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Characterization of clinical-epidemiological factors associated with AMI in the ICU: a systematic review

Abstract

The present study is a systematic review with the aim of knowing the Characterization of the Clinical-Epidemiological Factors Associated with Acute Myocardial Infarction in the Intensive Care Unit, with PRISMA methodology, where 10 articles were found included for this review, and the results found in this study mostly confirmed that the most prone age group is 50 to 59 years, in addition to the fact that most of them are male.

Keywords: High blood pressure, oxygenation, respiratory rate, epidemiologic factors

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Introduction

Ischemic heart disease according to the World Health Organization (WHO) and the Pan American Health Organization (PAHO) is defined as myocardial disease caused by a disproportion between blood flow supply and myocardial requirements, generated by changes in coronary circulation and its clinical form with the highest presentation and worst prognosis corresponds to acute myocardial infarction (AMI), which occurs due to a deprivation of blood supply to the heart (ischemia) for a period of time sufficient to produce structural alterations and necrosis of the heart muscle, generally as a result of occlusion of the artery.[1] According to the latest figures from the WHO, it was announced that ischemic heart disease is the leading cause of cardiovascular death, responsible for 9.44 million deaths in 2021 worldwide, and in Mexico, nearly 220 thousand people died from cardiovascular diseases in 2021, of which 177 thousand were due to myocardial infarction. It is important to note that half of the first-time heart attacks that occur appear without previous symptoms of the event without any heart disease being suspected, however, the most characteristic manifestations are: intense pain in the chest, in the precordial area, the feeling of general malaise, dizziness, nausea and sweating.[1] The pain may extend to the left arm, jaw, shoulder, back or neck, despite advances in the treatment of AMI, the impact of prevention measures is counteracted by the alarming increase in obesity, high blood pressure (HBP), diabetes mellitus (DM), the aging of the population and the appearance of other comorbidities, such as kidney failure.[2,3] There are two types of AMI that are differentiated in the Electrocardiogram (ECG) by ST segment elevation:

1) Q wave myocardial infarction or acute coronary syndrome with ST segment elevation: It occurs due to prolonged obstruction of one of the major coronary arteries, leading to the death of a more or less large area of the heart.

2) Non-Q wave myocardial infarction or non-ST segment elevation acute coronary syndrome: The lack of risk affects somewhat smaller arteries of the heart, not such a large area of the heart dies and without complete occlusion of the coronary artery by the thrombus and it does not cause death of cardiac cells even though it requires urgent treatment due to the high risk of a heart attack, serious arrhythmia or sudden death.[2,4] There have been many attempts to reduce mortality from myocardial infarction, among which thrombolytic treatment with fibrinolytic drugs is of great importance, which manage, in approximately 50% of patients, to reduce the relative risk of in-hospital mortality, as long as the treatment is applied within the first hour. Regarding the preferred treatment for patients with this pathology, it is fibrinolysis or thrombolysis, which is an important reperfusion strategy and should be started within the first 10 minutes after diagnosis or within the first 12 hours after the onset of symptoms, as long as it can be performed within the first 120 minutes from diagnosis by an experienced team.[5,6] In recent years, clinical practice guidelines have been updated on the care of patients with a heart attack, the management of stable coronary disease, and prevention strategies or specific management of risk factors to avoid complications or risk situations in the patient.[1]

Delimitation and statement of the research problem

Since AMI is the main ischemic heart disease that has claimed the most lives worldwide in recent years, the aim is to identify the main risk factors and their behavior in patients with AMI to minimize mortality in Cardiac Intensive Care areas. In addition, it is proposed to update information on clinical-epidemiological factors of AMI in order to obtain current information from the last 10 years. Therefore, the following research question is posed with the format patient and/or problem, intervention and results (PIO): What is the characterization of the factors associated with AMI in patients within the Intensive Care Unit (ICU)? The following are identified: P = Critical patients admitted to the ICU, I = Clinical-epidemiological factors of AMI and O = Characterization of AMI factors in the ICU.

Goals

a) To identify the prevalence of AMI in critically ill patients in the ICU.

b) To characterize the clinical- epidemiological factors of AMI in a critical patient in the ICU.

