Acute Myocardial Infarction: Comparison of morbidity in adults 40 years and older among an underdeveloped country

Infarto Agudo do Miocárdio: Comparação da morbilidade em adultos com 40 anos ou mais de idade entre um país subdesenvolvido

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ABSTRACT  
The interruption of cardiac blood flow by a clot, known as acute myocardial infarction (AMI), results in the death of cells in a specific region of the myocardium and is considered the most serious pathology of coronary syndromes. Besides, the main cause of AMI is atherosclerosis, leading to clot formation and interruption of blood flow. Thereby, the high mortality rate is explained by the increased prevalence of exposure to risk factors. Comparing 2021 with 2020, it is possible to see an increase of approximately 2.16% of cases in adults in the state of Rio Grande do Sul in Brazil.  

Keywords: acute myocardial infarction, age range, morbidity.  

RESUMO  
A interrupção do fluxo sanguíneo cardíaco por um coágulo, conhecida como enfarte agudo do miocárdio (IAM), resulta na morte de células numa região específica do miocárdio e é considerada a patologia mais grave das síndromes coronárias. Além disso, a principal causa do IAM é a aterosclerose, levando à formação de coágulos e à interrupção do fluxo sanguíneo. Por conseguinte, a elevada taxa de mortalidade é explicada pelo aumento da prevalência da exposição a factores de risco. Comparando 2021 com 2020, é possível ver um aumento de aproximadamente 2,16% dos casos em adultos no estado do Rio Grande do Sul no Brasil.  

Palavras-chave: infarto agudo do miocárdio, faixa etária, morbidade.  

1 INTRODUCTION  
The interruption of cardiac blood flow by a clot, known as acute myocardial infarction (AMI), results in the death of cells in a specific region of the myocardium and is considered the most serious pathology of the coronary syndromes, responsible for the death of 16,963 every 10,000,000 people in Brazil1,2.  

The main cause of AMI is atherosclerosis, a disease in which fatty plaques accumulate in the coronary arteries, and in most cases, it occurs when one of these plaques ruptures, leading to clot formation and interruption of blood flow. The high mortality rate is explained by the increased prevalence of exposure to risk factors, such as sedentarism, increased consumption of meat and fat, alcoholic beverages, smoking, and increased
prevalence of obesity. In this context, the increase of AMI cases in the state of Rio Grande do Sul in Brazil stands out, reaching approximately 22 thousand cases in the last two years. That said, it is worth emphasizing the change in lifestyle habits since it can help reduce the risk of this pathology.

2 OBJECTIVE

To compare and analyze the prevalence of cases of acute myocardial infarction in the state of Rio Grande do Sul in Brazil, in adults aged 40 to 80 years and older over a 2-year period.

3 METHODS

Corresponds to a quantitative epidemiological study, performed an active search to obtain data through the Unified Health System Database (DataSus) using the International Classification of Diseases (ICD10) relating to diseases of the circulatory system, acute myocardial infarction. Using the variables: year of diagnosis between 2020 and 2021, in the state of Rio Grande do Sul in Brazil, and age between 40 years and over 80 years. After collection, the results obtained were tabulated in Microsoft Excel for analysis.

4 RESULTS

Analyzing the total number of registrations in 2020, which accounted for 10,698 cases when compared to 10,929 presented in 2021, an increase of 231 new occurrences is visible, corresponding to 2.16% of the total. In the 40 to 49 age range, there was an increase of 3.12% between the years, with 1,089 cases cataloged in the first year and 1,123 in the second. Furthermore, a notable decrease of 5.56% was listed for ages 50 to 59, since 2,771 cases were registered in 2020 and 2,617 in 2021, that is, 157 fewer occurrences, comparing the two years. It is observed that between 60 and 69 years there was an increase of 6.14% of cases, due to 6,385 records in 2020 and 3,593 in 2021, being this, the largest increase presented. In this context, the age group from 70 to 79 years also showed a significant increase of 5.93%.
Graph 1. Comparison of the number of cases among age groups in Rio Grande do Sul, Brazil (2020-2021).

Otherwise, in individuals 80 and older, the increase was only 0.09%, therefore not showing a considerable change. Thus, the age groups 60 to 69 and 80 years and older stand out for their variation in the number of cases over the last 2 years. Compared to ages 80 years and over (1), the 60-69 breach (208) showed an increase of approximately 229.31% in adults.

Graph 2. Comparison of the number of cases among the age groups 60 to 69 years and 80 years and older (2020-2021).
5 CONCLUSION

The acute myocardial infarction represents the most serious cause of coronary syndromes, characterized by being a silent pathology. It has a typical symptomatology, described as intense pain in the form of tightness in the chest, without a relief factor, which is usually seen in males; in comparison, its atypical manifestation affects more diabetics, women, and the elderly. It is important to emphasize that the number of cases is higher in the period from 60 to 69 years and represents a public health problem, presenting high morbidity and mortality rates in Brazil and the world. In addition, a decrease was registered in the 50 to 59 age group, resulting from greater health care concerning the other years analyzed. Thus, it is necessary to mention that, in order to decrease the number of cases and, consequently, the complications resulting from AMI, there are 2 preventive measures: the conservative and the pharmacological. The first one consists of physical health care through regular exercise, healthy diets, avoiding excess weight, and ceasing or reducing the use of licit substances. Finally, in pharmacological prevention, it is recommended to seek the advice of a cardiologist to monitor each case, reducing the levels of blood pressure and cholesterol through specific drugs.
REFERENCES

