



EFFECTIVENESS OF NURSING GUIDELINES FOR PATIENTS SUBMITTED TO PERCUTANEOUS CORONARY INTERVENTION

EFICÁCIA DAS ORIENTAÇÕES DE ENFERMAGEM A PACIENTES SUBMETIDOS À INTERVENÇÃO CORONÁRIA PERCUTÂNEA

EFICACIA DE LAS ORIENTACIONES DE ENFERMERÍA A PACIENTES SOMETIDOS A LA INTERVENCIÓN CORONARIA PERCUTANEA

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ABSTRACT

Objective: to compare the patients' understanding of the specific guidelines to the patient and family needs and the guidelines of the institutional protocol for the population submitted to percutaneous coronary intervention. **Method:** quantitative study, type unicentric randomized clinical trial, with 100 patients with acute coronary syndrome treated in the emergency room of a cardiology hospital. Data collection was performed in two phases: at the time the procedure was scheduled and two weeks after the procedure. Fisher's exact test was used for the qualitative variables and the T-Student or Mann Withney test for comparison of the quantitative variables. **Results:** there was difference between the groups regarding the satisfaction of the orientation specific to the needs of the patient and family and the institutional orientations ($p = 0.031$). **Conclusion:** guidelines aimed at the identified needs of the patient and family improve the satisfaction of the clients, contributing to the understanding of the therapeutics. **Descriptors:** Percutaneous Coronary Intervention; Health Education; Cardiovascular Nursing.

RESUMO

Objetivo: comparar a compreensão dos pacientes quanto às orientações específicas às necessidades do paciente e família e às orientações do protocolo institucional para a população submetida à intervenção coronária percutânea. **Método:** estudo quantitativo, tipo ensaio clínico randomizado unicêntrico, com 100 pacientes com síndrome coronária aguda atendidos no Pronto Socorro de um hospital cardiológico. A coleta de dados foi realizada em duas fases: no momento em que o procedimento foi agendado e duas semanas após o procedimento. Foi utilizado o teste Exato de Fisher para as variáveis qualitativas e o teste de T-Student ou Mann Withney para a comparação das variáveis quantitativas. **Resultados:** houve diferença entre os grupos em relação à satisfação da orientação específica às necessidades do paciente e família e às orientações institucionais ($p=0,031$). **Conclusão:** as orientações voltadas às necessidades identificadas do paciente e família melhoram a satisfação dos clientes, contribuindo na compreensão da terapêutica. **Descritores:** Intervenção Coronária Percutânea; Educação em Saúde; Enfermagem Cardiovascular.

RESUMEN

Objetivo: comparar la comprensión de los pacientes cuanto las orientaciones específicas a las necesidades del paciente y familia y las orientaciones del protocolo institucional para la población sometida a la intervención coronaria percutánea. **Método:** estudio cuantitativo, tipo ensayo clínico randomizado unicéntrico, con 100 pacientes con síndrome coronario agudo atendidos en el Pronto Socorro de un hospital cardiológico. La recolección de datos se realizó en dos fases: en el momento en que el procedimiento fue programado y dos semanas después del procedimiento. Se utilizó la prueba Exacto de Fisher para las variables cualitativas y la prueba de T-Student o Mann Withney para la comparación de las variables cuantitativas. **Resultados:** hubo diferencia entre los grupos en relación a la satisfacción de la orientación específica a las necesidades del paciente y familia y las orientaciones institucionales ($p = 0,031$). **Conclusión:** las orientaciones orientadas a las necesidades identificadas del paciente y familia mejoran la satisfacción de los clientes, contribuyendo en la comprensión de la terapéutica. **Descriptor:** Intervención Coronaria Percutánea; Educación en Salud; Enfermería Cardiovascular.

