascular diseases, particular those related to atherosclerosis and hypertension, are often perceived to be problems unique to the “developed world”. However, in many regions of the world, active lives have been reduced to inactive ones with people consuming calories out of proportion to daily needs. New ways of processing food promote obesity and are a cause of the atherogenic load causing disease.

The use of technology in the form of novel drugs and devices, as well as surgical procedures, mitigates some of the consequences of this unhealthy life-style, albeit with the overall effect of palliation rather than cure. However, it is the repeated observation that vast differences in the amount of investment in health-care technology does not translate readily into measurable impact on public health statistics. Over the past decade, the global nature of many health problems has become much more evident, meaning that countries across the globe have started to adopt similar life styles, and with them a massive increase in cardiovascular risk factors. However, regions such as Africa are not prepared for this and need to find their own solutions for addressing this emerging epidemic. Treatment and prevention strategies will need to be adjusted for the region and the resource level. Current AHA/ACC/ ESC guidelines do not take into account the affordability of the treatment they recommend. However, pretending fiscal limitations are not real does very little to advance the efficient use of available resources based on evidence for a particular region. During the World Congress of Cardiology meeting in Barcelona, the Virtual Coordinating Centre for Global Collaborative Cardiovascular Research (VIGOUR) group held a symposium examining potential approaches to understanding and controlling the explosive worldwide growth of cardiovascular disease and its attendant morbidity and mortality (Mark DB et al.). The necessary action identified focused on major areas such as (i) the development of high quality data resources that can be used to study and improve the processes, treatment and outcome of CVD globally; (ii) the feasibility and resource/health economic implications; (iii) models /systems must be identified that can be used to guide effective interventions targeting health problems at an affordable price; (iv) academic research organizations need to assume a more active role in the health-care system, both through research and by developing evidence-based medicine along with translation of research findings into effective interventions that improve public health.

This special issue of SA heart is thus dedicated to a giving a glimpse into some of the cardiovascular research done in South Africa at present. Some of the articles refer to topics presented at the “Heart 2 Heart” meeting

and others to projects performed under the auspices of professional societies such as the Heart Failure Society of South Africa (HeFSSA).

Lee et al. presents data from more than 800 ECGs collected in 2006 from patients presenting with heart failure as part of the "Heart of Soweto study" aiming to use a tool that is inexpensive and accessible for screening and management.

The next article by Moolman et al. covers diagnostic aspects of more advanced rheumatic heart disease using a novel tool: measuring serum levels of natriuretic peptides (BNP and NT-proBNP).

Postpartum Cardiomyopathy (PPCM) is a common disease in South Africa and exposes women to high risk of mortality after delivery despite optimal medical therapy. In this issue Forster et al. summarize data from a collaborative project of the University of the Witwatersrand and Hannover University, Germany demonstrating that enhanced oxidative stress promotes the proteolytical processing of the nursing hormone prolactin into a biologically active derivative, the 16kDa prolactin, which appears to be a major cause for PPCM. This implies that inhibition of prolactin release with bromocryptine may represent a novel therapeutic strategy and in fact early clinical findings are supportive of this specific novel therapy for PPCM.

Dr Shirley Middlemost provides an excellent review on depression, a common problem in cardiac patients that is commonly ignored or not well managed by physicians and cardiologists. This article forms part of a new series, "Life with Chronic Heart Failure", initiated by the South African Heart Failure Society (HeFSSA).

I hope to see many more relevant simple or complex research projects investigating common cardiovascular conditions in Africa being published in the near future.

References:

I. Mark DB, Van der Werf FJ, Simes J et al.; Cardiovascular disease on a global scale: defining the path forward for research and practice. *European Heart Journal* 2007; 28: 2678-2684.