ORIGINAL ARTICLE

# EPIDEMIOLOGICAL, CLINICAL AND ANGIOGRAPHIC ASPECTS OF PATIENTS SUBMITTED TO PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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## ABSTRACT

**Introduction:** Having the profile of patients undergoing angioplasty helps to improve their quality of life and assist the health team. **Objective**: to analyze the epidemiological, clinical, and angiographic aspects and their relationship with the gender of patients undergoing primary percutaneous coronary intervention. **Method**: this is a descriptive and cross-sectional study carried out at a University Hospital in Rio Grande do Norte. Data collection took place between April and October 2017 from data found in the computerized and printed medical records of 93 patients undergoing Primary Percutaneous Coronary Intervention. Tests such as Kolmogorov-Sminorv, Mann-Whitney (U), and Pearson's chi-square (X2) evaluated the information evidenced by the research. **Results**: 64.5% of the 93 patients included in the study were men, with a mean age of 62.3 years old. Regarding the door-to-balloon time, 18.2% of women and 8.3% of men had time less than 90 minutes. The comorbidities of systemic arterial hypertension, diabetes mellitus, and alcoholism stand out. **Conclusion**: the results on the epidemiological, clinical, and angiographic aspects evidenced in this study favor greater knowledge, contributing to the generation of strategies for the prevention of diseases of patients submitted to primary Percutaneous Coronary Intervention.

**Keywords:** Cardiovascular Diseases. Angioplasty. Emergencies. Myocardial Infarction. Risk Factors.

## INTRODUCTION

Cardiovascular Diseases (CVD) are one of the main causes of death in the world[1]. About 383,961 deaths from CVD were estimated in Brazil in 2017. From 2004 to 2014, Acute Myocardial Infarction (AMI), angina, and other ischemic heart diseases accounted for 8.80% of deaths in the country. Also, the Brazilian Society of Cardiology reported that from January to the end of June 2020, more than 200,000 deaths from CVD were recorded in the Brazilian territory[2].

AMI is the main representative of Ischemic Heart Diseases, which results in myocardial necrosis by blocking oxygen to the heart muscle, caused by thrombosis and/or vasospasm on an atherosclerotic plaque[3]. The mortality rate of patients suffering from AMI or who have some type of limitation as a result of this infarction is increasing[4].

The primary Percutaneous Coronary Intervention (PCI) is the preferred method for the treatment of AMI with ST-segment elevation[5]. Primary PCI establishes the flow in the coronary artery without the previous use of fibrinolytic and consists of the use of a balloon catheter inserted through a radial, brachial, or femoral access route to dilate the lesion site from balloon inflation[6].

Studies reveal that women have a higher mortality rate than men when affected by AMI with ST-segment elevation. Also, women have more adverse factors than men, such as more severe clinical conditions and older age. This is capable of hindering the prognosis of women submitted, mainly, to primary PCI[7].

Knowing the profile of these patients according to gender and especially the behavioral risk factors can contribute to the

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understanding of the development of heart disease and the formation of preventive strategies, improving the quality of life of patients and the care work of the team. Thus, it can assist in the reduction of expenses since the excessive demand of patients requires numerous expenses with hospitalizations and treatments by the Unified Health System (SUS)[5].

Therefore, the question is: What are the epidemiological, clinical, and angiographic aspects of patients undergoing primary percutaneous coronary intervention in a referral hospital in a cardiac emergency?

Thus, this study aims to analyze the epidemiological, clinical, and angiographic aspects and their relationship with the gender in patients undergoing primary percutaneous coronary intervention in a university hospital located in Rio Grande do Norte, in 2015.

## METHODOLOGY

This is a described, cross-sectional study, carried out with secondary data. The research was carried out at the Onofre Lopes University Hospital (HUOL), in the city of Natal, Rio Grande do Norte (RN), in the sectors of the Cardiovascular Unit, Hemodynamics and Intensive Care Unit (ICU). The HUOL is considered the largest teaching hospital in RN and a public institution of reference at the state level for the care of patients diagnosed with AMI with ST-elevation[8].

We used a simple random sample of the probabilistic type. Thus, there was a random selection by the respondents, in which each member of the population had an equal probability of being selected for the sample. Thus, this type of sampling gives greater significance and representativeness of the sample based on the compensation of errors in the sample[9].