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INTRODUCTION

Acute Coronary Syndrome (ACS) has, as a pathophysiological mechanism erosion or rupture of coronary atherosclerotic plaque incorporating figurative blood elements and coagulation factors with the subendothelial material, leading to activation, adhesion and platelet aggregation and subsequent thrombus formation the plaque, manifesting clinically, depending on the total or partial occlusion of vessel lumen, such as unstable angina (UA) or acute myocardial infarction with or without ST segment elevation.¹⁻²

In acute myocardial infarction, with ST segment elevation (STEMI), the opening of the infarct-related artery by means of fibrinolytic agents or, preferably, by primary angioplasty, is the goal of the therapy. In AI or IAMSST, antithrombin and antiplatelet medications are essential for therapeutic management, followed by risk stratification in order to establish the urgency / emergency of coronary angioplasty and angioplasty, if indicated, in the same procedure.¹⁻³

Access to the hospital, by patients with ACS is performed through Emergency Room (PS), where anamnesis and physical examination are performed, followed by venous access and urgent electrocardiogram. Once ACS is diagnosed, with or ST segment elevation, the patient is referred to coronary angiography and primary angioplasty. This requires, the team of PS health professionals, to be agile and objective in the work process, aiming to reduce the time of diagnosis to the indicated therapy.¹⁻⁴

The emotional burden of a patient when diagnosing an acute illness is equivalent to a great loss.⁵⁻⁶ There is uncertainty about the future, returning to work, since many are in full professional activity. There is still, concern for the family or dependents. These are distressing issues that reflect the fear of the damage caused by heart disease and how it will interfere with quality of life. In these situations, when the patient is informed of the diagnosis of coronary disease and who needs to undergo angioplasty, his emotional reaction may interfere with the evolution of the disease, adherence to treatment and changes in the habit of life, when necessary. This is because each patient presents their own fantasies and defense mechanisms as a way of facing the disease, experiencing this fact in a unique and individual way.⁴⁻⁶

This fear is even greater when the organ being treated is the heart, since it encompasses meanings and symbolologies that involve personal, cultural, and psychosocial

emotions. Thus, the patient who is faced with a cardiac intervention necessarily has to face the objective and symbolic aspects of his life.⁴⁻⁵

The PS environment, for the most part, finds itself with much stress and tension reflecting on patients, who feel fearful, fragile, and insecure in the face of the unknown. This sudden and unexpected passage of the PS, with a change in the state of complete health in the proximity to death, reflects in the difficulty of absorption and assimilation of the information by the patients and their families, generating, for the healthcare professional, a difficulty in transmitting the necessary information.^{4-5,7}

A more targeted psychological approach prior to a procedure generates benefits during care and reduced stress. On the other hand, the scenario and the state of health, that do not benefit tranquility and emotional balance, are obstacles in the provision of a humanized care, with a good understanding and absorption of information pertinent to the case by the patient.^{4,8-9}

Thus, in view of the above and knowing that patients with ACS are submitted to hemodynamic procedures coming directly from the emergency rooms, the nurse in this sector can provide information and guidance on the procedure. Once the doubts and uncertainties of the patient and family have been solved, both can reduce the level of anxiety, fears and, consequently, contribute to the better evolution of the clinical picture.^{5,9-10}

OBJECTIVE

- To compare patients' understanding of specific guidelines to patient and family needs and guidelines of the institutional protocol for the population submitted to percutaneous coronary intervention.

METHOD

A quantitative study, a single-center randomized clinical trial, that included patients with ACS with and without ST-segment, elevation seen in the PS of a hospital specialized in the care of patients with heart disease in a large urban center of the country.

Inclusion criteria were: patients over 18 years of age; with hospital stay of up to 48 hours; who had an interventional procedure scheduled to be performed in less than 24 hours; ability to express themselves verbally or in writing, and who agreed to participate in the study by signing an Informed Consent

Form (ICF). The exclusion criteria were indication of clinical treatment; unavailability of medical records by the Medical and Statistical Archiving Service (SAME) and impossibility of telephone contact.

Randomization was performed by obtaining a random sequence of numbers in two groups: Group A - General guidelines according to the routine of PS and Group B - Specific guidelines by the nurse responsible for the study.

Data were collected from April 2015 to March 2016. We collected data from 110 patients with the diagnosis of ACS, with and without ST segment elevation. After the procedure, only those patients who underwent percutaneous coronary intervention were considered, resulting in 100 patients who met the inclusion and exclusion criteria.

