THE PERCEPTION OF NURSES ON THE CARE OF PATIENTS WITH ACUTE ENCEPHALIC VASCULAR ACCIDENT

A PERCEPCIÓN DE ENFERMEROS SOBRE EL ATENCIÓN DE PACIENTES CON ACCIDENTE VASCULAR ENCEFÁLICO AGUDO

ABSTRACT

Objective: to understand the opinion of the nurse working in the admission and initial care of patients with symptoms of acute encephalic vascular accident in an emergency unit. Method: qualitative field study, conducted in an emergency unit of a large hospital in Belo Horizonte (MG), Brazil. The subjects were 11 nurses who met the following inclusion criteria: to have the qualification in the Manchester Triage System (MTS©), to work in the above-mentioned sector, and to be employed at the institution for more than six months. Data were collected through semi-structured interviews, audio records, then fully transcribed and stored in a database. To analyze the data collected, the technique of Content Analysis and descriptive analysis were used. The research followed the ethical principles of the 196/96 Resolution, with the approval of the research project by the Ethics Committee in Research of the hospital in Belo Horizonte-MG, with the document 09/2011. Results: all nurses evaluated the initial care as appropriate and effective. The majority (82%) considered that the protocol did not include specific flowcharts and discriminators, ignoring new ones available in the current version. Conclusion: it became clear the need for training in the new protocol version of risk classification.

Descriptors: cerebral vascular accident; screening; emergency nursing.

RESUMO

Objetivo: compreender a opinião do enfermeiro que atua no acolhimento e atendimento inicial de pacientes com sintomas de acidente vascular encefálico agudo em uma unidade de emergência. Método: estudo de campo qualitativo, realizado em uma unidade de emergência de um hospital de grande porte em Belo Horizonte (MG), Brasil. Foram sujeitos 11 enfermeiros que atenderam aos critérios de inclusão: possuir habilitação do protocolo de triagem de Manchester (MTS©), atuar no setor supracitado, e ter vínculo empregatício superior a seis meses na instituição. Os dados foram coletados por meio de entrevistas semiestruturadas, gravadas em áudio, transcritas posteriormente na íntegra, e armazenadas em um banco de dados. Para tratamento dos dados foi utilizada a Técnica de Análise de Conteúdo e análise descritiva. A pesquisa obedeceu aos princípios éticos da Resolução 196/96, com a aprovação do projeto de pesquisa no Comitê de Ética em Pesquisa do hospital de Belo Horizonte-MG, com o parecer 09/2011. Resultados: todos os enfermeiros julgaram o atendimento inicial adequado e efetivo. A maioria (82%) considerou que o protocolo não contemplava fluxogramas e discriminadores específicos, desconhecendo alguns novos, disponíveis na versão atual. Conclusão: evidenciou-se a necessidade de capacitação na nova versão do protocolo de classificação de risco. Descriptores: acidente cerebral vascular; triagem; enfermagem em emergência.

RESUMEN

Objetivo: comprender la opinión del enfermero que trabaja en el acogimiento y atencion inicial de pacientes con sintomas de accidente vascular encefálico agudo en una unidad de emergencia. Método: estudio de campo cualitativo, desarrollado en una unidad de emergencia de un gran hospital de Belo Horizonte (MG), Brasil. Los participantes fueron 11 enfermeros que cumplieron los criterios de inclusión: tener habilitación del protocolo de triaje de Manchester (MTS©), trabajar en el sector supra citado y ser empleado de la institución más de seis meses. Los datos fueron recogidos por entrevista semi-estructurada, grabada en audio, transcritas posteriormente en la íntegra y almacenadas en un banco de datos. Para explorar los datos fue utilizada la técnica de Análisis de Contenido y Análisis Descriptivo. La investigación obedió los principios éticos de la Resolución 196/96, con la aprobación del proyecto de investigación en el Comité de Ética en Investigación del hospital de Belo Horizonte (MG), con el parecer 09/2011. Resultados: todos los enfermeros juzgaron la atención inicial adecuada y efectiva; la mayoría (82%) consideró que el protocolo no contenía fluxograma y discriminadores específicos, desconociendo algunos nuevos disponibles en la nueva versión. Conclusion: fue evidenciada la necesidad de capacitación en la versión actual del protocolo de clasificación de riesgo. Descriptores: accidente cerebrovascular; triaje; enfermería de urgencia.
INTRODUCTION