Theoretical framework

For this systematic review, the Virginia Henderson model will be used, which states 14 basic needs that are essential for the identification and satisfaction of patients' needs, in order to achieve

physical, psychological and social well-being.[7] Virginia Henderson was a distinguished nurse who became one of the most important figures in modern nursing and who incorporated physiological and psychological principles into the field of nursing. With this model, specialist nurses can obtain a clear and detailed picture of the situation of each patient who presents an AMI in an ICU, and thus design a care plan appropriate to their needs.

Need 1: Breathing normally refers to the fact that this need is essential for life. It is necessary to know the respiratory function of each individual, since the nursing staff must plan interventions to be developed to meet this need. It refers to cardiac massage and oxygenation control. The most relevant data for your assessment are:

a) Respiratory rate
b) Oxygen saturation
c) Type of breathing
d) Airway patency
e) Cough
f) Secretions
g) Smoking habits in smokers
h) Respiratory distress

In this case, the patient with AMI presents tachypnea, and this need is altered. The standardized care plan would be to place the patient in a semi-Fowler position with supplemental oxygen so that the patient does not develop dyspnea, in order to meet the need for normal breathing.

Need 2: Eating and drinking properly refers to all the mechanisms and processes that humans perform to ingest food and liquids, such as ingestion, swallowing, digestion and integration of nutrients to obtain the energy that the body needs. This need varies according to each person, according to their lifestyle, sex, age, culture, among others. Most relevant data for your assessment:

a) Follow some kind of diet
b) Lack of appetite
c) Problems swallowing
d) Need help feeding
e) Fixed meal times
f) Weight/height/BMI

This need is not affected since the patient will be able to eat as long as it is a soft, low-sodium diet and drink appropriately, excluding caffeinated and energy drinks.

Need 3: Eliminate bodily waste refers to the fact that the body, according to its metabolic process, must eliminate the waste it generates through urine, feces, breathing and menstruation. Relevant data that should be assessed are:

a) Frequency of fecal elimination
b) Characteristics of stool
c) Presence of alterations
d) Changes in bowel habits
e) Habits that help/hinder defecation
f) Means that promote defecation
g) Frequency of urinary elimination
h) Characteristics of urine
i) Has changes when urinating
j) Habits that facilitate/hinder urination
k) Resources you use when urinating
l) Frequency of menstruation
m) Characteristics of menstruation
n) Menopause
o) Excessive sweating
p) Loss of fluids

For this need, the patient with an AMI does not have control of his sphincters, which can cause incidents. This leads to the placement of a Foley catheter to maintain strict fluid control, in addition to the placement of a diaper to quantify evacuations. Sometimes there is excessive sweating (diaphoresis) which occurs when there is hyperthermia or intense pain.

Need 4: Moving and maintaining proper posture refers to maintaining the integrity of the human being, which includes important aspects such as age, growth, constitution, emotions, personality, culture, among others. Relevant data to be assessed:

a) Degree of daily life activity
b) Usual situation
c) Functional level for the activity
d) Regular physical exercise
e) Posture that is usually adopted
f) Difficulty walking and maintaining proper postures

Initially, this need may be restricted, since due to the pain and increased heart rate, the patient will have to remain in absolute rest and in the semi-Fowler position.

Need 5: Sleep and Rest refers to a person's ability to fall asleep, rest, or relax. Without sleep or rest, the ability to concentrate, judge, and perform daily activities decreases and irritability increases. This need may be altered, depending on the precordial pain that the patient presents, for this it is necessary to apply sedation analgesia to reduce these symptoms. Relevant data to be assessed:

a) Hours of sleep per day
b) Sleep/Rest Start/End Time
c) Existence of tiredness/drowsiness
d) Factors that produce it
e) Energy level during the day
f) Place where you sleep/rest
g) Existence of ritual for sleeping
h) Presence of bad sleeping habits
i) Difficulty falling or staying asleep
j) Existence of any disease that prevents you from falling asleep

k) Problems during rest

l) Frequent schedule changes

m) Presence of snoring

n) Natural stockings/drugs

Need 6: Choosing appropriate clothing refers to the need to protect the body depending on the climate, which allows choosing the appropriate clothing for the physical capabilities and abilities of each human being. Relevant data to be assessed:

a) Suitability and comfort of clothing and footwear

b) Clothes or objects that you want to always carry

c) Difficulties or limitations in choosing clothes

d) Causes of these limitations

e) How do you think you can avoid or solve them?