In 2015, 456 people underwent PCI procedures at the study site, of whom 121 underwent primary PCI. Therefore, considering a sampling error of 5% (p <0.05), the sample for this study was calculated in 93 patients. The inclusion criteria were patients older than 18 years old and who had had primary PCI. We excluded elective patients and those who had a surgical indication; Those who died during the PCI procedure were not considered, given the need to sign the Informed Consent Form (ICF).

The main researcher and two other research trained collaborators carried out data collection between April and October 2017, using a structured instrument and data from the computerized and printed medical records, after signing the informed consent form by the patient. We found all the data required in the research instrument.

We chose HUOL because it is currently the only public reference institution in the State of Rio Grande do Norte capable of assisting patients with AMI with ST-segment elevation. According to the flow of care for patients in situations of cardiological urgency, there is the first care and diagnosis carried out in public institutions or through the Mobile Emergency Care Service (SAMU). This is accompanied by the practice of initial care, using measures related to the administration of adjuvant therapy, and the choice of the reperfusion technique that will depend on the availability and knowledge of each center. After this first visit, the institution contacts the hospital's hemodynamics sector to carry out the regulation. After confirming the diagnosis by the cardiologist-hemodynamics and the ICU bed, the patient is sent to the cardiac catheterization and subsequent primary PCI[10].

We categorized the collected data in an Excel spreadsheet and sent them to the Statistical Package for the Social Sciences (SPSS) program (version 21.0 for Windows), in which they were tabulated and analyzed using descriptive and inferential statistics, shown in tables.

The variables chosen for categorization were the origin of the patients, the epidemiological data (gender, age group, education level, ethnicity, marital status, profession, and income); clinical aspects and comorbidities (nature of the event, door-to-balloon time, changes in the electrocardiogram, hypertension, diabetes, sedentary lifestyle, previous family history, previous history of infarction, smoking, kidney disease, and dyslipidemia); and angiographic data (puncture site, compromised coronaries, treated coronary, type and quantities of stents used).

For statistical analysis, we used a significance level of 5% in all statistical tests (p <0.05). The epidemiological profile of patients undergoing

primary PCI was conducted by descriptive data analysis, using measures of central tendency (mean and median) and dispersion (standard deviation) for continuous variables, while categorical variables were analyzed through the frequency of occurrences.

The Kolmogorov-Smirnov test, which showed an asymmetric distribution of the data (p <0.05), evaluated whether the continuous variables showed a normal distribution and consequently determined the inferential statistics to be conducted. Thus, the Mann-Whitney test (U) compared the gender of the continuous variables of patients submitted to primary PCI on an urgent basis. Also, Pearson's chi-square test (X2) verified the associations between the genders (men and women) with the variables of clinical aspects, comorbidities, risk factors, medication in use, characteristics of PCI, and recovery.

The research followed the precepts of Resolution No. 466, of December 12, 2012, of the National Health Council. A previous authorization was obtained from the institution for data collection and the project was approved by the Ethics Committee in Research at Hospital Universitário Onofre Lopes (HUOL) in Natal/RN, under opinion No. 1.997.884/2017 and CAAE 64183517.0.0000.5292.

## RESULTS

The study included 93 patients in an urgent situation. Table 1 shows the data about the age group, ethnicity, education level, marital status, total income per residence, and profession according to gender. Illiterate patients are predominant, with income from one to three minimum wages.

**Table 1.** Age group, ethnicity, education level, marital status, total income per residence, and profession according to the gender of the patients undergoing primary Percutaneous Coronary Intervention. Natal, RN, Brazil, 2017.

| Variables | Women (n=33) | Men (n=60) |
|---|---|---|
| Age (years old) Mean ± SD | 60.4±12.2 | 62.3±12.5 |
| Age group, n (%) | | |
| < 40 years old | 1(3.0) | 1(1.7) |
| 40 - 50 years old | 4(12.1) | 9(15.0) |
| 50 - 60 years old | 9(27.3) | 15(25.0) |
| 60 - 70 years old | 13(39.4) | 16(26.7) |
| 70 - 80 years old | 3(9.1) | 14(23.3) |
| ≥ 80 years old | 3(9.1) | 5(8.3) |
| Ethnicity, n (%) | | |
| Brown | 16(48.5) | 37(61.7) |
| White | 9(27.3) | 12(20.0) |
| Black | 8(24.2) | 10(16.7) |
| Asian | 0(0.0) | 1(1.7) |
| Education level, n (%) | | |
| Illiterate | 12(36.4) | 19(31.7) |
| Incomplete elementary school | 9(27.3) | 17(28.3) |
| Complete elementary school | 5(15.2) | 10(16.7) |
| Incomplete high school | 1(3.0) | 1(1.7) |
| Complete high school | 4(12.1) | 9(15.0) |
| Incomplete higher education | 1(3.0) | 1(1.7) |
| Complete higher education | 1(3.0) | 3(5.0) |
| Marital status, n (%) | | |
| Without a stable partner | 18(54.5) | 16(26.7) |
| With a stable partner | 15(45.5) | 44(73.3) |