The Encephalic Vascular Accident (EVA) is a major cause of death and neurological sequelae in the world, being considered the third cause of mortality in industrialized countries and the leading cause of disability in adults. In Brazil, according to the Ministry of Health (MoH), figures for 2008 show that cerebrovascular diseases rank 1st in deaths from defined causes, with 70,232 deaths registered in the same year, in addition to being responsible for the first cause of hospitalization and disabilities, surpassing cancer and heart disease. 1-3

EVA is characterized as a medical emergency and requires early recognition and quick response in urgency and emergency care units. The care of suspected cases should be performed within three hours of symptom onset, with the aid of imaging devices to determine the diagnostic, and in reference services, the possibility of thrombolysis in ischemic cases. 4-6

It is of paramount importance, the performance of a trained team for the admission and initial care of these patients, the education of the population in the early recognition of signs and symptoms, and training of health professionals, aiming at improving quality, standardization and systematization of care, especially those working in prehospital care services, care with risk classification, urgency and emergency care, diagnosis and initial management of patients with symptoms indicative of acute EVA, in order to reduce neurological sequelae and health costs. 4,6,7

The urgent and emergency units are in charge of the admission with risk classification. This is a strategy adopted by MoH to reorient the health care policy of emergency units, giving priority to patients with greater clinical severity. This service must be performed by trained health professionals, graduated, and with the adoption of protocols such as the Manchester Triage System (MTS©), and the nurse, must be the professional appointed to act in this sector. 8,9

The institution under study is one of the first of Minas Gerais (MG) to adopt the risk classification, which now contemplates the service with the Manchester Triage System (MTS©) as a way to enhance and enable the service to patients, contributing to the care and humanization of urgency and emergency units. 10 It also uses the guidelines of the EVA PACT, consisting of a project prepared by the Brazilian Society of Cerebrovascular Diseases (BSCVD) aiming at training medical professionals and interdisciplinary teams for the organization and efficiency of care for patients with suspect of acute EVA. 7

This study is justified by the fact that the hospital is a reference in the service of urgency and emergency care in Belo Horizonte-MG, and as a way to contribute to the debate on how the admission and initial care of patients victims of this medical emergency have been conducted. There is also a lack of scientific studies related to this theme, showing the relevance of conducting specific studies to address this issue.

Given the information presented the following research questions emerged: How the admission of patients with symptoms of acute EVA in the emergency department is being conducted, in view of nurses? Does the use of the Manchester Triage System (MTS©) facilitates the treatment of these patients? Which factors noted by nurses facilitate or difficult, the admission and initial assistance of these patients?

OBJECTIVES

● To understand the opinions of the nurses who work in admission and initial care of patients with symptoms of acute encephalic vascular accident (EVA) in an emergency unit.
● To analyze the applicability of the Manchester Triage System (MTS©) in these assessments.
● To identify factors that facilitate or difficult the applicability of the Manchester Triage System (© MTS).

METHOD

A descriptive and exploratory field research with a qualitative approach. This approach was used in order to allow a broader assessment of the results, the possibilities of description, the explanation and understanding of the object of study. 11-2

The qualitative method applies to the study of history, relationships, representations, beliefs and perceptions; products of the interpretations of people regarding their experiences, their way of feeling and thinking. 13

The field studied was the emergency unit of a large hospital in Belo Horizonte - MG, a tertiary reference in admission and treatment of EVA patients.

The subjects of this study were 11 nurses working in the emergency unit, accounting for 85% of all nurses. All met the following...
inclusion criteria: to have the qualification in the Manchester Triage System (MTS©), to work in the above-mentioned sector, and to be employed at the institution for more than six months.

The subjects were approached by appointment, with guidance regarding the research and voluntary participation. In order to preserve the anonymity it was decided to identify the individuals by the letter E, followed by the number corresponding to the interview, according to the order of their execution. Data collection was conducted during March and April 2011 after the signatures of the Free and Informed Consent Term (IC), through a semistructured interview, recorded in audio, and later transcribed and stored in a database.