f) Personal or environmental factors that influence the choice of clothing

g) Resources that you use to improve the satisfaction of this need

h) This need must be met; the patient must wear loose clothing such as a gown, without seams or elastic bands that press, to avoid suffocation and intensity of pain.

Need 7: Maintaining body temperature refers to maintaining normal limits whether it is cold or hot, by adapting certain types of clothing for each situation. Acting if changes in body temperature occur related to any disease. Relevant data to be assessed:

a) Measuring body temperature

b) Patient age

c) Determine the resources used to adapt to changes in environmental temperature

d) Resources to maintain body temperature

e) What do you do in case of fever?

For this need, it is necessary to maintain normothermia with monitoring of the thermal curve, in case of increased body temperature, application of antipyretics or physical means, in turn, the temperature may increase due to pain, which must be managed in conjunction with analgesia.

Need 8: personal hygiene refers to maintaining a clean and adequate appearance to meet a certain level of health and well-being. It is necessary to maintain intact, healthy, clean and well-cared for skin. Relevant data to be assessed:

a) Personal hygiene: body, oral, hair, nails.

b) Functional capacity for bathing/general hygiene and type of assistance required

c) Skin and mucous membrane condition: hydration characteristics, color, elasticity.

d) Assessment of lower limbs.

e) Foot assessment.

f) Skin changes or lesions: presence of pressure ulcers.

The patient with AMI must remain completely at rest, which is why it is necessary to bathe in bed, with as little movement as possible to avoid an increase in parameters. Once the patient with AMI is stabilized, it is necessary to implement mobilization at least every 4 hours.

Need 9: Avoiding environmental hazards refers to the fact that the person must have knowledge that allows him or her to identify the conditions in his or her environment that favor or increase the risk of suffering accidents and thus avoid or prevent dangers to him or herself and avoid injuring other people. Relevant data to be assessed:

a) Mood: Worry, sadness, nervousness, irritability, euphoria, impulsiveness.

b) Knowledge about your health status. Interest in healthy behaviors. Routine preventive measures: vaccinations, check-ups, etc.

c) Perception of yourself and the current situation: How do you feel?

d) Adherence to the therapeutic plan.

e) Personal and environmental safety measures, routine, prevention, barriers exist.

f) Allergies: medications, food, environmental.

g) Treatments. Self-medication.

h) Orientation: spatial, temporal, people.

i) Sensory-perceptual alterations.

j) Level of consciousness. Memory. Balance.

k) Pain: type, intensity, location, impact, help needed.

l) Toxic habits: tobacco, alcohol, drugs.

m) Accidents. Falls.

n) Violence.

o) Anesthesia.

It is necessary for the patient with AMI to be in a large room where noise, stress and bright lights are avoided, to avoid any type of alteration. Carry out a nutritional plan where any type of excess is excluded such as drugs, alcohol and tobacco. Analgesia to reduce pain through controlled medications. Likewise, avoid having contact with relatives who may alter their emotional stability, as well as exclude all types of problems.

Need 10: Communicating with others means that a person must express his or her thoughts. Likewise, learning to relate to others and to the environment in which he or she lives. Relevant data to be assessed:

a) Cognitive-perceptual limitations.

b) Possibility of alternative communication.

c) Changes in health situation.

d) Family structure and dynamics.

e) Environmental conditions.

f) Previous relationships with the dependent person.

g) General health status.

h) Perception of the situation.

i) Beliefs and values about health and dependent care.

j) Adequacy of physical space.

k) Reproductive dysfunction.

l) Availability of means of mobilization and transportation.

m) Commonly used medications.