**To Continue**

| Variables | Women (n=33) | Men (n=60) |
|---|---|---|
| Total income per household (minimum wage)*, n (%) | | |
| Less than a minimum wage | 7(21.2) | 5(8.3) |
| From one to three minimum wages | 24(72.7) | 49(81.7) |
| More than three minimum wages | 2(6.1) | 6(10.0) |
| Profession, n (%) | | |
| Agriculture and extractive vegetal and animal production | 7(21.2) | 5(8.3) |
| Technical, scientific, artistic and similar | 2(6.1) | 5(8.3) |
| Manufacturing and construction industries | 0(0.0) | 8(13.3) |
| Other/not-defined occupations† | 20(60.6) | 25(41.7) |
| Trade and auxiliary activities | 0(0.0) | 2(3.3) |
| Transport and communications | 0(0.0) | 6(10.0) |
| Services provision | 4(12.1) | 8(13.3) |
| Administrative | 0(0.0) | 1(1.7) |

**Source:** This research; SD: Standard deviation. *937.00; †Housewives, students, retirees, pensioners, self-employed and sex workers.

All participants had some type of comorbidity, regardless of gender. Alcoholism showed a significant association ($p < 0.01$) between men and women. Based on the Chance Factor, the possibility of men presenting a higher alcoholism risk factor (6.58) than women in this sample is indicated (Table 2).

**Table 2.** Clinical aspects of patients, according to gender, submitted to primary percutaneous coronary intervention. Natal, RN, Brazil, 2017.

| Variables | Women (n=33) | Men (n=60) | p-value |
|---|---|---|---|
| Comorbidities, n (%) | | | |
| Systemic Arterial Hypertension | 26(78.8) | 38(63.3) | 0.09* |
| Diabetes *Mellitus* | 15(45.5) | 20(33.3) | 0.17* |
| Previous acute myocardial infarction | 8(24.2) | 12(20.0) | 0.41* |
| Brain stroke | 2(6.1) | 5(8.3) | 0.52* |
| BMI of adult patients, n (%) | | | 0.19† |
| Overweight | 5(35.7) | 14(56.0) | |
| Obesity | 5(35.7) | 3(12.0) | |
| BMI of elderly patients, n (%) | | | 0.55† |
| Obesity (degrees 1, 2 and 3) | 10(52.6) | 13(37.1) | |
| Family history, n (%) | 13(39.4) | 25(41.7) | 0.50* |
| Life habits, n (%) | | | |
| Sedentary lifestyle | 28(84.8) | 55(91.7) | 0.24* |
| Currently smoking | 13(39.4) | 19(31.7) | 0.29* |
| Previous smoking | 6(18.2) | 17(28.3) | 0.20* |
| Alcoholism | 2(6.1) | 17(18.3) | 0.00‡,* |
| Physical activity | 5(15.2) | 5(8.3) | 0.29* |

**Source:** This research; *p-value: Pearson's chi-square; †p <0.05; ‡p-value: Fisher's exact test.

Table 3 shows the angiographic aspects of patients undergoing PCI. All emergency patients were sent to the Intensive Care Unit (ICU).

**Table 3.** Angiographic and procedural aspects of patients undergoing primary Percutaneous Coronary Intervention according to gender. Natal, RN, Brazil, 2017.

