Bol Clin Hosp Infant Edo Son 2008; 25(2): 129-133

This is How a Heart Breaks: Mexican Women Disparage Ischemic Heart Disease.

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ABSTRACT

In spite of ischemic heart disease is the second cause of death in Mexican females, and Sonora is one of the most affected entities in the country, there is a gap in preventive and medical care efforts to deal with the rampant increase in prevalence of such a disease among Mexican women. This essay briefly discusses some factors that might contribute to underestimate the magnitude and importance of the problem. It aims to foster future discussion on this topic at the local level.-

Key Words: Ischemic heart disease. Women. Mexico.

RESUMEN

No obstante que la enfermedad isquémica del corazón es la segunda causa de muerte en mujeres Mexicanas, y que Sonora es una de la entidades más afectadas del país, existe un hueco en los esfuerzos preventivos y de atención médica que se han establecido para lidiar con el acelerado incremento en la prevalencia de esta enfermedad entre este grupo poblacional. Este ensayo discute brevemente algunos de los factores que pueden contribuir a la subestimación de la magnitud e importancia del problema. Se pretende impulsar futuras discusiones a nivel local sobre el tema.

Palabras Clave: Enfermedad isquémica cardiaca. Mujeres. México.

Burden and magnitude

Throughout history, a woman's heart has been the primary target of discussion in all but one sort of art: the art of medicine. Whether the heart aches or not is merely a matter of personal perception. The fact is, the heart does suffer from illness; illness that is literally killing women. And while most Mexican females are aware of the high incidence of cancer today, they have no idea there is a greater silent killer: ischemic heart disease. The American Heart Association refers to coronary heart disease as the category that includes acute myocardial infarction, other acute ischemic heart disease, angina pectoris, atherosclerotic cardiovascular disease, and all other forms of chronic ischemic heart disease[1].

The most common cause of death in Western cul-

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ture is ischemic heart disease[2]. Mexico is no exception; this condition is the second cause of death in Mexican females, accounting for 10.6 percent of total female deaths over a year, just after diabetes mellitus which is the leading cause of death in this group. The state of Sonora is one of the most affected entities in the country; out of 100,000 women approximately 7,460 die every year due to ischemic heart disease: its death rate is 21.6 points higher than the national rate, making Sonora the fourth runner-up[3].

Ischemia refers to the absence of oxygen due to insufficient perfusion caused by an imbalance in the heart's supply and demand of this vital gas. The most frequent cause of myocardial ischemia is the presence of coronary atherosclerosis, a condition in which elevated low-density plasmatic lipoprotein, reduced high-density lipoprotein, tobacco, hypertension and diabetes mellitus alter the normal functions of vascular endothelium[4].

As it is known, cholesterol accumulates beneath vascular endothelium in several points throughout our body. Over time, fibrous tissue penetrates the areas of cholesterol deposits and therefore become calcified, leading to the formation of atherosclerotic plaques. These plaques protrude into the vessel lumens partially blocking blood flow. Gradually, the plaques may become bigger until blood flow is completely blocked. Unfortunately, the first centimeters of the major coronary arteries are a very common site for atherosclerotic plaques to develop, making atherosclerosis the main cause of decreased blood flow[2].

Acute coronary ischemia resulting in myocardial infarction is the result of either acute coronary occlusion or heart fibrillation. Acute occlusion of a coronary artery most frequently occurs in a person who already has underlying atherosclerotic coronary heart disease. The atherosclerotic plaque can cause a local blood clot called a thrombus, or a coronary embolus, which in turn occlude the artery. Many clinicians believe that local muscular spasm of a coronary artery resulting from direct irritation of the smooth muscle of the arterial wall by the edges of an atherosclerotic plaque can also occur, leading to secondary thrombosis of the vessel[2].

On the other hand, congestive heart failure, which is a form of chronic ischemic heart disease, is the result of progressive weakening of the heart's pumping ability due to insufficient perfusion over time; death may occur over a period of weeks to years[2].

Role of isk factors

Some people have a genetic predisposition to coronary heart disease; however, most of the time this pathology develops in those who eat meals with a very high content of saturated fats and lead a sedentary lifestyle[2]. Ischemic heart disease is thus associated with several potentially modifiable risk factors.