Data collection was performed in two phases: the first, at the time the procedure is scheduled and the second, two weeks after the procedure. The approach to patients was made to bedside, in the unit of hospitalization of the PS, and the second phase was performed by telephone. As a complement to the questionnaire, socio-demographic information was obtained directly from the patient's chart. The instrument used to collect the data was prepared by the researchers and typed in Excel spreadsheet.

In the Group A approach, pre-procedure information and guidelines were provided according to the institutional protocol in the schedule and routine of the sector. The nurse responsible for the study presented the research to the patient and confirmed their participation in the study, the reading and signing of the ICT was performed. Similar to group B, the patient was informed that after two weeks, the researcher would call to obtain new information.

In the Group B approach, the researcher presented the patient and described the research, its importance, purpose and objectives. She then proceeded to the invitation of voluntary participation, highlighting the ethical aspects of the research. Once the participation in the study was confirmed, the reading and signing of the ICT were performed. In sequence, he collected the questionnaire data regarding the pre-procedure. Patient and family needs were made by the researcher so that all information and guidance on angioplasty and catheterization were provided in a clear and concise manner, with clarification of all patient doubts, with time to approach ranging from 11 to 30 minutes. At the end of the interview, he informed that in two weeks he

would contact for further information regarding the procedure to be performed.

For the second phase, the medical records of each patient were requested in SAME to perform a survey of all the data related to the procedures from the hospital to the hospital discharge. At this stage of the research, data on patient history and catheterization and angioplasty, hospital evolution and possible complications were complemented.

After collecting the information contained in the patients' charts, in order to complete the data collection, telephone contact was made for both groups A and B, in order to fill the last phase of the instrument on the patient's level of knowledge regarding the procedure.

Regarding the knowledge of cardiac catheterization and angioplasty, it was assessed whether the patients had complete, partial or unknown information. The complete information corresponded to the knowledge of every process, from preparation to rest and the differences between catheterization and angioplasty. In the partial information, the patients showed knowledge of the whole process, from preparation to rest, but did not know the difference between catheterization and angioplasty. And finally, for lack of knowledge, patients did not know about the procedure or the difference between catheterization and angioplasty.

Regarding the degree of patient collaboration during the specific guidelines, the following criteria were used: collaborative, not collaborative and non-collaborative. Collaborative corresponded to the patient who answered all the questions and was interested in the information with questions related to the procedure. For the less collaborative criterion, the patients accepted to participate in the interview without any doubt about the research, but were indifferent during the guidelines, without any questioning. And in the non-collaborative criterion, patients accepted to participate in the research, but were indifferent about it, not paying attention to the guidelines provided and without questioning.

The sample was calculated using the Primer program. Through this calculation, a sample of 45 patients was obtained for each group. To avoid the possibility of eventual losses after coronary angioplasty, approximately 10% of patients in each group were added, totaling 50 patients in each group. Applying the inclusion and exclusion criteria, 47 patients from group A and 53 patients from group B.

Quantitative variables are presented as means and standard deviations and qualitative variables, such as absolute and relative frequencies. To test the hypothesis of equality in the two groups, in the pre and post-angioplasty moments, one used Fisher's exact test for the qualitative variables and the T-Student or Mann Withney test, to compare the quantitative variables. The level of significance was 5% ($P < 0.05$).

The research was submitted and approved by the Research Ethics Committee (CEP) of the IDPC under protocol number 4544.

Table 1. Demographic characteristics of patients undergoing hemodynamic procedure. São Paulo (SP), Brazil, 2017.

