Nurses' role in acute coronary syndrome in emergency patients

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ABSTRACT

Acute coronary syndrome (ACS) is a pathology that annually leads to the death of thousands of people around the world. Every year new statistics emerge, and every year they get worse on the global stage. Thus, the following question was asked: "what would be the role of the nurse in the face of a victim with acute coronary syndrome in the emergency department?" That is why the objective of this study was to describe the performance of nurses in a qualified way in the face of the clinical manifestations of Acute Coronary Syndrome. In view of the severity of the pathology and the high rate of morbidity and mortality, further studies on the subject are extremely relevant to better instruct professionals and disseminate the new protocols for the care of these patients. To do this, we chose to use the methodology in the form of an integrative review, to which throughout the research we came across a total of 35 articles talking about this theme. From this number, we excluded 16 because they were outdated and used 19 to carry out this work. We conclude that good care provided in the emergency room quickly and effectively significantly increases the chances of patient survival and, therefore, we can affirm that the initial approach with emphasis on the prevention of lesions secondary to ischemic myocardial injury is extremely important. Therefore, the health professional should be aware of the signs of poor tissue perfusion, thus preventing these secondary lesions.

Keywords: Acute coronary syndrome, Ischaemia, Acute myocardial infarction.

1 INTRODUCTION

It is notorious that Brazilian public health is still a slow system, but cardiovascular diseases still have a high rate of morbidity and mortality in Brazil and worldwide. Research showed that in 2012, in the period between January and October, heart disease was one of the main causes of death

(20.6%) affecting adults aged 20 to 59 years (24%). Acute myocardial infarction accounted for 12.1% of deaths in this group at the time. (Lopes et al. 2014)

The study of the etiology of ACS is essential so that this pathology affects the population less and less. ACS occurs due to any action that causes myocardial ischemia, since by generating a blockage in the coronary arteries, the affected vessels are unable to fulfill their function of irrigating the heart muscle, producing acute myocardial infarction or angina. (Carvalho, 2022)

There are risk factors that can contribute to the onset of ACS, among the non-modifiable risk factors is biological sex, considering that women spend most of their time being asymptomatic presenting symptoms only late, age group (men over 60 years and women over 70 years) and family history. Among the modifiable risk factors are arterial hypertension, diabetes and dyslipidemia (these are diseases that, when controlled, promote a better quality of life for the individual, reducing the chances of the appearance of other pathologies), alcohol consumption, smoking, sedentary lifestyle and obesity. (SANTOS et.al, 2017)

ACS has multiple complications and one of them is Acute Myocardial Infarction (AMI), in which the partial obstruction of a vessel can already cause it. It is noticeable that AMI is a huge problem in the health of Brazilians and that many of them die at home, even before they can get to the hospital to receive the necessary care and half of the deaths occur two hours after the episode. (PESARO et. al, 2008)

Acute Coronary Syndrome (ACS) has been receiving greater attention, since a large part of the population has turned to a change in habits that compromise quality of life, however, cardiovascular diseases are still positioned as the major cause of non-violent death in the country, causing the hospital environment to receive a large number of patients with symptoms focused on this health problem. (MAGEE et. al, 2012)

The development of more effective treatments and prevention measures would be ways to reduce the impacts caused by cardiovascular diseases. It is essential that the nursing team has full control of the risk factors that cause acute coronary syndromes in order to act more actively in the development of campaigns and programs to reduce their mortality rate (LOPES et. al, 2014)

The Resolution of the Federal Council of Nursing - COFEN-423/2012 prescribes the specification of the risk scale and how the private performance of the Nurse with his team has to be prepared to perform and perform care with excellence. The Nurse is the one who has the first contact and has to be ready to perform the care in the emergency services with the hypothesis of a possible ischemia, to be proven we perform the first electrocardiogram (which has the function of seeing the electrical activities of the heart through the electrodes that are fixed on the patient's skin) and the intervention of the doctor is already requested to see what the treatment measures and the Nursing will

be He is always around, in direct care of the patient and usually reassuring and assisting during treatment. (NUNES et.al,2020)

2 DATA ANALYSIS

2.1 DESCRIPTION OF THE ANATOMY AND PHYSIOLOGY OF THE MYOCARDIUM

The heart is a vital organ of the body responsible for pumping blood and maintaining good capillary perfusion to all organs. It is composed of specialized muscle tissue, being supplied by the coronary arteries that ascend from the aorta and ensure the necessary supply for the body's demands. (BAPSTITELA, 2021)