The data collected was evaluated through the technique of content analysis, which is defined as a set of tools aiming at analyzing communications through systematic procedures, describing the content of messages, and then the three steps proposed by the author: pre-analysis, which refers to data organization; exploration of the material, determined by the coding, classification of the speeches and elaboration of relevant categories for the purpose of the research; and the third step, processing of results, inference and interpretation of data, seeking its significance and validation. There was no data saturation and all interviews were used. The simple statistical analysis was also used, with calculation of frequencies, which is a possibility of content analysis. The semistructured interview is considered a domain for application of this technique and was used to complement the field diary prepared by the researchers.14

For meaningful analysis of the fragments of speeches, four categories of analysis were created: The recognition of the signs and symptoms of acute EVA by the nurses; The use of the Manchester Triage System (MTS©) in the care of acute EVA; Scales used in the admission and initial assistance; The initial assessment of patients with acute EVA: feelings and perceptions of nurses.

The research followed the ethical principles contained in the 196/96 Resolution, with the approval of the research project by the Ethics Committee in Research of the hospital in Belo Horizonte - MG, document 09/2011.

RESULTS AND DISCUSSION

- Characterization of study subjects

Eleven nurses of the emergency unit participated in this study, corresponding to 85% of nurses in this sector. There was no refusal and the remaining 15% corresponds to two nurses that are authors of this study. The analysis of the respondents profile shows that their age varies between 26 and 35 years, with a mean of 30 years and they were predominantly females (64%). Regarding the employment contract, 91% were admitted through public job contests and 9% had an administrative contract. As for the work shift, 64% belong to the nocturnal period and 41% belong to daytime period; all subjects work in this institution with a workload of 30 hours weekly. The average time working as nurses was five years, and the average time working in the emergency department was three years. During the study all nurses were helpful, available and interested in the subject addressed.

By comparing this research to a study conducted with nurses in the emergency and urgency department in the city of Foz do Iguaçu, a similarity in the profile of the subjects was observed such as: the predominance of females, only historical, since this profile has been changing; the mean age and time working as nurses, relevant data for a sector as complex as the urgency and emergency, since it requires vitality and availability for the work routines.16

- Category 1: The recognition of the signs and symptoms of acute EVA by nurses

All nurses reported that they were trained in the EVA PACT of 2009, a course based on the guidelines from the BSCVD which are intended to enable interdisciplinary teams in the organization and effectiveness of care for patients with a clinical suspicion of acute EVA.7 The training occurred between 2009 and 2010 and was offered by the institution. These data affirm the importance of continuing education of health staff, and should be mandatory for the development of critical and reflective attitudes and skills aimed at an upgrade of the care provided.17

The subjects claim to recognize the main signs and symptoms of acute EVA (Figure 1) and identify less common signs such as headache, hypertension, release of the sphincter, change in facial expressions (18%) and dysphasia, change in vision, change in behavior, mental confusion, change in gait, ptotic eyelid (9%).
In a study conducted in the emergency department of a hospital in Sao Paulo, the prevalence of signs and symptoms in patients diagnosed with EVA I that searched medical care were: deviation of rhyme, headache, dizziness, decreased level of consciousness, visual changes, seizures, dysphasia, dysarthria, paresis, ocular deviations, nausea and vomit.5

The EVA PACT 2009 presents the most common signs and symptoms: change in strength and / or sensitivity in one or both sides of the body, difficulty in talking, confusion or trouble understanding and communicating, difficulty in walking or balance, difficulty to see with one or both eyes, sudden and atypical headache.7

Given the above, it is observed that the nurses are trained and confident to recognize the most common signs and symptoms presented by patients with suspected acute EVA.