Need 11: Values and beliefs refer to the person making decisions in accordance with their values, beliefs and life choices. It has an important relationship with the person's mood and belonging to a group. This need must be met by the nurse with respect for these values and beliefs and paying special attention to the fact that this need becomes more important in times of illness and could constitute a support to help people cope with and adapt to their current and future situation. Relevant data to be assessed:

a) Current perception of your health and well-being situation.

b) The person's future plans.

c) Hierarchy of values.

d) Ease/difficulty of living according to your beliefs and values.

e) Importance of religiosity/spirituality in your life.

f) Resources you use to maintain health.

g) Existence of some value or belief that is shared at the family level by all its members.

h) Manifestations of dependency and cause of difficulty.

i) Attitude towards death.

j) Possession of a living will.

Need 12: Working to feel fulfilled refers to the role that each individual performs that makes him or her feel special, useful, and thus feel satisfied with it; it depends a lot on the person's values and interests. Relevant data to be assessed:

a) Normal work, social, family and role activity.

b) Socio-economic limitations.

c) Desire for achievement and improvement.

d) Feeling of usefulness.

e) Adaptation to the disease.

f) Immaturity or senility.

g) Activities you like to do.

h) Difficulty in carrying out your usual hobbies.

i) Common feeling of stress.

Need 13: Participate in various forms of entertainment. The individual needs various recreational activities. When these activities are altered by an illness, this causes a problem of partial or total independence in the individual. Relevant data to be assessed:

a) Recreational activities that you usually do.

b) Number of hours you dedicate to it per week.

c) It is difficult to perform.

d) Common hobbies.

e) He is bored.

f) Causes to which this difficulty or limitation is attributed.

g) Response to stressful situations.

Need 14: Learning, discovering or satisfying curiosity refers to the acquisition of knowledge and training that is considered essential for the basic care of the person, which helps to promote the management of one's own health. This can improve or worsen according to the level of knowledge that the person has about their process. Relevant data to be assessed:

a) Circumstances that influence learning: cognitive or physical limitations, emotional state, motivation, age, etc.

b) Degree of knowledge of your current health status.

c) Behaviors indicative of interest in learning and problem solving.

d) Educational resources for your social-health environment.

Methodology

Study design: The present systematic review was carried out according to the six steps of Holly, Salmond and Saimbert,[8] which are appropriate for nursing practice and consist of:

a) formulating a question

b) establishing inclusion and exclusion criteria

c) developing search strategies

d) selecting articles to be included in the review

e) extracting data

f) synthesizing the data.

Eligibility criteria: This systematic review is based on a structured PIO question- P: patients with AMI**,** I: clinical-epidemiological factors**,** O: characterization of factors in the ICU**.** Original, open-access articles with a quantitative approach in English and Spanish that addressed clinical-epidemiological factors associated with AMI in the ICU were included. Clinical practice guidelines, case studies, narrative, anecdotal and editorial reviews were excluded.

Sources of information: The search was carried out in the following databases: Scielo, Medline, Redalyc and Google Scholar where the terms used were: AMI, clinical factors, epidemiological factors, intensive care unit. Respecting the established selection criteria, a total of 8 articles remained as a sample for this systematic review.

Search strategy: A bibliographic search strategy was developed and carried out in June 2023, to obtain the best evidence the DeCS and MeSH descriptors were included: Epidemiologic Factors, Myocardial Infarction, Intensive Care Units. Using English and Spanish in all possible combinations, as well as Boolean operators AND and OR, respecting the established selection criteria.

Selection of studies: The selection of studies was carried out according to the eligibility criteria, for which the bibliographic manager MENDELEY was used to organize the articles found, eliminate duplicates and articles that did not meet the established criteria. In addition, the PRISMA flowchart was used to disseminate the articles found.

Data collection process: The information collection was prepared from the bibliographic review of national and international articles, which had as their essential content the clinical-epidemiological factors in patients with AMI in the ICU. Of all the academic works located, those of greatest importance will be included according to the level of evidence and those not relevant will be discarded.