| Variables | Women (n=33) | Men (n=60) | p-value |
|---|---|---|---|
| Door-to-balloon time, n (%) | | | 0.09[*] |
| <90 minutes | 6(18.2) | 5(8.3) | |
| 91 - 360 minutes | 6(18.2) | 18(30.0) | |
| 361 - 720 minutes | 13(39.4) | 27(45.0) | |
| >720 minutes | 8(24.2) | 10(16.7) | |
| Electrocardiogram, n (%) | | | 0.83[*] |
| ECG with SST | 21(63.6) | 42(70.0) | |
| ECG with SST + enzymes | 11(34.4) | 17(28.3) | |
| ECG with SST | 1(3.1) | 1(1.7) | |
| *Stents*, n (%) | | | 0.69[*] |
| Conventional | 21(63.6) | 32(53.3) | |
| Pharmacological | 11(33.4) | 25(41.7) | |
| Conventional and pharmacological | 1(3.0) | 3(5.0) | |
| Number of Stents, n (%) | | | 0.10[*] |
| One | 24(72.7) | 30(50.0) | |
| Two | 7(21.2) | 23(38.3) | |
| Three or more | 2(6.1) | 7(11.7) | |
| Treated coronary artery, n (%) | | | 0.05[†,*] |
| Right coronary | 10(33.3) | 18(30.0) | |
| Previous descendant | 11(33.3) | 28(46.7) | |
| Circumflex | 8(24.2) | 4(6.7) | |
| More than one coronary treated | 3(9.0) | 9(14.9) | |
| Others | 1(3.0) | 1(1.7) | |
| Puncture site, n (%) | | | 0.50[‡] |
| Femoral | 20(60.6) | 35(58.3) | |
| Radial | 13(39.4) | 25(41.7) | |
| Percentage of injury (mean ± SD) | 97.52±7.66 | 97.53±4.97 | 0.26[§] |
| Complications, n (%) | 3(9.1) | 5(8.3) | 0.59[*] |

**Source:** This research; * p-value: Fisher's exact test; †p <0.05; ‡ p-value: Pearson's chi-square; §P-value: Mann-Whitney test.

The AMI protocol was performed in all patients. Regarding the door-to-balloon time (Table 3), 18.2% of women and 8.3% of men achieved the time less than 90 minutes, in which the shortest time was 1 hour and the longest was 48 hours.

## DISCUSSION

In this study, 64.5% of the patients were men, aged over 50 years old. Similar to these findings, an analysis carried out in North India found that 80.1% of the 383 emergency patients were male, with a mean age of 54.2 years old[11], showing that primary PCI and consequent infarction is more prevalent in men than in women.

Maybe the lower incidence of cardiovascular disease in women is related to the protective action of estradiol. Thus, the number of cases becomes greater in the post-menopausal period due to the decrease in estrogen[12]. For this reason, most women who undergo primary PCI have an older age, which shows a greater number of women aged between 60 - 70 years old.

The brown color prevailed in both genders, with a percentage of 61.7% and 48.5%, in men and women, respectively. In a survey conducted at the hospital in Rio Grande do Sul, Brazil, white patients were predominant with 83.3%[12]. This difference in the skin color may be related to ethnic differences between the regions where the studies were developed[8].

As for the other social data in the population of this study, men and women had a low level of education, a stable partner, income of one to three minimum wages, and other not-defined occupations. Similarly, research carried out in the Midwest of Minas Gerais, Brazil, showed that most had incomplete elementary education with a stable partner and earned two to ten minimum wages[13].

The level of education is directly related to the individuals' better understanding of the types

of chronic pathologies and risk factors that contribute to their evolution and knowing the meaning of the guidelines of life habits, food, and health effects[14].

The prevalence of door-to-balloon time between 361-720 minutes in men and women was evident with a percentage of 45% and 39.4%, respectively. While research conducted in Southeast Asia aimed at evaluating the causes and impact of delayed door-to-balloon time in patients undergoing primary PCI showed that 16% of 1,268 patients of both genders had an average delay of 112 minutes of the door-to-balloon time. [15] This is significantly lower when compared to the time indicated by this research. The main causes of these delays were the unstable condition, which requires stabilization, and the delay in the emergency service[15].

The most frequent comorbidities in this study were arterial hypertension with 78.8% women and 63.3% men, and diabetes mellitus with 45.5% women and 33.3% men. This is because diabetes mellitus favors the formation of microthrombi due to the inflammatory state caused by the disease, promoting the occlusion of the coronary circulation, and favoring the development of AMI. Also, the release of endothelin due to oxidative stress in diabetics hinders the coronary flow[16]. Also, research has shown that AMI is the second major complication of hypertension, indicating that most patients with this comorbidity if they do not follow the treatment correctly, have a chance of progressing to a heart attack[17].

Previous AMI was more frequent in men, as well as stroke, 8.3% of men and 6.1% of women. A survey of 775 patients in Paris, France, which aimed to compare the results of one year after primary PCI in women and men with AMI with ST-segment elevation, matched for age and diabetes, found a higher frequency of AMI in men, 10.1% men versus 4.9% women and stroke, and 3.5% men versus 2.2% women[18].