• Category 2: The use of the Manchester Triage System (MTS©) in the care of acute EVA

All nurses interviewed admit patients with signs and symptoms of acute EVA and confirm the use of the Manchester Triage System (MTS©) in the evaluation. Most subjects (82%) believe that this protocol does not include specific flowchart for these cases. The following statements evidence it:

The flowcharts do not include specific discriminators; do not specify signs and symptoms of EVA. (E11)

Depending on the complaint, such as deviation of labial commissure, abnormal gait or strength, there is no specific discriminator, leading to misclassification of the patient [...] the flowchart does not characterize a prioritization for EVA, impacting on the time required to do a CT scan and laboratory exams [...] (E4)

It foresees a longer waiting for care than would be ideal for the group of patients who will be thrombolized. The protocol always classifies a patient who arrives with an indication for thrombolysis in orange or yellow. Orange waits ten minutes for the first medical evaluation and yellow one hour, the ideal is that the patient is thrombolized within 3 hours of symptom onset and this may delay treatment. (E5)

According to the results, it is observed that some new and more specific flowcharts that are available in the current version of the protocol used in the institution since April 2011 are not known.

• Subcategory 2.1: Welcoming the patient with symptoms of acute EVA: Identifying the pathways used by nurses

The flowchart of the Manchester Triage System (MTS©) are driven by discriminators representing the patient’s main complaint (signs and symptoms). They are represented by questions to enable the classification, and in the end, characterize the color according to the clinical emergency. This classification is established by five colors, according to the time for assistance, having the highest priority, patients that need immediate care (color red). Non-urgent patients are characterized by the color blue, indicating that they can wait 240 minutes. The color orange classifies patients as very urgent (10 minutes), yellow urgent (60 minutes) and green not so urgent (120 minutes).10

Of the nurses interviewed, 55% reported that the most commonly used flowcharts in the classification are: Strange Behavior (36%) and Adult indisposition (27%). These two flowcharts are found in the first version of the Manchester Triage System (MTS©) year 2003.18

According to the signs and symptoms mentioned by the subjects, it is observed that in the flowchart entitled “Adult Indisposition”,...
only the complaint of altered level of consciousness is classified as a clinical priority (orange), since the term altered level of consciousness is a discriminator of this flowchart. The other complaints are not contemplated. 18

The flowchart named “Strange Behaviour” also classifies complaints of altered level of consciousness as clinical priority (orange), but when it comes to neurological signs and symptoms such as paresthesia, paresis, dysalalia, dysarthria, aphasia, deviation of labial commissure and hemiplegia the clinical priority is urgent, yellow (60 minutes), not agreeing with the time proposed by BSCVD, negatively impacting the therapy. The recommended time of admission to medical evaluation is 10 minutes.4 In the absence of a specific discriminator, most patients will be classified as non urgent.16

The MTS© was reformulated by the Portuguese triage group in 2005, and in its second version, flowcharts were modified for a greater range of signs and symptoms. The two mentioned above were altered, and were identified in the new version as Behavior Change and Adult Discomfort. The new flowcharts are more comprehensive and include two key discriminators: Acute neurological deficit and New neurological deficit. The first is conceptualized as “any loss of neurological function occurred in the last 24 h: change or loss of sensitivity, weakness of limbs (transient or permanent), urinary retention or change in bowel function” 10:121

The second is “any loss of neurological function: change or loss of sensitivity, weakness of limbs (transient or permanent), urinary retention or change in bowel function over 24 h.” 10:121

Regardless of the flowchart used (Adult Discomfort / Change of Behavior), the patient is classified with the same priority of care. With acute neurological complaint within 24 hours of onset, clinical priority will be orange. Patients with new neurological complaints, for more than 24 hours, will be characterized as yellow.10

This new version of the Manchester Triage System (MTS©) began to be used in the referred institution in April 2011, not being stressed by any of the respondents. Given the above, it is of paramount importance the need for more effective training that includes a more effective admission and following the current version of the current protocol for risk classification.