Citation: Franco CGE, Cortes AMC, Saucedo BFS. Characterization of clinical-epidemiological factors associated with AMI in the ICU: a systematic review. *Nurse Care Open Acces J.* 2024;10(4):152–159. DOI: 10.15406/ncoaj.2024.10.00307

Summary of results

Results are described below by each of the authors included Table 1. The results found in this study mostly confirmed that the most prone age group is 50 to 59 years old, and that they are mostly male Figure 1. Most AMI occur in the anterior face of the heart and in most cases it produces chest pain. In addition, it has been shown that it can increase life expectancy by more than half if the patient is admitted within 3 hours of the onset of the cardiac event Table 2. It also minimizes the hospital stay from 3 to 5 days. The thrombotic treatment does not have much difference between thrombolyzed and non- thrombolyzed patients. In addition, hyperlipidemia, diabetes mellitus, arterial hypertension, smoking and obesity were found to be associated with the development of AMI.

Table 1 Summary of clinical-epidemiological factors of AMI

Factors of AMI	Clinicians	Epidemiological
Ferrer, Fong, Rosell, Guzmán, & Oliva[9]	Longer pre-hospital time is associated with more complications, which are less frequent in those affected by thrombolysis.	Male sex and age group 55-64 years.
Aguiar, Giralt, Gonzalez, Rojas, & Machin[2]	Half of them did not receive reperfusion therapy and cardiogenic shock was confirmed as the most common complication.	
Matos-Santisteban, Cedeño-Salema, & López- Catá[14]	Smoking, arterial hypertension, hyperlipidemia and diabetes mellitus were risk factors.	Age group 50 to 59 years old .Individuals aged 40 years were more likely to develop acute myocardial infarction.
Favier, Aladro, Alarcón, Quintana, & Arteaga[13]	Ischemic heart disease was the most common family history of disease. A high percentage of patients with high blood pressure, hypercholesterolemia, smokers,diabetics and obese people.	Age group of 65 years and over and male sex.
Carcausto & Zegarra[3]	The time from the onset of pain to admission was less than three approximately hours.	The majority were men with an average age of 60 years and had no conventional cardiovascular risk factors.
Evans-Meza, Perez-Fallas, & Bonilla-Carrion[12]		It is prevalent in men and since 1999 the mortality rate has mostly decreased.
Vitón , Casabella , Bermúdez, García, & Lorenzo[6]	The most common cause of non- thrombolysis is with a time greater than 12 hours. The most common complication was hypotension.	The age group that predominated was 60-69 years, with the male sex being the most common, and the most common location was the lower one.
Bono, y otros[4]	The most frequent complication was heart failure. Most of them became complicated on the first day of hospitalization and all (with the exception of one patient) within 48 hours. Complications are very frequent and occur within the first two days of hospitalization. A lower-risk group was identified that could have a shortened hospital stay of just 48 hours.	The average age was 68 years.

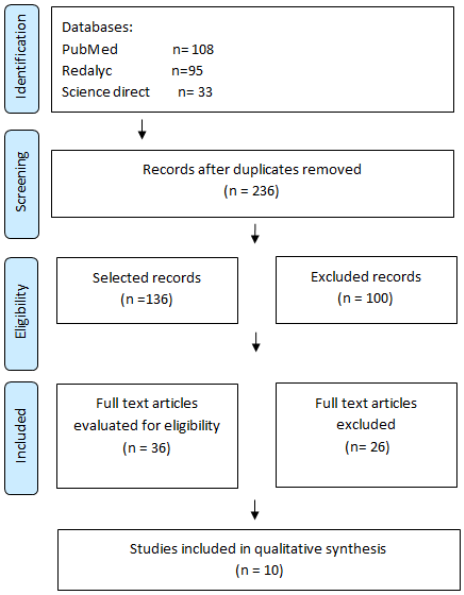

Figure 1 PRISMA flowchart.