INTERHEART, a case-control study of 52 countries including Mexico, established there are nine specific factors responsible for more than 90 percent of the risk of an initial acute myocardial infarction[1]. The nine factors are cigarette smoking, abnormal blood lipid levels, hypertension, diabetes, abdominal obesity, lack of physical activity, low daily fruit and vegetable consumption, alcohol overconsumption and psychosocial health index.

The metabolic syndrome is a term used to describe a clump of risk factors associated specifically with cardiovascular disease and type II diabetes[1]. The metabolic syndrome is diagnosed in women when three or more of the following five risk factors are present: elevated fasting plasma glucose, low levels of high density lipoprotein, high levels of triglycerides, waist circumference of 88 centimeters or more, high blood pressure, or drug treatment for hypertension. Women with metabolic syndrome are approximately 1.5 and two times more likely to develop cardiovascular heart disease. In the United States, coronary heart disease accounts for 52 percent of all cardiovascular diseases[1].

Mexican Americans have the highest age-adjusted prevalence of metabolic syndrome; among Mexican Americans, women have a 26 percent higher prevalence than men[1]. Therefore, it is not a surprise the northern states of Mexico have the highest female death rates in the country due to ischemic heart disease[3]. It is well-known that people living in the border states have adopted a similar lifestyle to that of Americans: high consumption of fast food and sedentarism. Globalization has brought powerful fast food chains to our country, which indeed means 'tasty' and cheap food is easily available to most people. Mexicans are embracing American diet practices while keeping traditional high fat Mexican foods in their diet. Moreover, not enough individual and populational capabilities exist to deal with the burden posed by such practices.

Why do Mexican Americans have a higher prevalence of metabolic syndrome than other Americans? Some researchers have pointed out that the Mexican American population has grown more rapidly than other populations since 1990, so that the increase in prevalence would be just a consequence of it[5]. Is it the same reason for such a pattern in Mexican women living in the country? It is speculated a different explanation exists, more contextual than individual that might be related to social class or socioeconomic position.

Without a doubt, Mexico has one of the highest prevalence worldwide. A question stems from the previous fact: who are the people suffering a more deleterious

impact? It is believed people with the highest prevalence of disease are the people who have the less money to deal with it.

Developing countries are now adopting the same patterns of nutrition as developed countries, despite having a very low total health expenditure[6]. This year, the estimated direct and indirect cost of coronary heart disease in the United States is 156.4 billions of dollars[1], whereas Mexico is still struggling for resources to provide basic health care for its population.

As it is mentioned before, one of the mayor risk factors for ischemic heart disease and all other forms of chronic disease is obesity. The prevalence of overweight adolescents in Mexico is 19.8 percent; 18 percent of boys and 21 percent of girls are now dealing with weight issues[7]. The increasing incidence of obesity in developing countries, especially among female adolescents, means more upcoming cases of metabolic syndrome, therefore leading to an increase in chronic diseases including ischemic heart disease amid women. A rise in chronic disease morbidity obviously creates an immense burden for public health in countries with a low income, leading to more social and economic problems that the country cannot efficiently deal with.

Apparently, the main cause of death in Mexican females is diabetes mellitus[3]. The fact is, diabetes mellitus is a major risk factor for ischemic heart disease if not the main cause. Most women whose death is attributed to diabetes have an underlying condition of severe atherosclerosis and coronary artery damage, meaning they suffer chronic ischemic heart disease such as angina pectoris. Then again, female ischemic heart disease constitutes a much greater problem than what it seems.

Current and future issues about heart disease among women

Coronary heart disease should no longer be considered as a health issue concerning only postmenopausal women. Even though it is well-known estrogen plays a very important role in keeping a woman's heart healthy, it is not the only determinant in heart disease after menopause. Women who are capable of maintaining healthy cholesterol levels throughout their life are not as affected by the lack of estrogen protection after menopause as women who do not[8].

The rise in female adolescent obesity as well as stress and tobacco use associated with the female population's recent incorporation to the work force have also influenced the increased incidence of risk factors for heart disease in younger women. According to a study carried out by the Department of Endocrinology and Metabolism of the Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán in Mexico City, the age-adjusted prevalence of metabolic syndrome in 2003 was 26.6 percent in people aged 20-69 years, with 35 percent of affected cases under forty years of age[9]. The easiest way to address increased morbidity, and therefore mortality, due to coronary heart disease comes from preventing the manifestation of risk factors at an early age.