Variables		Group A 47 N (%)	Group B 53 N (%)	p
Age	(years, average $\pm$ SD)	62.1 $\pm$ 10.1	62.2 $\pm$ 11.7	0.95
Sex	Male	25 (53.2%)	30 (56.6%)	0.84
Colour	White	36 (76.6%)	37 (69.8%)	0.62
Religion	Catholic	29 (61.7%)	35 (66.1%)	0.82
Profession	Retired	18 (38.3%)	24 (45.3%)	0.07
Schooling	Elementary	34 (72.3%)	25 (47.2%)	0.09

Among the risk factors for coronary disease, was observed a predominance of Systemic Arterial Hypertension (SAH), Hypercholesterolemia and Diabetes Mellitus (DM) in both groups, with no statistically significant difference. The number of smoker

RESULTS

Age was 62.1 $\pm$ 10.1 years in Group A and 62.2 $\pm$ 11.7 years in Group B. Most of the patients were males, predominantly white, Catholic and retired, with no difference statistically significant difference between the two groups. In relation to schooling, the majority of patients had completed elementary school (Table 1).

patients with a history of catheterization and previous angioplasty was also not statistically significant. The prevalent diagnosis was non-ST segment elevation AML, followed by unstable angina with no statistically significant difference (Table 2).

Table 2. Cardiovascular history and clinical characteristics. São Paulo (SP), Brazil, 2017.

Variables	Group A 47 N (%)	Group B 53 N (%)	p
Previous AML	17 (36.2)	24 (45.3)	0.42
RM * prior	10 (21.3)	6 (11.3)	0.27
HAS	38 (80.9)	45 (84.9)	0.60
Hypercholesterolemia	22(46.8)	26 (49.1)	0.84
DM	15(31.9)	12(22.6)	0.37
Smoker	8 (17)	8(15.1)	1
Previous catheterization	24(51.1)	17(32.1)	0.07
ATC ** prior	18(16.7)	17(36.2)	0.84
Internment	29 (54.7)	24 (51.1)	0.93
	21(39.6)	20 (42.6)	

* MRI: myocardial revascularization; ** ATC: coronary angioplasty; SAH: systemic arterial hypertension; AML: acute myocardial infarction; DM: diabetes mellitus.

Patient orientation time ranged from 11 to 20 minutes and from 21 to 30 minutes. Most of the patients had previous knowledge about catheterization and angioplasty, with predominance of partial knowledge and

collaborative degree in both procedures and groups. Most were optimistic about the outcome and were satisfied with the guidelines (Table 3).

Table 3. Prior knowledge, orientation and satisfaction of the guidelines. São Paulo (SP), Brazil, 2017.

Variables		Group A 47 N (%)	Group B 53 N (%)	p
Orientation / approach time	11 to 20 minutes	2(66.7)0	22(43.1)20(39.2)	0.4
	21-30 minutes			
Knowledge about * ATC before procedure	Partial	34(72.3)	9(19.1)30(56.6)	0.28
	Does not know		17(32.1)	
Knowledge of catheterization before the procedure	Partial	33(70.2)	31(58.5)	0.45
	Does not know	10(21.3)	17(32.1)	
Degree of patient collaboration	Collaborative	39(83)	43(81.1)	0.92
Degree of pre-procedure satisfaction	Very satisfied	1 (2.2)	6 (11.3)	0.15
	Satisfied	43 (95.6)	44 (83)	

* ATC: coronary angioplasty

Regarding the knowledge of catheterization and angioplasty, both the first time they were questioned, and the second, it was observed that there was no difference between the groups, so that, in both moments, the majority of the patients had partial knowledge. Regarding the nervousness referred by the patient as improvement or

worsening, we observed a statistically significant difference between the groups ($p = 0.001$). When questioned about patient satisfaction, one obtained a significant difference between the groups ($p = 0.031$) and an increase in the degree of satisfaction in group B, that received specific guidance from the study nurse (Table 4).

Table 4. Satisfaction Level Post-procedure Hemodynamic. São Paulo (SP), Brazil, 2017.