The myocardium must receive a good blood supply so that there is a supply of nutrients and oxygen and it can produce enough energy for it to be able to perform its contractions, therefore, the first branches that come out of the aorta (right and left coronary artery) are directed to the myocardium itself, to ensure the blood supply of the heart muscle itself and the acute myocardial infarction happens exactly when the irrigation of the same by the coronary arteries is impaired, i.e. there is an obstruction. (SANT'ANNA et.al, 2022)

The heart muscle, myocardium, has its musculature formed by cardiomyocytes (cardiac striated muscle fibers) that are individual and located around the heart. These fibers on the surface of the atria and right ventricles form two layers, while in the left ventricle they can form up to 3 layers and, therefore, it is concluded that the left ventricle is much thicker because it must pump blood with a higher pressure in the systemic circulation than the right ventricle. (Sobotta, 2019)

In the heart we have afferent nerve pathways and it is through them that stimuli are transmitted and reach the CNS (Central Nervous System) and, from there, these pathways approach the dermatomes (nerve fibers from the cutaneous areas) and direct to the spinal cord. The myocardium is directly related to the T3 and T4 dermatomes, also called the Head Zone. This is a cutaneous region where chest pain manifests, this can be caused by a reduction in blood flow causing angina pectoris or even infarction. (Sobotta, 2019)

The coronary arteries get their name because they form a crown at the base of the heart, both coronary arteries (right and left) originate from the aortic artery, specifically in the upper part of their origin, in the left ventricle and posteriorly to the pulmonary trunk. The left coronary artery arises in the left aortic sinus and in its posterior course to the pulmonary trunk it bifurcates to form the anterior interventricular and circumflex branches, while the right coronary artery originates in the right aortic sinus and irrigates the right ventricle (RV), a posterior part of the left ventricle (LV), also irrigates the posterior interventricular septum, the right atrium (RA) and the interatrial septum, in this way contributing to the conduction system of the heart. (MENDES, 2019)

2.2 CLASSIFICATION OF ACUTE CORONARY SYNDROMES

When the patient receives the diagnosis of acute coronary syndrome, he goes through a classification of this pathology, which is stable angina, which is when there is an increase in oxygen consumption, since the coronary wall is obstructed, unstable angina that occurs when there is a decrease in the supply of oxygen transiently, since the plaques that are obstructing the coronary rupture and become loose, Non-ST Elevation AMI (Acute Myocardial Infarction), which is when there is a partial myocardial injury without an electrocardiogram change, and ST-segment AMI, which is when a transmural myocardial injury occurs with an electrocardiogram change. (PESARO et.al, 2008)

Angina pictoris: discomfort in the chest or precordial region, caused by myocardial ischemia, its main cause can be atherosclerotic disease, but it can also be caused by embolism, vasculitis or aortic dissection. (NICHOLAS, 2021)

Angina of recent onset, pathology that appears in a period of less than two months and worsens when performing usual efforts. (KLONNER, 2007)

Caused by a focal spasm of a coronary artery, which can lead to severe coronary ischemia, diagnosis is by ECG and sublingual calcium channel blockers and nitroglycerin. (FERREIRA, 2015)

Acute coronary syndrome (ACS) is a group of clinical symptoms that are linked to myocardial ischemia, such as ST-segment elevation acute myocardial infarction (STEMI) and non-ST-segment elevation acute myocardial infarction (NSTEMI) and unstable angina (UA). It is of paramount importance to identify the changes in symptoms in order to choose immediate treatment with repercussions, such as thrombolytics or primary angioplasty. (SOUZA, 2019)

Cardiovascular diseases, also identified with the acronym CVDs, are the major causes of morbidity and mortality in the world and among them is Acute Coronary Syndrome. ACS is an emergency situation because its clinical symptoms are compatible with the symptoms of acute myocardial ischemia. (CARVALHO, et.al 2019)

STEMI with STEMI (STEMI) and AMI Without STEMI ST-segment elevation (NSTEMI) has as its main characteristic the increase and/or decrease in biomarkers of myocardial injury other than Unstable Angina (UA), which represents chest pain specific to myocardial ischemia, but there is no change in these biomarkers. The Electrocardiogram (ECG) is a test commonly performed in patients with suspected ACS, in which the ST segment and the AVR lead are evaluated, the elevation of both may be associated with a severe coronary lesion. (BORN et.al, 2021)

2.3 SIGNS AND SYMPTOMS OF ACUTE CORONARY SYNDROME

The signs and symptoms of Acute Coronary Syndrome should be analyzed carefully, since the symptoms are not always as evident as the typical pain, for example when we have tightness, burning, radiation to the left upper limbs, pain greater than 10, 20 minutes. It may happen that the symptoms come from an anginal equivalent, where syncope, dyspnea, nausea and vomiting may present and the patient is sudoreic and therefore it is extremely important to be aware of all the signs. (VASCONCELOS et.al, 2021)

One of the main reports is chest pains or a strong feeling of oppression radiating to the upper limbs and epigastric. The duration of this pain is a factor of paramount importance, because a duration of more than 20 minutes with no improvement at rest or with drug interaction increases the chances of accurate diagnosis. (PAIVA, 2021)

The pain of infarction is usually similar to the pain of angina, but with greater intensity and duration greater than 20 minutes. The patient is dyspneic and has palpitations, nausea and has cases of emesis (MAGEE, 2012).

