South African heart failure patients younger, female

Study highlights:
• In South African, heart failure affects younger patients and women more than expected and more than a quarter have an unusual form of heart failure.
• Researchers cited uncontrolled hypertension, air pollution and urban lifestyle which includes inactivity and eating processed, high-salt foods.
• This study may give insight into what Western countries could expect because of the obesity epidemic.

DALLAS, Nov. 25, 2008 — Heart failure patients in Soweto, South Africa, are more likely to be middle-aged and female compared to patients in Western nations, researchers report in *Circulation: Journal of the American Heart Association.*

Results of The Heart of Soweto Study present a more complex picture of fighting the disease in urban Africa than researchers expected.

“The overall number of cases is far larger than we expected for Africa,” said Simon Stewart, Ph.D., lead author of the study. “Secondly, there was a predominance of younger adults and women — unlike those seen in the Western World — that will require us to develop unique primary and secondary prevention strategies.”

The major contributing factors to heart failure in Soweto were uncontrolled hypertension, valve disorders and increasing urbanization, researchers said.

As more rural South Africans move to urban centers and more money enters urban communities such as Soweto, etiologies of heart failure such as diabetes, obesity and high blood pressure mimic those of wealthier societies, Stewart said.

“The underlying background of this study is the epidemiological transition in many urban regions in Africa, including Soweto, where the double threat of malnourishment and infection have now been joined by more affluent pathways to disease,” said Stewart, who runs the Preventative Cardiology Unit at Baker IDI Heart and Diabetes Institute in Melbourne, Australia.

The township of Soweto is one of Africa’s largest urban concentrations of black Africans and its residents are becoming more affluent.

The study is the most comprehensive report on heart failure in Africa; the sub-analysis focused on the 844 newly diagnosed heart failure cases (43 percent of the total cases) identified. It found that:

• Eighty-eight percent of the new heart failure patients were black Africans.
• Their average age was 55, and 57 percent were women.
• About 90 percent had at least one cardiovascular risk factor — with hypertension being the most common (60 percent).
• Twenty-seven percent of patients had right heart failure (reduced pumping ability in the right heart chambers).

“These data confirm that black African patients are particularly vulnerable to heart failure caused by untreated high blood pressure,” Stewart said.

He noted that isolated right heart failure is rarely seen in the Western countries including the United States. Usually, right heart failure is secondary to left heart failure. Surprisingly, 27 percent of patients had right heart failure in this study, which is more than 10 times greater than that reported in the United States and other developed countries, and a significant proportion were isolated, either due to COPD or to indeterminate causes.

“Given the very high number of cases of isolated right heart failure reflecting damage to the pulmonary vessels and lungs, even in non-smokers, it is likely that air pollution — both occupational and domestic — plays a leading role,” Stewart said. “This will require major public health initiatives, particularly as Soweto, like many other developing regions including China, suffers from major air pollution. The treatment of this form of heart failure is underdeveloped

and will require further research."

Because of the number of women with heart failure is increasing, Stewart said gender-specific programs for screening and managing heart failure in Soweto should be a priority. The study found that women with new cases of heart failure were about three years younger than men, which researchers said may be attributed to pregnancy-related heart failure, as post-partum cardiomyopathy occurs more frequently in black African women.

The study, with its increase in ischemia-related heart muscle disease, also offers insight into potential future implications of the increase in obesity found in the United States and other developed countries. "It is possible, with the emergence of a new epidemic of obesity, diabetes and uncontrolled hypertension, that the United States will also see more younger patients with advanced heart disease," Stewart said.

The findings also could indicate health issues that may arise in other developing societies as people move to more populated metropolitan areas and start eating more processed, high-salt foods and become less physically active.

"We need to raise awareness of heart health and disease in these communities," Stewart said.

"Ultimately, we have to catch patients earlier in the disease process and strengthen prevention programs. Whether this is achievable with limited resources is the key question."

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Editor's Note: The American Heart Association is raising awareness of heart disease in women globally.

Go Red For Women initiative materials have been made available in South Africa via a partnership with the World Heart Federation. For more information visit: http://www.world-heart-federation.org/what-we-do/go-red-for-women.

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