- Category 3: Scales used in admission e initial assistance

Most respondents (91%) refer to the use of scales of neurological evaluation in the risk classification and initial care of these patients. The Glasgow Coma Scale (GCS) was cited by 64% of subjects, and the scale of the National Institutes of Health Stroke Scale (NIHSS) by 73%, and it was emphasized that the latter is part of the initial care and medical diagnosis. According to recommendations of BSCVD, during the initial clinical evaluation, methods should be used to monitor the level of consciousness and neurological deficits such as GCS and NIHSS.6

None of the nurses surveyed compared the GCS to assess the level of consciousness with the scale of the Face Arm Speech Test (FAST), recommended for initial evaluation of patients with the aim of prioritizing the assistance.19

This scale evaluates the asymmetry of the face, arm movements, change in speech and action time, which are crucial to identify the patient with suspected acute EVA.19 Some testimonials confirm these data:

- We use the NIHSS scale, which measures changes in the patient through score defining thrombolytic therapy, especially in ischemic EVA. (E3)
- Besides the Glasgow coma scale, that the protocol Manchester contemplates, there is the NIHSS scale, which is a rating scale of the patient’s deficit from the moment they arrive at our unit. (E5)

The prehospital assistance uses the Cincinnati Prehospital Stroke Scale (CPSS), which is a simplification of the NIHSS scale. It facilitates the identification of suspected cases of acute EVA from specific signs and symptoms, by evaluating three items: facial asymmetry, strength in arms and language.20

The CPSS can be applied in less than 1 minute and studies have shown that when performed by emergency physicians, only one abnormality represents sensitivity of 66% and specificity of 87% in the identification of patients with EVA; and when performed by paramedics 59% and 89% respectively.20

In a study with fire fighters in San Francisco, 61% correctly identified the signs of EVA without any training. It was observed that after 4 hours of training in these adapted scales, identification by the professionals reached 91%, which confirms the need for training in the existing scales for emergency assessment.21

- Category 4: The initial assessment of patients with acute EVA: feelings and perceptions of nurses

As for the initial care provided by the health team, all nurses consider it to be
appropriate and effective, considering the reference institution in the service and care of patients with EVA, which indicates the credibility of the multidisciplinary team, as evidenced in the speeches below:

[…] The service has been operating in a dynamic and efficient way, the prehospital team already recognizes our institution as a reference, forwarding patients with signs and symptoms better defined [...] (E3)

[…] For being a reference hospital, the first evaluation is done quickly, there is a routine of evaluation in this patient profile [...] (E6)

The service is prompt, the nurses in charge of the risk classification are sensitized for recognition of acute EVA, they take the patient immediately to the emergency room, we seek to define well the EVA of that patient, especially in the assessment of patients who will be thrombolized [...] (E5)

[…] I even say that if I bend, take me to the hospital where I work, because I think we have been engaged enough to provide adequate treatment. (E7)

- Subcategory 4.1: Potential and difficulties experienced

The main potential noticed by nurses in the initial care of these patients are: the hospital studied is a reference for treatment of suspected cases of EVA (55%); material resources (45%) such as the service of computerized tomography, clinical pathology laboratory and availability of thrombolytic and human resources (55%) such as a skilled multidisciplinary team, neurologists available. It is evident through the above speech:

The team is well trained and sensible, the triage nurse already recognizes and brings this patient immediately to the emergency room [...] (E5)

[…] The training of the team is important, the reference by SAMU [...] (E3)

[…] The hospital has neurologists available; the medical team prioritizes the care of these patients. (E8)

One of the indicators we use is the time between the entry of the patient in hospital and measuring of vital signs, conducting blood tests, CT scans, which are made immediately [...] (E9)

Emergency staff collects blood for laboratory tests, we do not wait for the lab [...] (E7)

The BSCVD establishes that reference centres for EVA should be divided into levels A and B, according to the availability of resources. Level B includes a service with trained and organized staff, clinical care protocols, 24 hours neurology and neurosurgery service, computed tomography, clinical laboratory, blood bank, extracranial vascular ultrasound, transthoracic echocardiography and nursing staff specialized in emergency care. Level A, besides level B resources, counts on MRI services, digital angiography, transcranial Doppler, interventional neuroradiology and EVA units.6

The institution under study has some features mentioned in levels A and B such as: skilled nursing staff, 24 hours neurologist and neurosurgeon, clinical pathology laboratory, CT scan, EVA unit, emergency room equipped with intensive care unit, and thrombolysis protocol based on PACT 2009.6

With these results, it is noted that the sectors develop an integrated task, from the classification of the risk, until the involvement of the diagnostic support sectors. The commitment of the team facilitates the process of care and increases the prospects for recovery of the patients.