Patients who are affected by ACS, in addition to angina pain, also have symptoms such as pain in the thoracic region, asthenia (weakness), excessive fatigue and vertigo. It is common for the pain to start in the mandibular region and extend to the umbilical scar (navel), and can even affect the stomach. In order to have an accurate diagnosis, it is necessary to provide agile and effective care as soon as the patient goes to the care unit. (MOURA, 2021)

ACS is defined as an obstruction, which can be permanent or temporary, of a coronary artery and this obstruction is usually due to the accumulation of lipid plaques inside the artery, causing a blockage. The clinical manifestation is characterized by myocardial oxygen imbalance, presenting as STEMI (ST-Elevation Myocardial Infarction), NSTEMI (Non-ST-Elevation Myocardial Infarction) and UA (Unstable Angina). (SOUZA, 2019).

2.4 PROTOCOL FOR DEFINING THE DIAGNOSIS OF ACUTE CORONARY SYNDROME

It is important that the diagnosis of ACS (Acute Coronary Syndrome) is made as early as possible, since a large part of the deaths that occur due to this pathology happen 1 hour after the discovery, for this it is necessary to have ECG monitoring, as well as oxygen therapy and a fight against the patient's suffering through medications, Because the pains cause an increase in heart rate that results in the worsening of the patient's case. (Bassan, 2006)

Investigation of the clinical history is essential to make the differential diagnosis of ACS etiologies and appropriate management. Chest pain is the most common clinical manifestation of myocardial ischemia, being present in about 80% of cases. It is usually a pressure pain in the

retrosternal region and can radiate to the upper limbs, neck, and jaw. Concurrently, diaphoresis, dyspnoea, abdominal pain and syncope may be present. (Carvalho, 2022)

Every diagnosis is concluded based on the information and tests requested, and we are able to identify the problem through an electrocardiogram that shows us the electrocardiogram changes. Depending on the symptoms, the change in markers begins six hours after the onset of pain (PESARO et.al, 2004)

The ECG tracing has to be controlled because it is essential to continue its treatment and to be attentive to the evolution of the disease. The alterations will decrease through a correct diagnosis and treatment, it leads us to therapeutic success, but if the electrical alterations persist, it shows us that there was a discourse in the diagnosis and treatment, promoting more invasive conducts (MAGEE et.al, 2012)

Newly diagnosed with ACS, it is extremely important to understand the clinical acts in order to circumvent the pathology. Some of the procedures performed on patients with ACS are myocardial revascularization and the use of balloon angioplasty (a procedure that increases the width of the arteries). For patients who are over 75 years of age, the ideal is the use of beta-blocker medications, and in patients under 75 years of age, it is common to perform the PCI (Percutaneous Coronary Intervention) procedure. (BEGNINI, et.al, 2021)

The initial care of the patient is given by the nurse in the triage, so the professional must be extremely qualified to provide the necessary support to the patient right from the beginning, such as monitoring in order to control vital signs, the administration of oxygen for a good tissue perfusion

It is of paramount importance to make an early diagnosis of primary diseases that cause imminent risk of death for ACS, pulmonary thrombosis and aortic dissection, for example. (SON, 2020)

To classify the severity of ACS, we used the HEART and GRACE scores. In the HEART score, we evaluated the following data: family history, ECG, age, risk factors, troponin, TIMI, and gender. The HEART score has a low risk score of less than 3, a medium risk of 4 to 6, and a high risk of 7 or higher. (FEITOSA , 2021)

In the GRACE score, we evaluated eight markers: age, blood pressure (systolic), pulse rate, serum creatinine, cardiac arrest on admission, elevated cardiac biomarkers, ST-segment deviation, and Killip. Low risk 1-108, intermediate risk 109-140 and high risk greater than 140. (FEITOSA, 2021)