Prevention is a difficult word to approach in developing countries such as Mexico. Whereas developed countries are able to finance health promotion, low- and middle-income countries spend their money dealing with a double burden of disease: We are still facing problems of infectious disease and undernourishment at the same time chronic disease and obesity are rapidly making their way up the statistics[10]. Anyway, are the few resources available being used in the best possible way?

While ischemic heart disease represents the second cause of death in Mexican women, there is a greater concern among these females in the prevention of cervical and breast cancer. Ischemic heart disease contributes with 23,508 female deaths each year, whereas cervical and breast cancer together account for 8,490 deaths approximately[3]. It is not about paying less attention to cancer, but considering the growing necessity to attend cardiovascular health in women.

Hard to understand, but Mexico still does not have enough health programs or campaigns promoting cardiovascular health. The Ministry of Health (Secretaría de Salud) has eleven radio spots and six television spots promoting reproductive health, including cervical and breast cancer prevention, but not one promoting a healthy heart for females[11].

Historically, women have always been concerned for breasts and ovaries. Whether they do it or not, most women know it is necessary to get a pap screening and a mammogram every year. Nevertheless, females do not feel the urge to get blood pressure and cholesterol screenings. This might be a result from doing a good job schooling females about reproductive health, or most probably women have a greater fear of facing cancer since they do not consider heart disease as a serious threaten.

A very common misconception regarding ischemic heart disease is thinking of it as a male problem; coronary heart disease does not only affect men. There is no main reason to blame for the stereotype created, but an array of issues concerning female heart disease. "Heart disease in women suffers from what I term the 'unders': It is under recognized, under diagnosed and undertreated," says Amparo Villablanca, M.D., director of Women's Cardiovascular Health Program at the University of California, Davis[12].

Ischemic heart disease is more difficult to diag-

nose in women than it is in men. Atherosclerosis is not an acute condition but a disease in progress; anyhow, heart disease in women surfaces around the time of menopause due to lower estrogen levels, while men can detect symptoms in a much earlier stage. No need to say the younger the patient, the greater the chances of survival to myocardial infarction[8].

Since most women in our country are not aware of the big problem cardiovascular disease represents for females today, a woman feeling unwell rarely suspects heart problems, therefore does nothing about it. While men's symptoms include the typical chest and upper arm pain, women's symptoms can be as vague and diffuse as back pain, nausea and vomiting. Hence these symptoms are frequently confused or attributed to other pathologies such as dyspepsia, stress or high blood pressure, leading to a late diagnosis of ischemic heart disease[4].

If we were to picture a heart attack candidate, the first thing that comes to most people's minds, including medical doctors, is an overweight stressed out man. This is obviously not a wrong mental picture; anyhow, it depicts half of the real situation. Even though the death rate due to ischemic heart disease is still higher in Mexican men than it is in women, females have not understood the severity of coronary heart disease regarding their gender. It is ischemic heart disease and not cancer the major killer among females.

If Mexican health programs do not consider targeting female cardiovascular health soon, not far from now this public health issue will become a much greater problem. The growing statistics of female overweight girls and adolescents, along with the under recognition, under diagnosis and under treatment of female ischemic heart disease today, represents an important threaten to Mexico's public health system. Our country is not prepared to keep on dealing with double burdens of disease.

Final comment

The most convenient action nowadays is making women aware of the importance to get cholesterol and blood pressure screenings along with breast self examination, mammograms and pap tests. Most middle- and high-income women who experience diffuse symptoms visit the gynecologist; therefore it is a good idea to include these basic cardiovascular health screenings as part of a woman's regular clinical evaluation during her visit. Low-income women in Sonora have the possibility of getting pap tests done at their local Centro de Salud and through Casas Saludables; why isn't cardiovascular health for females being promoted along with reproductive health?

More elaborate and attractive ways of teaching the population to lead a healthier lifestyle that includes better nutrition and exercise should be designed. It is true most people in Mexico do not have the possibility to acquire considerable amounts of fruit, vegetables, chicken, fish and meats; anyhow, wouldn't simple diet twists such as using vegetable oil instead of lard in daily cooking make a difference? It is indeed hard to change cultural diet patterns; maybe if women knew the consequences of their behavior in their own health as in that of their daughters, they would consider taking action. The time to address female heart disease is now. Education and training will be critical to ensure that health care providers as well as population have knowledge and skills to properly identify and treat women with cardiovascular health problems. We need to seriously discuss, investigate, and design medical and public health interventions to reduce the current and future burden of heart disease

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