Respondents believe that even in the face of difficulties the team excels and can provide appropriate and effective assistance. Of the respondents, 55% report that the laboratory service is an impediment, as well as the service of computerized tomography, cited by 45% of respondents. Some employees do not even know the immediate prioritization of this assistance.

In some shifts supporting sectors such as the laboratory and CT take long to answer our call, this complicates the job [...] (E5)

[…] Or sometimes when one of the tomography equipments is faulty the answer takes even longer [...] it is a precious time, it is a golden hour [...] (E4)

Some difficulties are found in the recognition of the initial symptoms by the family (27%) and the translation of these to the prehospital service. Ineffective communication of this service with the emergency unit was also reported by 9% of respondents, which negatively influences the definition of appropriate treatment.

[…] patients without company, it is difficult to obtain information [...] (E3)

[…] Not always the information brought by the SAMU and fire fighters can be concise and really reflect the reality of time and the characteristics of the symptoms [...] there is sometimes an inefficient communication between family members and first rescuers [...] (E9)

The large influx of patients in the unit was named by 18% of nurses as a weakness, as well as the physical area aimed at emergency care (9%), limited due to the high demand of patients.
The perception of nurses on the care...

Most respondents (73%) suggest the training of the interdisciplinary team in specific protocol for the management of these patients.

 [...] more training is needed, to join the entire multidisciplinary team, to do this training every two weeks, monthly updating everyone, I think it is the chance we have to take away all doubts and bring uniformity to the team [...] (E2)

 [...] there must be a training and awareness of the importance of treatment; I think we should have a formulation of flowcharts to prioritize patient care [...] (E10)

 Of the subjects, 27% propose the creation of a specific protocol for the unit, as follows: [...] the creation of a protocol or flowchart is needed, describing the procedures to be performed for patients with risk of thrombolysis to advance the process [...] (E9)

 It is observed that all nurses are trained in EVA PACT, and refer to it as support of the activities undertaken in the management of patients with suspected acute EVA. However, training was not formalized and propagated to all employees working in the emergency unit. In this way it is perceived the need for effective implementation of the institutional protocol for the admission and initial care of patients with suspected acute EVA. With this protocol defined, the entire staff should be trained, including nursing technicians who are directly linked to the execution of initial care and basic care, such as administration of thrombolytic and periodic reassessment of vital signs and neurological examination of these patients.

 It is also suggested the inclusion of staff from the sectors of diagnostic support in these trainings and the raising of the difficulties experienced in this process.

**CONCLUSION**

This study allowed us to understand the vision of nurses working in the service. It was shown that the Manchester Triage System (MTS©) is used by all subjects, however, they were not trained in its new version, which brings difficulties in using new flowcharts and discriminators.

For the service to progress to a continuous improvement in front of difficulties encountered daily, it becomes necessary, in the perception of these nurses, an extensive training of the entire team in the institutional protocol, especially the nursing technicians, constant updating of the multidisciplinary team involved, and awareness of the
employees from the sector of imaging diagnostic and laboratory.

Further specific studies involving patients diagnosed with EVA I and that were thrombolized, raising indicators of effectiveness of actions taken since the classifications of the potential complications.

Once considered the leading cause of death in the population, preventive public policies and of health promotion at all levels are necessary. It is relevant to the population the early recognition of signs and symptoms, and demand for emergency services. To urgent and emergency units fits the adoption of specific protocols, and trained and involved multidisciplinary team, besides the awareness that this disease is a life threatening medical emergency.

REFERENCES

7. Fábio SRC, Massaro AR. PACTO AVC - Módulo I Conceitos básicos sobre o AVC. 2. Ed. [S.I]: PACTO AVC; 2009.
The perception of nurses on the care...


Moro CHC. Pacto AVC - Módulo II Atendimento Emergencial. 2. ed. [S.I]: Pacto AVC; 2009.

Moro CHC, Neto OMP. Pacto AVC - Módulo III Escalas de avaliação. 2. ed. [S.I]: Pacto AVC; 2009.