2.5 TREATMENT OF ACUTE CORONARY SYNDROME

In order for there to be an effective result in the treatment against ACS, it is essential to have an early risk stratification, recognizing and classifying the risk to which the patient is, which is carried

out during the hospitalization period and can be done in different ways. This process is essential for professionals to be able to direct themselves to the best therapeutic strategies. (Pesaro et, al 2008)

In cases of hypoxemia with saturation less than 92%, O2 supplementation should be introduced. Situations that are offered without its need cause complications, because O2 increases vascular resistance, thus reducing flow and increasing mortality. The recommended standard would be to start with the supplementation of a mask or nasal catheter at 2-4l/min accompanied by blood gas analysis. (Aguiar, 2022)

Therefore, the most effective way to reduce the impact of cardiovascular diseases, especially ACS on the population, is through the development of preventive actions and treatment of modifiable risk factors, such as systemic arterial hypertension (SAH), diabetes mellitus (DM), dyslipidemia, sedentary lifestyle and smoking, in addition to early diagnosis and treatment. in order to ensure better survival for carriers. (SOUZA et al.2022)

We can say that morphine is effective for pain relief and its action is vasodilator, and doses of 4-8mg intravenously can be administered, but its side effects cause bradycardia and hypotension. Nitrates, on the other hand, are used to relieve symptoms and decrease AMI mortality. (PESARO. et al, 2004)

Anticoagulants are drugs that will inhibit the generation of thrombin and some anticoagulants have been tested and used in studies but only four drugs are available for use, unfractionated heparin, enoxaparin, fondaparinux and bivalirudin. (SILVA, et.al 2015)

Beta-blockers are used in ACS because it slows the heart rate and lowers blood pressure, and should be a routine and early medication in patients with ACS, except in situations where the patient has some contraindication, for example chronic lung disease or severe liver disease. (Souza, 2021)

3 RESULTS AND DISCUSSIONS

The 19 selected articles underwent a detailed analysis, and data pertinent to this research were extracted. Chart 1 shows the main variables of each of them, containing year, author, journal, objectives, and main results and discussions.

Chart 1: Main variables of the 19 articles selected from the electronic databases

Year	Title	Authors	Newspaper	Objectives	Results and discussions
2006	Approach to acute coronary syndrome	Fernando Bassan and Roberto Bassan	Journal of the Society of Cardiology of Rio Grande do Sul – year XV n 07	To verify the importance of the diagnosis of acute coronary syndrome for the clinical status of the patient.	Early diagnosis of ACS is essential, because if it is too late, the vast majority of patients die.
2008	Acute coronary syndromes: treatment and	Antonio Eduardo Pereira Pesaro, Paulo	Brazilian Journal of Intensive	To know how risk stratification influences the best	An effective treatment is essential so that the patient gets out of the

	risk stratification.	Cesar Gobert Damasceno Campos, Marcelo Katz, Thiago Domingos Corrêa, Elias Knobel.	Care – vol 20 n° 2	therapeutic strategies.	acute phase and does not run an imminent risk of death.
2022	Acute coronary syndrome: an approach to its impact on cardiology	Lanna do Carmo Carvalho, Nuno Brandão di Barros Cachapuz Caiado, Sofia Carneiro Mansur Silva, Jehovah Guedes de Lima, Rilávia Eneiha Monteiro Alves, Marina Gabriela Magalhães Barbosa Murta, Edivaldo Bezerra Mendes Filho, Wilkie Azevêdo Machado, Heitor dos Santos Leão, João Pedro Sasso, Isabella Gomes Tenan	Research, society and development , vol. 11 n°9	Understand the etiology and appropriate treatment for acute coronary syndrome.	The study of the etiology of ACS shows that this pathology increasingly affects the population that several tests must be done to isolate it.
2018	Predominant Risk Factors in the Population With Acute Coronary Syndrome	Amanda Francielle Santos, Rafaela Ribeiro Machado and Míriam Geisa V. Menezes	ver.Saúde.com 14(2)	To report the risk factors of higher incidence in individuals with Acute Coronary Syndrome.	It is concluded that a large part of the population studied with ACS suffers more from modifiable risk factors, especially hypertension and smoking.
2021	Association and Comparison of high-risk electrocardiographic alterations with coronary lesion findings and out-of-hospital clinical outcome in patients with Acute Coronary Syndrome	Rodrigo Freitas do Nascimento, Reginaldo Cipullo, Lucas Magalhães dos Reis and Seleno Glauber de Jesus-Silva	Ver. Ciênc. Avg. 2021	To differentiate the changes in the electrocardiogram that present angiocoronary lesions, presenting a clinical outcome.	It was impossible to differentiate the clinical outcomes, such as length of hospital stay and death, in any of the groups analyzed, because the high-risk patterns were associated with severe coronary lesions, triggering an invasive treatment, whether endovascular or surgical, similar to AMI with or without ST-segment elevation.
2021	Nursing Care for Patients with Acute Coronary Syndrome.	Josué Moura do Nascimento	Dspace/Manakin Repository	To identify the main nursing care for patients with Acute Coronary Syndrome.	The professional quoted to carry out the accurate risk classification is based on technical and scientific knowledge to be able to identify an

