

**PROFILE OF ADULT  
PATIENTS WITH  
EVOLUTION TO  
DEATH FROM ACUTE  
MYOCARDIAL  
INFARCTION IN  
FLORIANÓPOLIS, SANTA  
CATARINA**

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**Abstract:** OBJECTIVE: To describe the profile of deaths due to acute myocardial infarction (AMI) in Florianópolis SC, in order to provide data for the public power to implement appropriate prophylactic measures for the population. METHOD: This is a cross-sectional, qualitative and quantitative study, analyzing data on deaths of adults caused by AMI in Florianópolis, using data from the mortality information system (SIM) present on the DATASUS platform, from January 2015 to December 2020. RESULTS: It is noted that there was no great variation in the number of deaths over the years evaluated, with 193 deaths in total. Regarding the age group, following the national pattern, the predominant group was 50-59 years old. What most drew attention within the research was the variable of education of the victims, the group that had incomplete high school had the most deaths, with more than 75%. The racial group that had the highest number of deaths from AMI were whites, differing from the national pattern where browns dominated. **Keywords:** acute myocardial infarction. Mortality. Adults

## INTRODUCTION

Acute myocardial infarction (AMI) is defined as myocardial ischemia, through obstructions in the coronary arteries preventing or limiting blood flow. Acute myocardial infarction is subdivided into two main types, AMI without ST-segment elevation on the electrocardiogram (ECG) and AMI with ST-segment elevation on the ECG, where one presents a partial blockage of coronary flow and the other an acute ischemia. deep heart muscle, respectively.

The main cause of AMI is the rupture of atherosclerotic plaques, in which this rupture causes the release of tissue factor, lipids and collagen that, when associated with the exposed thrombogenic matrix of the plaque,

activate platelet activity, favoring the formation of thrombi, which can cause obstruction and subsequent myocardial ischemia.

AMI is clinically manifested mainly by retrosternal pain on the left side, also called unstable anginal pain, which is characterized by a prolonged and intense sensation of “tightness” in the region during physical rest. This pain radiates to the left upper limb, to the mandible and to the epigastric region, according to the reports of some patients.

Considering that Acute Myocardial Infarction is the main cause of death from heart disease in Brazil, it is necessary to understand the local numbers of mortality from AMI, in order to develop prophylaxis and educational measures, taking into account socioeconomic and cultural characteristics of the local population, since life habits such as smoking, diet, lipid profile, physical activity and environmental pollution in the individual's place of residence influence the risk of developing AMI. Therefore, what is the profile of mortality due to acute myocardial infarction in adults in the city of Florianópolis, Santa Catarina?

## OBJECTIVE

To describe the profile of mortality due to acute myocardial infarction in the adult population of Florianópolis, Santa Catarina, with the aim of suggesting specific prophylactic measures to the public authorities that are more efficient for their specific population.

## METHODOLOGY

This study has a cross-sectional design, with a quantitative and qualitative approach, using data from January 2015 to December 2020. The inclusion criteria in the study were adults aged 20 to 59 years, who died due to a episode of AMI or complications after an AMI in the city of Florianópolis, Santa Catarina. The variables analyzed were the year of

death, age, gender, race and education. Data collection was performed using the Mortality Information System (SIM) hosted by the DATASUS platform.

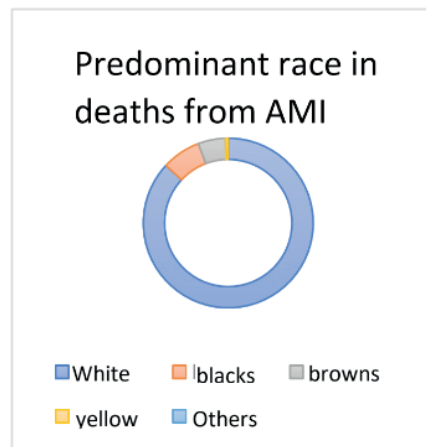
## RESULTS

According to the data obtained, the city of Florianópolis had a total of 193 deaths from AMI in the analyzed period, which represents 21.75% of the total number of deaths recorded in the database (887 deaths). Such deaths were distributed relatively constant between years, with 2016 being the year with the most deaths (41 deaths or 21.2%) and 2019 the year with the fewest deaths due to AMI (25 deaths or 12.9%). There was a predominance of deaths in male participants of 76.1% in relation to female participants, with an incidence of 23.9%.

Regarding the age of the participants, the groups were divided by decades of life (20-29; 30-39; 40-49 and 50-59), where the age group between 50 and 59 years old had the highest number of deaths, with 117 deaths (60.6%), followed by the 40-49 age group, with 58 deaths (30%). The other analyzed groups had insignificant rates of 7.7% for the 30-39 age group and 1.5% for the 20-29 age group.

Analyzing data referring to race, white participants had the highest number of deaths in the group, with 84.9% (164 deaths), followed by black participants with 7.2%, brown participants with 5.1% and finally yellow participants, with 0.5% of deaths due to AMI, four of the participants did not have their race declared.

Regarding the education of the participants, there was a predominance of the group that did not have completed high school, with a total of 79.17% of registered deaths, participants who had higher education (more than 12 years of study), represented 4.6% of deaths.



## CONCLUSIONS

Given the data collected, we can see a considerable predominance of deaths in male patients, 76.1%, a notoriously higher percentage than the national rate, 63%. Regarding the data of the skin color of the patients, the group most affected nationally are the brown people, however the pattern observed in Florianópolis was predominantly of deaths in Caucasians, this can be justified by the greater number of white people who inhabit the city, characteristic that has historical origin in the strong Azorean colonization of the island, with the intention of occupying the space, being the exploration of the land a supporting factor, different from what was observed in great part of the country.

A factor that drew attention in the data obtained was related to the education of the most affected, it is noted that individuals who did not have completed high school, with less than 12 years of study, were the group that most evolved to death from AMI, with 79.17% of deaths. This observed characteristic is due to structural factors of education and Brazilian purchasing power, people with little schooling have greater difficulty in getting a formal job and fair remuneration, which often results in lifestyles that expose this group to risk, such as an inadequate diet (more affordable price). As for the age group with the highest number

of deaths, the predominant group was 50-59, following the national pattern in the adult age group (18-59 years), disregarding the elderly.

### **FINAL CONSIDERATIONS**

By knowing the profile of the patients most affected by AMI in Florianópolis, prevention measures and health education by

the municipal health department are evident. Thus, the greater distribution of food baskets providing foods that favor a balanced diet associated with community education on healthy lifestyle practices that can reduce the risk of an AMI occurring, such as regular physical exercise and interrupting the consumption of alcohol and tobacco.

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