# WOMEN'S CARDIOLOGY. The essence of a chapter dedicated to women's cardiology 

# CARDIOLOGÍA DE LA MUJER. La esencia de un capítulo dedicado a la Cardiología de la mujer 

Karen A. Dueñas C ${ }^{\text {a,b,* }}$<br>${ }^{\text {a }}$ Women's Cardiology Chapter 2018-2019. Bogotá, Colombia<br>${ }^{\mathrm{b}}$ Heart Valve Clinic, Fundación Cardioinfantil-Instituto de Cardiología. Bogotá, Colombia

Received 14 December 2018; accepted 14 December 2018

## "We need to be the change we wish to see in the world." Mahatma Gandhi

Heart disease is the first cause of morbidity and mortality in the world and in Colombia. ${ }^{1,2}$ Over the last decades, mortality due to heart disease decreased significantly, with a modest reduction in women and a more marked one in men. However, 2018 statistics show a new increase in mortality in recent years. ${ }^{1}$ Furthermore, paradoxically, while deaths due to myocardial infarction decrease, there is an alarming increase in heart failure cases.

The study of the global burden of disease for Colombia in $2017^{2}$ establishes heart disease as the main cause of death, and gives a mortality rate for women of $130.8 / 100,000$ inhabitants. In 2016, 16,827 were reported to have died due to heart disease, which is equivalent to 46 women/day. The most recent vital statistics report from DANE ${ }^{3}$ [the Colombian National Department of Statistics] for January-

[^0]September 2018 registered 18,320 deaths due to heart disease, of which 8,307 were women ( $45.4 \%$ ).

Heart disease is different in men than women, not just due to sex but also to gender, as it is not only a matter of biological differences, but also differences in roles, cultural norms, and societally influenced behaviors. ${ }^{4}$ In the context of an acute coronary syndrome, women have greater mortality both in-hospital and during the first year, as well as a higher incidence of cardiogenic shock and heart failure, longer time intervals between arrival at the hospital and interventionist treatment, and fewer revascularizations. This final point is due to the fact that although obstructive epicardial atherosclerotic disease continues to be the basic cause of myocardial infarction for both sexes, the plaque characteristics are different in women, and studies show a greater prevalence of microvascular disease. ${ }^{5,6}$

One of the greatest fears in a woman's life is breast cancer, which accounts for one out of every 30 womens deaths per year. However, one out of every four deaths in women derives from heart disease. In other words, more women die from heart disease than from all cancers combined. ${ }^{1,5,7}$ In this regard, the relationship between heart disease and breast cancer is highlighted, since they have common risk factors such as smoking, obesity, a sedentary lifestyle and
diet; and on the other hand, some cancer treatments have side effects which increase the risk of heart disease by causing cardiotoxicity leading to heart failure, which is only reversible in some cases. ${ }^{7}$

In view of this reality, the following questions are posed: Knowing that heart disease is the main cause of death in women and that $80 \%$ of cases are considered to be preventable deaths, where is the action gap? Is it in woman's lack of knowledge regarding their risk of disease, leading to risk factors not being modified? Is it that we, the healthcare workers in charge of caring for womens health, still do not establish gender differences in care?

An answer to this question has been attempted. The first survey on awareness of heart disease in women ${ }^{8}$ was carried out in the United States in 1997 by the American Heart Association (AHA) as part of the «Go Red for Women» strategy. In its first results it showed that $30 \%$ of women considered heart disease to be their main cause of mortality.

Since 2005, in Colombia, the Sociedad Colombiana de Cardiología y Cirugía Cardiovascular [Colombian Society of Cardiology and Cardiovascular Surgery] has spearheaded the topic of heart disease in women, and in 2008 it carried out the first survey on the perception of womens heart disease ${ }^{9}$, documenting that $10 \%$ of the women surveyed considered heart disease to be their main cause of death, and only 4\% considered it to be their main health problem. In light of this, the Society has worked together with the Fundación Colombiana del Corazón [Colombian Heart Foundation] since 2009 in the "Act with a Womanś Heart"' program. Likewise, the Womens Committee was established in 2014, the Womenś Chapter was organized in 2016, and subsequently the second survey on perception of woman's heart disease in Colombia was carried out.

The 2017-2018 measurement II survey was carried out by the Centro Nacional de Consultoría [National Consulting Center] with support from the Sociedad Colombian de Cardiología [Colombian Society of Cardiology], and a sample of 1,000 women between the ages of 21 and 64 years was obtained in the country's main cities. The survey showed that only $10 \%$ considered heart disease as a cause of death and only $3 \%$ considered heart disease to be the main health problem. As can be seen, there were no changes over the last nine years in perception of the disease. It is also surprising that $67 \%$ of the women surveyed stated that they had not seen or heard information regarding heart disease in women, and $77 \%$ of the women surveyed stated they had not heard anything regarding heart failure. A significant disassociation between the perceived and real risk is therefore evidenced.

The survey was also applied to 222 medical and nursing students in their final year of studies in the countrys main universities. One third (35\%) considered heart disease to be a cause of death and only $7 \%$ stated that heart disease was the main health problem in women.