					SCA.
2019	The Role of Nurses in the Fight against Acute Coronary Syndrome: Literature Review	Mariana Rocha de Souza	CEUB Higher Education	To describe the role of the nurse in the classification of risk or in care with chest pain suggestive of ACS.	The greatest efficacy for the improvement of a patient who has suffered myocardial ischemia is the rapid identification of this clinical picture.
2023	The new classification of chronic coronary syndrome and the currently available methods of diagnosis and treatment.	Amanda P. Santos, Henrique Viviani, Jaqueline Rossi Marim and Márcio Marins Peixoto	Cardiology in Focus: prevention, diagnosis and current treatments. Epitaya Publishing House	Demonstrate the updates of the protocols for classification, diagnosis and treatment of the pathology in a clearer and more accurate way.	It is concluded that we currently have several ways to make a diagnosis, including non-invasive monitoring, which is less harmful to health, and its treatment includes other classes of drugs.
2022	Profile of individuals with acute coronary syndrome treated at an urgent and emergency hospital in Acre.	Mathews Barbosa Santiago, Christopher Wando da Silva Souza, Matilde da Silva Conceição and Ruth Silva Lima da Costa	Ver Soc Arm Clin Med. 2022; 20(1):28-34	OBJECTIVE: To describe the profile of individuals with acute coronary syndrome treated at an urgent and emergency hospital in Acre.	The results reflected the profile of the patient admitted to the unit studied, in addition to the identification of associated risk factors and the use of invasive procedures to obtain the diagnosis of acute coronary syndrome.
2012	Acute Coronary Syndrome: a review	Raquel Ferreira Magee, Estefânia Cardoso Trindade Lacerda, Guilherme de Freitas Braga Borges, Gibran Antonio Garcia Daher, Rhaisa Ghannam Macedo, Ana Cláudia Cavalcante Nogueira and Alexandre Visconti Brick	See Med Saúde Brasília 2012; 1(3):174-89	To review the ACS theme from its fundamental concepts, through the pathophysiological process, correlate it with the clinical picture and finally highlight the approach for rapid and accurate diagnosis.	ACS is a pathological entity of great importance because it causes risk of death, in addition to being responsible for large health care costs. Thus, the physician who receives the patient in the emergency service must be prepared for emergency care of those who are admitted with chest pain, or even atypical conditions, especially in the elderly, women and diabetics, quickly and effectively.
2021	Signs and symptoms of acute coronary syndrome in the elderly: an integrative review.	Bruno Castro de Paiva	Fabiana Gulin Longhi Library (CRB-8:7257)	Identify the signs and symptoms of acute coronary syndrome in the elderly.	Almost all studies have reported the occurrence of angina pain, which may be typical or atypical. The pain could or could not be associated with some other factor and/or ischemic equivalent, such as ischnea, sweating, nausea and emesis.
2014	Association of cardiovascular risk factors with the	Evelise Helena Fadini, Reis Brunori, Camila Takáo Lopes,	Ver. Latino-Am. Nursing	To identify the relationship between the different presentations of acute	Hypertension and high levels of low-density lipoprotein were associated with