Variables		Group A 47 N (%)	Group B 53 N (%)	p
Degree of expectation		35(75.5)		0.32
	Optimist	12(25.5)	38(71.7)	
	Fear		10(18.9)	
Post-procedure ATP knowledge	Partial	25 (75.8)	23 (62.2)	0.30
Post-procedure catheterization knowledge	Partial	25 (75.8)	24 (63.2)	0.39
Degree of satisfaction after the procedure		12(36.4)	16(42.1)	0.1
	Very satisfied	14(42.4)	21(55.3)	
	Satisfied			
Guidance helped at the time of the exam	Yes	26(92.9)	34(97.1)	0.19
Decreased nervousness	Yes	14 (50)	33 (89.2)	0.001
Orientation by the nurse in the PS was satisfactory for understanding the exam	Yes	9 (91.7)	33 (64.3)	0.031

* ATC: coronary angioplasty

DISCUSSION

The patients with the diagnosis of ACS undergoing coronary angiography and emergency angioplasty are, largely, from the emergency rooms of the PS, where it is most often a stress and tension environment,^{4,6-8} aggravating the imbalance caused by the disease, with consequent reduction of the understanding of the information provided by health professionals.⁹

In these situations, when the patient is informed of the diagnosis of coronary disease and who needs to undergo angioplasty, his / her emotional reaction may interfere with the evolution of the disease, adherence to treatment and change of habit of life. This is because each patient presents their own fantasies and defense mechanisms as a way of facing the disease, experiencing this fact in a unique and individual way.^{5,9}

A study to evaluate the meanings and emerging feelings of patients who underwent cardiac catheterization, observed that

feelings of fear, anxiety among others appear in patients when diagnosed with cardiac problems with indication of more invasive exams and emphasized the importance the approach of the health team throughout the treatment process and the search for alternatives to decrease these feelings in the search for improvement in the quality of care.⁹

Much is said about satisfaction with the quality of health services⁸ and we questioned whether the guidelines provided in the hospitalization process, according to established protocols, are sufficient for a good understanding of patients about their own health status.⁵ These protocols or systematization of Nursing care are constantly improving to provide a quality service with a more cautious look at emergency environments, where patients need more specialized care, which takes into account the stress of the environment and high turnover requiring professional efficiency and agility.^{5,10-1}

This study showed that patients who received guidelines specific to the needs of the patient and family presented a decrease in nervousness and a greater satisfaction of the understanding of the exams, when compared the institutional orientations of the PS of a Cardiology Hospital of high complexity in patients submitted to the intervention percutaneous coronary artery.

The provision of all information and guidance on angioplasty and catheterization was given by the study leader, in a clear and concise manner, clarifying all patients' doubts, which, certainly, contributed to the reduction of patients' nervousness.

Most patients in both groups were knowledgeable about catheterization and angioplasty and perhaps for this reason were optimistic about the outcome of the procedures. These data were corroborated by a study by Ferreira et al.,⁹ who observed that patients who underwent a hemodynamic procedure for the second time were more confident and less anxious than patients who were performing for the first time.

In Nursing care, Nursing plays a very important role in the pre-procedures, providing a humanized and adequate care through strategies that minimize the stress and anxiety situations arising from the unknown. The differentiated and qualified care of the nurse with a greater attention and directed to the patient contributes to the improvement of the quality care, covering the particular needs of each individual.^{5,9}

The identification, by the nurse, of the individual needs of each patient and the ability of the professional to direct the care and guidelines pertinent to each one, providing precise information, minimizes situations of stress and anxiety, improving the understanding of certain information necessary for the process of hospitalization and fulfillment of the examination.^{5,9,12}

In a study carried out to evaluate the degree of health service satisfaction, a more positive response was observed regarding satisfaction related to the work of the health team of private hospitals than of hospitals managed by UHS.⁸

It should be borne in mind that any procedure will be more effective if patients understand and adhere to the treatment they underwent, both during hospitalization and in the post-discharge period. A client who goes through an inpatient process where all the pertinent doubts have been clarified will result in a more efficient treatment.⁵⁻⁷

CONCLUSION

This study when comparing whether the patients' understanding of the general guidelines according to the PS routine with those specific by the PS nurse in patients with ACS undergoing percutaneous coronary intervention could influence the assimilation and understanding of the information and reassure the patients, observed that providing specific information and guidance to patients about the procedure they will perform decreased nervousness and a satisfactory understanding of the examination.

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