The study showed a higher prevalence of obesity in women (35.7%) than men (12%). In research carried out in Paris, France, in both genders, there was greater evidence of overweight[18]. Also, this study showed a predominance of men with overweight in adult men and obesity in elderly people. Obesity is directly associated with glucose, blood pressure, and lipid changes, contributing to the increase in the chances of developing diabetes, hypertension, and accumulation of lipids in the coronary arteries, consequently causing AMI[19].

There was a greater predominance in men in the family history of performing the primary PCI procedure, with 41.7%. Previous research corroborated with these data showing a higher prevalence in men than in women, indicating that this risk factor contributes to the greater appearance of cardiovascular diseases since the hereditary factor associated with bad lifestyle habits contributes to it[18].

As for lifestyle habits, alcoholism was a relevant fact in this research, with a higher prevalence in men, corroborating the reality of other studies[12]. This may be linked to the male-dominated culture and its association with the use of alcohol in moments of leisure and relaxation, acting strongly in this reality.

Research indicated a high sedentary rate, with a greater predominance of sedentary men, 75.0% (12), as well as in this study that found greater sedentary lifestyle in men, 91.7% men versus 84.8% women. This data was similar to a survey conducted in Rio Grande do Norte, which found that 99% of patients undergoing primary PCI were sedentary[8]. Such a life habit is related to the decrease in metabolism and, consequently, to the onset of obesity and its repercussions on health[19,20].

Smoking is more common in men, having 31.7% current smokers and 28.3% ex-smokers. Research carried out in England whose objective was to investigate the association of gender and race with clinical results after primary PCI also showed more male than female smokers[21]. The habit of smoking allows a greater risk of death and other unfavorable outcomes in patients with Acute Coronary Syndrome, increasing the risk by up to four times when associated with dyslipidemia and arterial hypertension[22].

We observed that in both genders, conventional stents were used more. Despite this, it is highlighted that research indicates that the use of conventional stents may be related to a rate of restenosis of 20 to 30%. This complication may be associated with the technique used in the PCI procedure[23].

In this study, the use of "one" stent predominated, both in men and women. These data corroborate those found in studies in North India, where the use of "one" stent also prevailed[11]. Thus, the findings may indicate a better clinical prognosis since the greater number of stents used suggests an increase in angiographic complexity and the possible risks of immediate or late complications after placement, such as inflammation and stent thrombosis.

The right coronary artery was treated in 33.3% of women and 30.0% of men, while the anterior descendant was treated in a higher percentage in men. Research in Taiwan, China, and Leeds, England, showed that the right coronary and anterior descending coronary arteries were the most treated in both men and women[21]. The anterior descendant originates from the Left Coronary Trunk (LCT), which is responsible for the blood supply of most of the myocardial tissue. Therefore, injuries that affect LCT tend to offer a greater degree of ischemia and, consequently, greater left ventricular dysfunction.

The femoral approach was the most used in the patients of this research, considered the route of choice in 60.6% of women and 58.3% of men. However, the radial route was the most used access in studies carried out in Paris, France, with 87.4% of men and 81.3% of women[18]. Investigations carried out in the city of Toledo, United States, showed that radial access is safer than the femoral access due to the complications that the femoral approach can cause, such as the formation of the pseudoaneurysm, hematoma, ecchymosis and hemorrhages[24]. Also, radial access provides more comfort to the patient, offering less hospitalization time, early walking, and fewer complaints of pain at the puncture site[25].

There was little prevalence of complications in both gender patients in this study, 9.1% women and 8.3% men. In a survey carried out in New Delhi, India only 2.7% of the 371 patients who underwent primary PCI between men and women had some complications[11], showing the safety in carrying out this procedure.

## CONCLUSION

Male patients were predominant, elderly people, with a stable partner, mixed-race, and low level of education. The main comorbidities found in this study were Systemic Arterial Hypertension and Diabetes Mellitus, with a greater predominance in women. Life habits such as smoking and physical inactivity were associated with patients undergoing primary PCI, in which smoking was more frequent in men. There was greater use of conventional type stents in both genders and the use of the femoral approach as a puncture site.

We observed prolonged door-to-balloon time among women and men, indicating a poor prognosis.

This study favors the knowledge of health professionals about the epidemiological, clinical, and angiographic aspects of patients undergoing primary PCI, which may contribute to the strengthening of the health team's assistance.