	different presentations of acute coronary syndrome.	Agueda Maria Ruiz Zimmer Cavalcante, Vinicius Batista Santos, Juliana de Lima Lopes and Alba Lucia Bottura Leite de Barros		coronary syndrome and cardiovascular risk factors among hospitalized individuals	different presentations of coronary syndrome. The results can provide subsidies to health professionals for secondary prevention programs aimed at behavior change.
2010	Prevalence of risk factors for acute coronary syndrome in patients treated in an emergency room	Karine Franke Lemosa , Roberta DAVISb , Maria Antonieta MORAESc and Karina AZZOLIN	See Gaúcha Enferm., Porto Alegre	The objective of this study was to characterize the profile of patients with Acute Coronary Syndrome (ACS) treated at an emergency service in Porto Alegre, Rio Grande do Sul, Brazil, with regard to risk factors.	The results of this study demonstrate lifestyle habits that condition the development of coronary artery disease. It was possible to verify a high prevalence of risk factors for acute coronary syndrome in the population treated in the emergency room of a general hospital in Porto Alegre, among which sedentary lifestyle, overweight and obesity, and systemic arterial hypertension were significantly present in the sample.
2020	Acute Coronary Syndrome: a review	Raquel Ferreira Magee, Estefânia Cardoso Trindade Lacerda, Guilherme de Freitas Braga Borges, Gibran Antonio Garcia Daher, Rhaisa Ghannam Macedo, Ana Cláudia Cavalcante Nogueira and Alexandre Visconti Brick.	Vol. 1 No. 3 (2020): Journal of Medicine and Health of Brasília	The objective of this article is to review the ACS theme from its fundamental concepts, through the pathophysiological process, correlate it with the clinical picture and finally highlight the approach for rapid and accurate diagnosis.	Acute Coronary Syndrome (ACS) is an important problem in the contemporary world since it is a medical emergency, one of the main causes of non-violent death. This syndrome, in terms of its spectrum of presentation, can be classified into three forms: Unstable Angina, ST-segment Elevation Acute Myocardial Infarction, and Non-ST-segment Acute Myocardial Infarction.
2019	Early identification of acute coronary syndrome: a literature review	Anderson Cavalcante, Alessandra de Andrade Alves dos Santos, Dalayne Deysi Silva Braz, Lenilson Santos da Trindade, Ângela Maria Melo Sá Barros and Diego Santos de Souza	Vol. 4 No. 2 (2019)	The present study aimed to investigate the factors that influence the search for health services; recognize the relevant aspects in the care of patients with acute coronary syndrome; and, to identify the main protocols applied in the care of patients with acute	Cardiovascular diseases (CVD) represent a serious public health problem worldwide. In Brazil, CVD is the leading cause of death, accounting for almost 32% of deaths.

				coronary syndrome.	
2019	Suspicion of Obstructive Sleep Apnea defined by the Berlin Questionnaire predicts events in patients with Acute Coronary Syndrome	Eryca Vanessa S. de Jesus	Vol. 10 No. 2 (2019)	To investigate whether a standardized clinical diagnosis of OSAS in patients with ACS predicts the risk of cardiovascular events during hospitalization.	From a mechanistic point of view, obstructive sleep apnea (OSAS) can cause extra disturbances to cardiovascular homeostasis in the presence of acute coronary syndrome (ACS).
2015	Current treatment of non-ST-elevation acute coronary syndrome	Fernando Morita Fernandes Silva1, Antonio Eduardo Pereira Pesaro1, Marcelo Franken1, Mauricio Wajngarten	Thematic Review: Intensive Care • EINSEinstein (São Paulo) 13 (3) • Jul-Sep 2015	When the team is qualified for such treatment, they have fewer keys to make mistakes and thus promoting the well-being of that patient.	There will always be the clash of which treatment is better or which drug will have the most effect. But we have to take into account the patient's entire history and risk.
2020	Care for patients with Acute Coronary Syndrome: an integrative review	Flávia Maria Palmeira Nunes, Amanda Benício da Silva	Vol. 18 No.2 (2020) Journal of Health Sciences Nova Esperança	It aims to show the role of nursing in welcoming and how an adequate form of care needs to be established.	It showed that when we in Nursing provide quality care, we achieve better care for patients.
2004	Acute Myocardial Infarction: ST-segment elevation Acute Coronary Syndrome	Antonio Eduardo Pereira Pesaro, Carlos Vicente Serrano Jr, José Carlos Nicolau	Journal of the Brazilian Medical Association	Acute myocardial infarction is one of the main and major causes of mortality and a large part of the population does not receive adequate treatment.	He notes that the disease can be treated by major therapeutic advances and by specific units.

Source: prepared by the authors, 2023

In order for there to be an effective result in the treatment against ACS, it is essential to have an early risk stratification, recognizing and classifying the risk to which the patient is, which is carried out during the hospitalization period and can be done in different ways. This process is essential for professionals to be able to direct themselves to the best therapeutic strategies. (Pesaro et, al 2008)

Confirming what Pesaro says, the immediate treatment to be done is consistent with minimizing the risk to the patient's life, taking him out of that state of urgency, so that when he is stable, the necessary tests can be done. It is known that the electrocardiogram is essential in ACS and it should be done within 10 minutes after the patient's entry, reducing the risk of death, as well as beta-blockers are essential to reduce the heart rate, diuretics, oxygen supplementation, anticoagulant and antiplatelet therapy and coronary revascularization are essential for the intervention of this pathology. (Carvalho et., al 2022)

Pesado and Carvalho are succinct in what leads to the necessary treatment, since the correct thing would be to have a lifelong medical follow-up to know if the patient has the predisposition to

this pathology that affects a large part of the population and the electrocardiogram is an essential test that many people spend their entire lives without performing one.