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Table 2 Critical reading analysis of the clinical-epidemiological factors of AMI

Authors and year of publication	Design and Participants	Place and date	Aim	Results
Ferrer, Fong, Rosell, Guzmán, & Oliva[9]	Cross. Descriptive.64 patients.	Cuba.January to December 2008.	To characterize 64 patients diagnosed with acute myocardial infarction, who were discharged from the Intensive Care Unit of the "Dr. Joaquín Castillo Duany " Teaching Clinical-Surgical Hospital in Santiago de Cuba	The male sex predominated (53.1%) and the age group 55-64 years (34.4%).Likewise, the longer the prehospital time, the more complications there were (47.4%).In 62.5% thrombolytic treatment was not performed.
Plain[5]	Descriptive,77 patients. longitudinal and retrospective.	Cuba, January 1 to December 31 , 2016.	To identify some clinical-epidemiological characteristics of AMI in people admitted to the "Mártires del 9 de Abril " Hospital in Sagua la Grande.	The male sex predominated, the age group that had the greatest impact was 60-69 for the female sex (33.7%) and 70-79 for the male sex (66.23%).The risk factors found included age (92.20%), smoking (67.53%), dyslipidemia (58.44%), HTA (42.86%), Diabetes mellitus (41.56%) and APF (11.69%).The most frequent location was the anterior face, more than 80% of the patients were thrombolyzed . Mortality was higher in the male sex and increased with age.
Vitón , Lorenzo, Linares, & Godoy[10]	Descriptive and cross-sectional observational.1427 patients.	Cuba,January 2013 – December 2017	To clinically and epidemiologically characterize patients with acute myocardial infarction hospitalized in the Coronary Intensive Care Unit of the "Abel Santamaría Cuadrado" General Teaching Hospital in the period January 2013 - December 2017.	The most affected age group was 60-69 with 30% and males represented 63.7%. Inferior infarcts predominated in 54.9% and arterial hypertension was found in 65% of patients. Electrical complications appeared in 34.3% of cases, with left bundle branch block predominating in 12.4%.Thrombolysis was applied to 64.5%. 9.1% of patients died.
Aguiar, Giralt, González, Rojas, & Machín[2]	Observational, descriptive, cross-sectional study.50 patients died from AMI.	Cuba.June 2009 to March 2017.	To characterize patients who died from acute myocardial infarction in the Intensive Coronary Care Unit of the " Comandante Manuel Fajardo" Clinical-Surgical Hospital.	Mean age was 62.6 years ± 7.Anterior infarction predominated (76%), together with patients with Killip -Kimball III - IV and TIMI low risk with (68%) and (40%) respectively. 56% of the universe did not receive reperfusion therapy and Cardiogenic Shock (40%) was found as the most common complication.
Matos-Santisteban, Cedeño-Salema, & López- Catá[14]	Observational analytical case-control study. 345 patients.	Cuba.2019	To identify the risk factors associated with acute myocardial infarction in the Cardiology service of the "Celia Sánchez Manduley " Clinical Surgical Teaching Hospital during 2019.	In both cases (27.9%) and controls (26.5%), the age group of 50 to 59 years of age predominated . 71.3% of cases were non-obese, as were 72.6% of controls. Hyperlipidemia was associated with the development of an acute myocardial infarction ($p < 0.001$), representing a risk factor (OR: 4.39 CI: 2.72-7.07). An association was found between the presence of diabetes mellitus, arterial hypertension, smoking and a history of ischemic heart disease ($p<0.05$) with the occurrence of an acute myocardial infarction.
Favier, Aladro, Alarcón, Quintana, & Arteaga[13]	Descriptive and retrospective longitudinal.30 patients.	Venezuela. November 2005 to March 2008.	Describe the behavior of risk factors present in patients with AMI.	The predominance of the age group 65 years and older (40.0%) and male sex (73.33%) was found. Ischemic heart disease was the most frequently found family history of pathology (90.0%). A high percentage of patients with arterial hypertension (96.6%), hypercholesterolemia (90.0%), smokers, diabetics (76.6%) and obese (63.3%) was determined.
Carcausto & Zegarra[3]	Descriptive type case series. 30 patients.	Peru. January 1 to December 31, 2007.	To determine the morbidity and mortality of patients with ST-elevation acute myocardial infarction treated in a general hospital and to describe their demographic and clinical-epidemiological characteristics.	86.7% were men.The mean age was 62.8±12.6 years. A history of hypertension was found in 57%, obesity in 40%, smoking in 40%, and diabetes mellitus in 30%. Typical chest pain occurred in 75% of patients. 50% of patients had uncontrolled hypertension on admission, 33% had leukocytosis, and 46% had blood sugar >110 mg/dl. Only 25% received reperfusion therapy, 33.3% of cases were successful, with a door-to-needle time of 250 ± 114 minutes. Complications occurred in 26.6% of patients, with a mortality rate of 13.3%. 76% were admitted to the hospital with a pain time of less than 3 hours.