Based on the results, public policies can be formulated to prevent and promote the health of patients with family history and/or comorbidities that may favor the development of the disease and also the development of strategies aimed at prevention of health problems for those diagnosed with AMI with ST-segment elevation, improving their quality of life.

This research was limited to analyzing the epidemiological, clinical, and angiographic aspects of patients undergoing primary PCI. Thus, the information evidenced by the study cannot be generalized to all patients diagnosed with AMI, but only to those who have undergone the procedure. We also highlight the limitation of the sample.

## ASPECTOS EPIDEMIOLÓGICOS, CLÍNICOS E ANGIOGRÁFICOS DE PACIENTES SUBMETIDOS À INTERVENÇÃO CORONÁRIA PERCUTÂNEA PRIMÁRIA

### RESUMO

**Introdução:** Dispor do perfil de pacientes submetidos à angioplastia colabora para a melhoria da qualidade de vida dos mesmos e trabalho assistencial da equipe de saúde. **Objetivo**: analisar os aspectos epidemiológicos, clínicos e angiográficos e suas relações com o sexo dos pacientes submetidos à intervenção coronária percutânea primária. **Método:** estudo descritivo e transversal realizado em Hospital Universitário do Rio Grande do Norte. A coleta de dados

ocorreu entre abril e outubro de 2017 a partir de dados encontrados no prontuário informatizado e impresso de 93 pacientes submetidos à Intervenção Coronária Percutânea Primária.Utilizaram-se testes como o Kolmogorov-Sminorv, Mann-Whitney (U) e Qui-quadrado de Pearson (X2) para a avaliação das informações evidenciadas pela pesquisa. **Resultados:** dos 93 pacientes inclusos no estudo, 64,5% eram homens, com média de idade de 62,3 anos. Sobre o tempo porta-balão,18,2% das mulheres e 8,3% dos homens conseguiram o tempo menor que 90 minutos. Quanto às comorbidades, destacam-se hipertensão arterial sistêmica, diabetes *mellitus,* além do hábito de vida etilismo. **Conclusão:** os resultados sobre os aspectos epidemiológicos, clínicos e angiográficos evidenciados neste estudo favorecem um maior conhecimento, contribuindo para a geração de estratégias para a prevenção de agravos de pacientes submetidos à Intervenção Coronária Percutânea primária.

**Palavras-chave:** Doenças Cardiovasculares; Angioplastia; Emergências; Infarto do Miocárdio; Fatores de Risco.

## ASPECTOS EPIDEMIOLÓGICOS, CLÍNICOS Y ANGIOGRÁFICOS DE PACIENTES SOMETIDOS A LA INTERVENCIÓN CORONARIA PERCUTÁNEA PRIMARIA

### RESUMEN

**Introducción:** Disponer del perfil de pacientes sometidos a la angioplastia colabora para la mejoría de su calidad de vida y del trabajo asistencial del equipo de salud. **Objetivo**: analizar los aspectos epidemiológicos, clínicos y angiográficos y sus relaciones con el sexo de los pacientes sometidos a la intervención coronaria percutánea primaria. **Método:** estudio descriptivo y transversal realizado en Hospital Universitario de Rio Grande do Norte-Brasil, la recolección de datos ocurrió entre abril y octubre de 2017 a partir de datos encontrados en el registro médico informatizado e impreso de 93 pacientes sometidos a la Intervención Coronaria Percutánea Primaria. Se utilizaron pruebas como *Kolmogorov-Sminorv*, *Mann-Whitney* (U) y chi cuadrado de Pearson (X2) para la evaluación de las informaciones evidenciadas por la investigación. **Resultados:** de los 93 pacientes incluidos en el estudio, 64,5% era hombre, con promedio de edad de 62,3 años. Sobre el tiempo puerta-balón, un 18,2% de las mujeres y 8,3% de los hombres consiguieron el tiempo menor que 90 minutos. En cuanto a las comorbilidades, se destacan hipertensión arterial sistémica, diabetes *mellitus,* además del hábito de vida etilismo. **Conclusión:** los resultados sobre los aspectos epidemiológicos, clínicos y angiográficos evidenciados e neste estudio fomentan un mayor conocimiento, contribuyendo para la generación de estrategias para la prevención de agravios de pacientes sometidos a la Intervención Coronaria Percutánea primaria.

**Palabras clave**: Enfermedades cardiovasculares. Angioplastia. Urgencias. Infarto de miocardio. Factores de riesgo.

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