One of the main reports is chest pains or a strong feeling of oppression radiating to the upper limbs and epigastric. The duration of this pain is a factor of paramount importance, because a duration of more than 20 minutes with no improvement at rest or with drug interaction increases the chances of accurate diagnosis. (PAIVA, 2021)

Confirming what was reported by Paiva, the main clinical manifestation of ACS is pain in the thoracic region that spreads to the upper limbs, both right and left, and can also reach the mandibular region. He also added changes in consciousness and abdominal pain as symptoms. (MAGALHÃES et.,al 2022)

As reported by Magalhães and Paiva, Acute Coronary Syndrome is an emergency case that is extremely characteristic in its symptoms, so I believe that the immediate action is to reduce damage and stabilize the patient, leaving the closure of the diagnosis for post-stability. After stabilization, the diagnosis is made and the most important thing is to investigate the trigger point that caused the ACS.

Patients who are affected by ACS, in addition to angina pain, also have symptoms such as pain in the thoracic region, asthenia (weakness), excessive fatigue and vertigo. It is common for the pain to start in the mandibular region and extend to the umbilical scar (navel), and can even affect the stomach. In order to have an accurate diagnosis, it is necessary to provide agile and effective care as soon as the patient goes to the care unit. (MOURA, 2021)

Acute Coronary Syndrome (ACS) is associated with myocardial ischemia (heart muscle) that occurs through inconsistency of atherosclerotic plaques associated with the rupture of blood vessels. There is a grouping of symptoms that characterize ACS, with chest pain as the main one, which can be prolonged affecting the right and left upper limbs and also the mandible, in addition this syndrome can be associated with other symptomatic manifestations such as nausea, sweating, pain in the abdominal region and lipothymia (feeling of fainting). (NUNES et.al, 2020)

Affirming what Moura and Nunes say, it is necessary to provide quick and resolute care immediately and this is done through a professional trained to make a quality assessment during the triage so that there is no negligence, leaving the patient to wait longer than he should.

Therefore, the most effective way to reduce the impact of cardiovascular diseases, especially ACS on the population, is through the development of preventive actions and treatment of modifiable risk factors, such as systemic arterial hypertension (SAH), diabetes mellitus (DM), dyslipidemia, sedentary lifestyle and smoking, in addition to early diagnosis and treatment. in order to ensure better survival for carriers. (SOUZA et al. 2022)

According to PEIXOTO in 2023, an essential aspect of the management of patients with CCS is the importance of controlling risk factors – smoking, hypertension, diabetes, dyslipidemia, and

lifestyle factors – in order to reduce symptoms and improve overall prognosis1. Evidence considers that the most effective method to achieve this is a combination of behavioral and pharmacological approaches, which includes regular physical exercise, capable of significantly decreasing cardiovascular risk factors, including blood pressure, insulin resistance, and blood lipids. (Peixoto, 2023)

As mentioned during the article, prevention is the best treatment for the pathology, since a large part of the population has systemic and cardiovascular diseases, such as diabetes and hypertension. The change of daily habits, such as healthy eating and physical exercise, are the most difficult steps to be completed by society, as they do not have incentive or family monitoring, causing neglect in basic treatment.

The ECG tracing has to be controlled because it is essential to continue its treatment and to be attentive to the evolution of the disease. The alterations will decrease through a correct diagnosis and treatment, it leads us to therapeutic success, but if the electrical alterations persist in showing us that there was a discourse in the diagnosis and treatment, promoting more invasive conducts. (MAGEE et.al, 2012)

In 2019, Souza reaffirms that the initial clinical evaluation and interpretation of the ECG indicate the procedure that should be taken later and, in cases suggestive of ACS, it is essential to perform risk stratification that will score the patient in the standardized score that will determine the therapeutic conduct that meets all basic human needs such as oxygenation, ventilation, circulation, perfusion, comfort and pain control, safety, among others, are subjective to each individual, in addition to verifying the possibility of morbidity and mortality. (Souza, 2019)

Magge and Souza were precise when they stated that early diagnosis is essential for adequate treatment, the qualified ECG reading will score the risk classification of this patient on a standardized scale to perform the therapeutic conduct in a qualified and humanized way, providing the lowest type of biological and surgical risk.