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Table 2 continued

Authors and year of publication	Design and Participants	Place and date	Aim	Results
Evans-Meza, Perez-Fallas, & Bonilla-Carrion[12]	Quantitative and descriptive. Standardized mortality rates for AMI for the 35-74 age group, by sex and province.	Costa Rica. From 1970 to 2014.	To update some important aspects of the descriptive epidemiology of ischemic heart disease (IHD) in Costa Rica during the period 1970-2014.	There was an increase in rates in the general population and with greater impetus in the population aged 35 to 74 years, until the five-year period 1995-1999, from which a decline began that apparently stopped during the five-year period 2010-2014 (both sexes: r = 0.9964, r2 = 0.9928, β = –2.4950, p = 0.04; men: r = 0.9994, r2 = 0.9988, β = –2.770, p = 0.02; women: r = 0.9896, r2 = 0.9793, β = –2.4950, p = 0.07). The highest rates are found in the provinces in the center of the country. It predominates throughout the period in the male sex and represents on average 14% of general mortality.
Vitón , Casabella , Bermúdez, García, & Lorenzo[6]	Descriptive and cross-sectional observational.734 patients.	Cuba.January 2013 and December 2015.	To characterize thrombolytic therapy in patients with acute myocardial infarction hospitalized in the coronary intensive care unit of the "Abel Santamaría Cuadrado" General Teaching Hospital.	The age group that predominated was 60-69 years (30.3%) and the male sex (66.75%), the most common location was the lower one with 51%. The most common cause of non-thrombolysis was a time greater than 12 hours in 63.8% of cases. Thrombolysis was applied in 63.5% of cases and the most common complication was hypotension in 20.8%. 53.9% of deaths were thrombolyzed patients and 61.9% of the deceased were male.
Bono, y otros[4]	Prospective single-center observational study .1796 patients.	Argentina. September 2017 to March 2020.	To know the incidence of hospital complications of STEMI, their chronology of appearance and identify their predictors.	The days of hospitalization were 2 to 3 days, regarding treatment, 83% had repercussion therapy and mortality was 7%, more than 70% had chronic-degenerative diseases, regarding location, 40% each had the lower and anterior sides.

Discussion

In 2021, AMI was the heart disease with the highest mortality rate worldwide and although it is known that it mostly affects men between 50 and 59 years of age, patients of this sex predominated with a prevalence up to 74 years of age with a greater probability of suffering from it, but from this age onwards, women predominated.[9] In addition, there is a difference between the location of the infarction, while in the "Comandante Manuel Fajardo" Clinical-Surgical Hospital, located in Havana, Cuba, the majority presented the lesion in the anterior region,[2] in the coronary intensive care unit of the "Abel Santamaría Cuadrado" General Teaching Hospital in Cuba, the most common location was the lower one.[10–14]

Limitations

In this review, the general and specific objectives were met; however, the studies included a sample of mostly Latin American patients where the clinical-epidemiological factors of AMI vary in their characterization, which makes it difficult to generalize the results.[15] The same applies to the design of each of the investigations, which, by not including randomized clinical trials, makes their generalization difficult.

Conclusion and discussion

AMI is the main ischemic heart disease with the highest mortality rate worldwide, so it is important to alert and provide timely care to the general population suffering from the most notable risk factors, which were: hypertension, DM, hypercholesterolemia, hyperlipidemia, smoking or a history of ischemic heart disease. Chest pain was the sign most frequently presented by patients, so it is important to provide immediate care within the first 3 hours to increase the chance of survival and avoid prolonged hospital stay, and in this activity with emphasis on nursing practice.

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None.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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