

# **EPIDEMIOLOGICAL PROFILE OF PATIENTS CARE FOR ACUTE CORONARY SYNDROME IN BRAZIL**

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**Abstract:** Cardiovascular diseases are the leading cause of death in the world and encompass a group of disorders that affect the heart and blood vessels, including Acute Coronary Syndrome (ACS), which represents a significant rate of mortality, and it is important to know its risk factors. to try to reduce unfavorable outcomes. The present study aims to analyze the epidemiological profile of patients with ACS, highlighting the main risk factors found. This is an integrative literature review, including articles from the last 10 years. Potential risk factors and the epidemiological profile for ACS were identified, such as advanced age, gender, systemic diseases, lifestyle habits and socioeconomic development. Thus, the importance of preventing ACS and treating modifiable risk factors is evident.

**Keywords:** Acute Coronary Syndrome, Epidemiological Profile, Risk factors.

## INTRODUCTION

Cardiovascular diseases (CVD) are a group of disorders that affect the heart and blood vessels, such as coronary heart disease and cerebrovascular disease. They are the leading cause of death in the world, with an estimated number of more than 17.9 million deaths per year, representing 31% of all deaths globally (WHO, 2017).

In Brazil, CVDs are responsible for 27.7% of deaths, reaching 31.8% when deaths from external causes are excluded, a value close to that found worldwide (BRASIL, 2019). Acute Coronary Syndrome (ACS) is among the most important cardiovascular diseases, including unstable angina (UA) and Acute Myocardial Infarction (AMI), with or without ST-segment elevation (STEMI/STEMI). (COSTA, et al. 2018).

The most common cause of ACS is due to the appearance of an acute thrombus, resulting from atherosclerosis, in a coronary

artery. The extent of heart muscle affected depends on the time from which the patient begins to experience symptoms to the time he receives appropriate treatment. The initial consequences of this event vary with the size, location and duration of the obstruction, ranging from transient ischemia to infarction. This process results from the prolonged reduction in coronary blood flow, which causes an imbalance between the supply and demand of nutrients to the tissue and culminates in ischemia and functional impairment of the heart. (BASSAN, F.; BASSAN, R., 2006; MAGEE, et al. 2012; COSTA, F. A. S., et al. 2018).

## GOALS

To analyze the epidemiological profile of patients with ACS, highlighting the main risk factors found.

## MATERIALS AND METHODS

This is an integrative literature review, of a qualitative nature, by means of electronic data collection in the databases: PubMed and VHL, in which the descriptors “Acute Coronary Syndrome”, “epidemiological profile” and “factors of risk” were used. risk”. The inclusion criteria were articles with a time frame of the last 10 years, in Portuguese, Spanish and English. Exclusion criteria were articles that did not present methodology, adequate language and did not address the area of interest. After collecting the data, the information was interpreted and analyzed.

## RESULTS AND DISCUSSION

### EPIDEMIOLOGICAL PROFILE AND RISK FACTORS FOR ACS

Acute coronary syndrome usually presents in the sixth decade of life, with a mean age of 68 years, with a male/female ratio of approximately 3/2 (GASH, O. H., LANCELOTTI P). The difference between

female and male global cardiovascular mortality has equaled in the last decade, due to the increase in female mortality associated with coronary artery disease. In addition, the effect of AMI increased in younger women and may have a higher risk of death compared to younger men (FOUSSAS, S., 2016).

In another study carried out in Recife, the following complications were observed: heart failure, infection, hematoma and cardiogenic shock after ACS. Such conditions were more frequent in women when compared to men, which reinforces the worst outcomes in women. (ALMEIDA, M.C., MONTENEGRO, C.E.L., SARTESCHI, C., et al., 2014)

It is estimated that within one year of the first myocardial infarction, 18% of men and 23% of women will die, and the median survival time is 8.2 years for men and 5.5 years for women, above 45 years old. The explanations for the worse outcomes in women are: atypical presentation of symptoms, with less ST-segment elevation and onset with older age (LORENZO, D. A., 2018).

In another study, which compares different demographic regions at the national level, of a total of 1097 patients from 71 hospitals: 63.7% were male and 36.3% were female. The mean age was 63.1. More than two-thirds of patients had a history of systemic arterial hypertension, more than a quarter of diabetes mellitus, and more than a third of hypercholesterolemia. More than half of the patients reported tobacco use (current or past), and approximately a quarter had a history of AMI. (NICOLAU, J. C. FRANKEN, M. LOTUFO P. A. et. al. 2012)

Many factors contribute to the formation of atheromas and atherosclerotic plaques, including high blood pressure, smoking, diabetes, and high blood cholesterol levels. These disorders are directly related to the individual's modifiable lifestyle habits, such as inadequate diet, physical inactivity,

tobacco use and harmful use of alcohol. (HARRISON, 2016; PAHO, 2017).

In low- and middle-income countries, there is an increase in mortality from acute coronary syndromes in younger patients, when compared to high-income countries. Many countries today are going through a demographic transition and an increase in the population's income. This directly affects the quality of life of patients, as there is an increase in fat and sugars in the diet, a sedentary lifestyle and tobacco and alcohol abuse. This scenario reflects an increase in coronary syndromes resulting from these habits, which are not accompanied by improvements in the health system in terms of detection, conduct and proper management. (SELIGMAN B, V. R. FUSTER, V., 2016). Also, in Europe, a high-income country, investment in the prevention and treatment of ACS, such as symptom awareness, access to medical and acute care facilities, and drug release significantly reduced cardiovascular mortality (SELIGMAN B, VR FUSTER, V., 2016). Evidencing, therefore, the importance of knowing the epidemiological profile and the risk factors involved with ACS.

Based on the results of the studies, it is possible to identify the epidemiological profile of patients with ACS and the main risk factors related to the disease. The incidence of ACS is higher in men over 60 years of age. However, in recent years the difference in male and female mortality has equaled, with an emphasis on a worse outcome and complications in females.

The previous medical history of the patients was an important factor, with some chronic diseases highlighted as a risk factor for ACS, namely: systemic arterial hypertension, diabetes mellitus and hypercholesterolemia. Also, modifiable lifestyle habits closely related to these chronic diseases were highlighted as important factors in the course of the

disease. Among them, the main ones were: inadequate diet, sedentary lifestyle, tobacco use and harmful use of alcohol.

## CONCLUSION

In view of the above, it is important to know the epidemiological profile and risk factors involved with acute coronary

syndrome. In this sense, it becomes possible to act actively in the prevention of the disease, giving importance to actions and measures that focus mainly on modifiable risk factors, through improved access to healthy diets, encouragement of physical activity and awareness campaigns regarding harmful use of tobacco and alcohol.

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