It is important that the diagnosis of ACS (Acute Coronary Syndrome) is made as early as possible, since a large part of the deaths that occur due to this pathology happen 1 hour after the discovery, for this it is necessary to have ECG monitoring, as well as oxygen therapy and a fight against the patient's suffering through medications, Because the pains cause an increase in heart rate that results in the worsening of the patient's case. (Bassan, 2006)

Going against what Bassan says, Vasconcelos confirms that the patient must receive the diagnosis through an electrocardiogram precisely within 10 minutes of the individual's entry, requiring oxygen, as well as venous access so that the drugs can be administered quickly. (Vasconcelos et., al 2021)

I believe that all the screening for the diagnosis of ACS should be done immediately so that it meets the correct treatment, because it is a disease in which everything occurs very quickly and the risks that the patient runs must be removed as soon as possible.

Beta-blockers are used in ACS because it has the function of slowing heart rate and lowering blood pressure, and should be a routine and early medication in patients with ACS, except in situations where the patient has some contraindication, for example chronic lung disease or severe liver disease. (Souza, 2021)

Beta-blockers should be used consciously because they have some cardiac and non-cardiac adverse effects, such as precipitation or worsening of congestive heart failure, slowing of the resting heart rate and the development of sinus bradycardia. Non-cardiac adverse effects include increased airway resistance, exacerbation of peripheral arterial disease, hypercalcemia, and hypoglycemia. (COLOMBO, 2021)

As Souza and Colombo say, the use of beta-blockers should be used consciously so that it does not cause harm to the patient, because as mentioned above they can be harmful if not used consciously, this drug can be used in a reduced way when associated with other drugs, thus mentioning vasodilators, morphine and anticoagulants.

It is of paramount importance to make an early diagnosis of primary diseases that cause imminent risk of death for ACS, pulmonary thrombosis and aortic dissection, for example. (SON,2020)

The initial approach to a patient according to the Ministry of Health reaffirms that it is of paramount importance to diagnose or rule out a possible ACS, in addition to diagnosing life-threatening diseases such as pulmonary embolism. Recognize individuals with a higher propensity to develop ACS. (Mathias, 2021)

According to the authors Filho and Mathias, we can affirm the importance of early diagnosis of primary diseases to reduce the progression to ACS. It is important to closely monitor patients with a greater predisposition to this disease.

ST-segment elevation AMI (STEMI) and non-ST-segment elevation AMI (NSTEMI) have as their main characteristic the increase and/or decrease in the biomarkers of myocardial injury other than Unstable Angina (UA), which represents chest pain specific to myocardial ischemia, but there is no change in these biomarkers. The Electrocardiogram (ECG) is a test commonly performed in patients with ACS, in which the ST segment and the aVR due are evaluated, the elevation of both may be associated with a severe coronary lesion. (BORN et.al, 2021)

According to Mathews Barbosa Santiago, Acute Coronary Syndrome is diagnosed based on UA (Unstable Angina), and is related to ST-segment elevation non-ST AMI (NSTEMI) and ST-segment elevation AMI (STEMI), affirming what Nascimento reports. (SANTIAGO et., al 2022).

According to Nascimento and Santiago, it is necessary to perform tests to be able to diagnose AMI (STEMI) and AMI (NSTEMI) and one of these tests is the electrocardiogram that we can see if there is any change.

Cardiovascular diseases, also identified with the acronym CVDs, are the major causes of morbidity and mortality in the world and among them is Acute Coronary Syndrome. ACS is an emergency situation because its clinical symptoms are compatible with the symptoms of acute myocardial ischemia. (CARVALHO, et.al 2019)

According to Carvalho, Pellense points out that CVDs are the leading causes of death, in low- and middle-income countries 88% of deaths occur due to CVD. Other countries have adopted a healthier lifestyle, thus promoting measures for a better quality of life. (PALLENSE, et.al 2021)

That is why the actions that CMS carry out to make the population aware of the risks of cardiovascular diseases are so important. It is of paramount importance to show the population how serious cardiovascular diseases are and that they can be prevented with simple changes in habits.

4 FINAL CONSIDERATIONS

According to what has been presented, we can conclude that agile and quality care from the screening is the differential for the patient's clinical condition, considering that there is a reduction in sequelae since treatment and diagnosis would be carried out early. In addition, the studies presented pointed out that ACS has avoidable risk factors that can be spared by simple changes in habits, such as changing diet, stopping alcohol consumption and smoking, and practicing physical activities routinely. In view of this, the nurse's function is to qualify as a professional for the brief identification of the pathology presented during the anamnesis, to welcome the patient by promoting well-being activities, specialized and humanized care, seeking an efficient nursing diagnosis so that there is a nursing implementation and evaluation in a qualified way, bringing benefits to the patient's health status.

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