The conclusion is that there has been a very poor perception of the magnitude and seriousness of this problem in our society, not just among women, but even among the physicians who treat them, and, especially the media. This is a critical point, since most women cite the media as their main source of information. We must recognize that, so far, the campaigns designed to improve the available information have had modest results.

Women are not aware of the risks associated with heart diseases, which greatly impact their quality of life and that of their families. However, blaming women for not being informed does not appear to solve the problem, especially when many have no way of knowing they are at risk: the middle-aged runner who drops dead during her morning run; the housewife who experiences shortness of breath during her daily activities and attributes it to feelings of anxiety; or the large number of women whose condition is misdiagnosed by physicians who do not recognize that heart disease symptoms vary by gender. These women are definitely not the only ones responsible for their condition, which may be as silent and lethal as any cancer.

In our country there are significant disparities between various subgroups of women, particularly those who are at a social disadvantage due to race, ethnic background, income level and education; and they are not adequately represented in clinical studies. All of these factors have an unfavorable impact on the diagnosis, prevention and treatment strategies of at-risk women.

It would seem to be easy to convince a college educated woman to begin exercising, eat a healthy diet and prevent heart disease, but there are far fewer options for people from a lower social and academic status who frequently do not have access to information, are subjected to greater psychosocial stress and in addition have little access to healthy foods, as they increase family costs. It is paradoxical that our leaders should be currently discussing how to tax the basic family food basket.

In order to counter this situation with concrete actions, "CardioMujer" was launched. This is an initiative spearheaded by the Womens Cardiology Chapter of the Colombian Society of Cardiology and Cardiovascular Surgery which seeks to raise awareness regarding the real risk of heart disease in women, provide the necessary information to foster a heart self-care culture, empower Colombian women regarding the consequences and impact of these medical conditions, and thus reduce the incidence and prevalence of these diseases.

The challenges we face are to:

1. Educate the population through mass education campaigns and social networks.
2. Propose a cardiovascular curriculum with a gender focus in medical and nursing schools.
3. Work together with the healthcare teams providing direct care for women (primary care, gynecology, emergencies, etc.).
4. Foster academic research in the country regarding womenś heart disease.
5. Propose public health policies which will contribute to adequate cardiovascular healthcare for women.

Thus, we are all called to make the change we want to see in our setting.

## Conflict of interests

None.

## References

1. Benjamin EJ, Virani SS, Callaway CW, Chamberlain AM, Chang AR, Cheng $S$, et al. Heart Disease and Stroke Statistics- 2018 Update. Circulation. 2018;137:e67-492, http://dx.doi.org/10.1161/CIR. 000000000000558.
2. Castañeda CA, Chaparro PE, Cortés KP, Vargas GA, Díaz DP, Cárdenas LM, et al. Carga de Enfermedad por Enfermedades Crónicas No Transmisibles y Discapacidad en Colombia. V Edición. Observatorio Nacional de Salud. Bogota, Colombia<, 2015. Informe Técnico. Consultado el 30 noviembre de 2018. Consultado: 22 de noviembre de 2018. Disponible en: https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/ RIDE/IA/INS/informe-ons-5.pdf.
3. Departamento Nacional de Estadistica (DANE). Censo Nacional de Población y Vivienda Colombia 2018 Resultados preliminares. [Acceso 09 Dic 2018]. Disponible en: https://www.dane.gov.co/.
4. Aggarwal NR, Patel HN, Mehta LS, Sanghani RM, Lundberg GP, Lewis SJ, et al. Sex differences in ischemic heart disease, Advances, obstacles, and next steps. Circ Cardiovasc Qual Outcomes. 2018;11:e004437, http://dx.doi.org/10.1161/ CIRCOUTCOMES.117.004437.
5. Mehta LS, Beckie TM, DeVon HA, Grines CL, Krumholz HM, Johnson MN, et al. Acute myocardial infarction in women. A scientific statement from the American Heart Association. Circulation. 2016;133:916-47, http://dx.doi.org/10.1161/ CIR. 0000000000000351.
6. Anchique C, Olmos P, García M, Urrea JK, Svatikova A, Hayes SN , et al. Cardiología de la Mujer. Rev Colomb Cardiol. 2018;25(1):1-153.
7. Mehta LS, Watson KE, Barac A, Beckie TM, Bittner V, CruzFlores S, et al. Cardiovascular disease and breast cancer: where these entities intersect: a scientific statement from the American Heart Association. Circulation. 2018;137:e30-66, http://dx.doi.org/10.1161/CIR.0000000000000556.
8. Mosca L, Hammond G, Mochari-Greenberger H, Towfighi A, Albert MA. Fifteen-Year Trends in Awareness of Heart Disease in Women: Results of a 2012 American Heart Association National Survey. Circulation. 2013;127(11):1254-63, http://dx.doi.org/10.1161/CIR.0b013e318287cf2f.
9. Sociedad Colombiana de Cardiología. Capítulo Cardiología de la mujer. Centro Nacional de Consultoria. Bogota 2008. Encuesta mujer y enfermedad Cardiovascular 2008. [Acceso 22 Nov 2018]. Disponible en: http://scc.org.co/comunidad/cardiologia-de-lamujer/.

[^0]:    DOI of original article:
    https://doi.org/10.1016/j.rccar.2018.12.001

    * Corresponding author.

    E-mail address: kdueñas@cardioinfantil.org

