

A note on woman's cardiovascular health problems

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PERSPECTIVE

Cardiovascular disease (CVD) is a serious health problem for women in Southeast Asia that is under-recognized. With the exception of Singapore, the prevalence of cardiovascular risk factors such as hypertension, diabetes mellitus, dyslipidemia, physical inactivity, and being overweight or obese has increased dramatically among women in the region. The situation is exacerbated by a lack of understanding that CVD affects men and women, as well as misconceptions about the disease and a lack of appropriate, local materials health literature. National heart associations and other organisations have worked to raise heart health awareness and promote healthy lifestyles. Singapore began similar prevention efforts in the early 1990s and has seen a decrease in the prevalence of cardiovascular risk factors. In accordance with the Non-communicable Disease Alliance, the governments of the region have begun adopting suitable preventative initiatives and upgrading health-delivery systems. However, before these programmes can be completely implemented and successful, psychological, social, and cultural barriers to women's cardiovascular health awareness must be addressed. The most common cause of death in women is cardiovascular disease.

Historically, women have been under-appreciative of these dangers. There are significant disparities in the relative impact of risk factors, especially when it comes to the age of presentation. The female 'gender advantage,' which was once thought to be attributable to female sex hormones, has yet to be explained. The benefits of post-menopausal hormone replacement are likewise debatable. Risk can be lowered by rational risk-factor management, but there is still a disconnect between estimated risk and evidence of subclinical atherosclerosis, and a more proactive approach to risk reduction in women, in particular, may be necessary. The debate about the efficacy of statins in women is likely attributable to issues with meta-analyses rather than gender dimorphism.

Cardiac rehabilitation lowers cardiac risk, however women have been underrepresented in the programme, despite the fact that the benefits are same for both genders. Recent claims of "sex prejudice" in the treatment of cardiac disease draw attention to a more serious issue. Too little is understood about the biology of heart disease in women, or the causes for significant disparities in risk, prognosis, and treatment outcome—medical or surgical—between men and women. Half of the patient population could benefit from studies that are more focused on these issues. Ischemic heart disease (IHD) is frequently overlooked or misdiagnosed in women. As a result, many people who are at risk of negative outcomes are not given appropriate diagnostic, prevention, and/or treatment options. This under-recognition is due to sex-specific IHD pathophysiology, which varies from classic models based on data from men with flow-limiting CAD blockages.

Symptomatic women are less likely than males with similar symptoms to have obstructive CAD, and they are more likely to have coronary microvascular dysfunction, plaque erosion, and thrombus development. More widespread nonobstructive CAD involvement, hypertension, and diabetes are linked to significant adverse outcomes similar to those seen in obstructive CAD, according to new research. The concept of non-obstructive CAD as a source

of IHD and accompanying un-favorable consequences in women is a key emerging paradigm. This position paper covers existing information and knowledge gaps, as well as management choices that may be useful until further evidence becomes available.

Due of the participation of the mother and the baby, research in pregnancy is difficult since it involves a specific 'sensitive' population. These difficulties, which come with researching pregnancy in both normal and pathologic phases, have contributed to the paucity of pregnancy research. Until recently, the majority of pregnancy researches were nonrandomized and retrospective, reflecting current clinical practice and professional biases. Prospective studies were usually limited to single centres, had small sample numbers, and were observational rather than randomised studies that involved therapy. Barriers to research in pregnancy in developed countries include ethical and legal issues, research mandates, patient factors, the protracted nature of pregnancy, institutional commitment to research, interdisciplinary research and clinical collaboration, funding support, administrative issues, and the level of involvement of national cardiac and obstetric and gynaecological societies. Even prospective observational studies are difficult to conduct due to the challenges of gaining consent, recruiting participants, and following up.

Women's engagement in research has been hampered by misconceptions about it. Increased drop-out rates during pregnancy, as well as difficulty with follow-up in the post-partum state, have been caused by the longitudinal nature of prospective studies in pregnancy, problems associated with enrolling women before pregnancy and in the first trimester, and failure to understand the commitment required by the patient, as well as many social factors. Due to these issues, as well as a failure to supplement funding assistance due to lengthier study periods than planned, studies with limited sample numbers have been conducted. Understanding the reasons that lead to a patient's refusal to participate in research or their withdrawal after initial consent should make research involvement more appealing to pregnant women. National societies' involvement in multicenter study planning and funding, interdepartmental and interinstitutional collaboration, institutional and extramural funding support, and patient incentives are all critical for reducing study duration and ensuring adequate sample sizes for successful pregnancy research.

Multicenter collaboration for prospective studies is more possible in countries with national health service structures, such as those prevalent in Europe and Canada, than in nations with a fee-for-service system, such as the United States. Participation in prospective multicenter registries and the use of telemedicine and handheld ultrasound technologies could not only improve the clinical care of pregnant women in developing nations, but also provide a platform for research throughout pregnancy. Recently, multicenter and even global registries backed by European cardiac societies have emerged, bringing much-needed data on pathological conditions such peripartum cardiomyopathy and pregnancy in congenital heart disease. Such studies are generally limited to non-US countries, but they are increasingly attracting participation from developing nations. Pregnancy in connective tissue illnesses, older women, post-chemo radiation therapy or organ transplantation, and in the HIV condition are all areas where research is lacking.

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