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ORIGINAL ARTICLE

Physicians' knowledge of syncope in adults and its care in the emergency department

Conocimientos de los médicos sobre síncope en adultos y su atención en Urgencias

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ABSTRACT

Introduction: syncope is a common entity in emergency departments.
Objective: to evaluate the knowledge about syncope and its management in the emergency department in physicians of a general hospital.
Methods: a qualitative, evaluative research was carried out through the application of a pre-designed academic questionnaire on key aspects of syncope care in the emergency department to physicians of clinical specialties related to emergency care at the Abel Santamaría general teaching hospital, Pinar del Río province, in April 2022. Respondents were chosen randomly, voluntarily and anonymously.
Questionnaire: the questionnaire included 5 questions, single-choice multiple choice type, with 4 possible answers (a, b, c, d). The aspects evaluated were: definition, causes, initial evaluation, diagnosis, risk stratification, and syncope care.
Results: the questionnaire was administered to 35 physicians. Less than 5 minutes were required to complete the questionnaire. According to the aspects evaluated, 40 % of the respondents did not select the correct answer related to the definition and causes of syncope; on the initial evaluation and multidisciplinary care, the correct answers reached 74 % and 71 % respectively. And in relation to diagnosis and risk stratification, misses were 80 %. The application of the KR20 coefficient classified the internal consistency of the evaluation instrument used as very good.
Conclusions: the level of knowledge of physicians about syncope and its management in the emergency department was evaluated. There is a knowledge deficit in the aspects evaluated. The results obtained are considered reliable.

Keywords: Syncope; Consciousness Disorders; Neurobehavioral Manifestations; Knowledge.

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RESUMEN

Introducción: el síncope constituye una entidad común en los servicios de urgencias.
Objetivo: evaluar en médicos de un hospital general, el conocimiento sobre el síncope y su manejo en urgencias.
Métodos: se realizó una investigación cualitativa, de tipo evaluativo; mediante la aplicación de un cuestionario académico prediseñado, sobre aspectos claves de la atención del síncope en urgencias, a médicos de especialidades clínicas relacionadas con la atención de urgencias, del hospital general docente Abel Santamaría; provincia Pinar del Río, en abril del 2022. Los encuestados, fueron escogidos al azar, de forma voluntaria y anónimo.
Resultados: se aplicó el cuestionario a 35 médicos. Se requirieron menos de cinco minutos para responder el cuestionario completo. Según los aspectos evaluados; el 40 % de los encuestados no seleccionó la respuesta correcta relacionada con la definición y causas de síncope; sobre la evaluación inicial y atención multidisciplinaria, los aciertos alcanzaron el 74 % y 71 % respectivamente. En relación al diagnóstico y estratificación de riesgo, los desaciertos fueron del 80 %. La aplicación del coeficiente KR20 clasificó como muy buena la consistencia interna del instrumento evaluativo empleado.
Conclusiones: se evaluó el nivel de conocimiento de los médicos sobre síncope y su manejo en urgencias. Existe déficit del conocimiento en los aspectos evaluados. Los resultados obtenidos se consideran confiables.

Palabras clave: Síncope; Trastornos de la Conciencia; Manifestaciones Neuroconductuales; Conocimiento.

INTRODUCTION

Syncope is defined as the transient and self-limited loss of consciousness and postural tone, due to transient global cerebral hypoperfusion, of rapid onset, short duration and spontaneous and complete recovery.[1,2,3,4,5] This definition excludes entities in which the loss of consciousness does not imply a transient global cerebral hypoperfusion (epileptic seizures, psychogenic conditions). Syncopal episodes may be preceded by characteristic symptoms (dizziness, fainting, weakness, fatigue, visual and auditory disturbances) or may occur without prodromal symptoms.

Pre-syncope refers just to the period before syncope; but it is also used to describe a state, which presumably reflects the same pathophysiology as syncope, but is less severe and is not followed by syncope. It refers to the sensation of imminent loss of consciousness without actually occurring, and should be evaluated similarly to syncope.[2]

Syncope affects a high percentage of the population during their lifetime. Its social and health impact is not irrelevant. It accounts for 3 % of all emergency room visits and 1 % of all hospitalizations. Recurrences are frequent and it has a substantial impact on the person's quality of life. Despite its high population incidence, syncope remains an underestimated clinical condition. All forms of syncope share in common cerebral hypoperfusion and arterial hypotension as the final common pathway. They differ in the mechanisms of hypotension. Their causes are varied; they can be benign to life-threatening;[6] and represent a diagnostic challenge in the ED.

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Proper initial care in the ED will depend on the correct decision making. Due to its high population incidence, the wide variety of etiologies, and its prognostic diversity, the appropriate management of syncope must be multidisciplinary and cross-sectional. During the current year, only 7 cases of syncope have been reported to statistics at the General Teaching Hospital "Abel Santamaría Cuadrado", none reported in the emergency department. The present investigation was carried out with the objective of evaluating the level of knowledge of physicians about syncope and its management in the emergency department.

METHODS

An observational, descriptive and transversal research was carried out in physicians of clinical specialties related to emergency care at the General Teaching Hospital "Abel Santamaría Cuadrado" of Pinar del Río in April 2022. A sample of 35 physicians was selected by means of simple random sampling, surveyed in two groups, a first cut of 15 physicians and a second cut of 20 physicians.

To obtain the data of interest, a predesigned academic questionnaire on key aspects of syncope care in the emergency department was applied. The questionnaire, "Syncope in the Emergency Department", (Appendix 1) includes 5 single-choice multiple-choice questions on aspects of syncope care in the emergency department; each one includes 4 possible answers or items (a, b, c, d). The aspects evaluated in the questionnaire were: definition, causes, initial evaluation, diagnosis, risk stratification, and syncope care.

The data obtained were stored in a database created for this purpose.

The results obtained in each of the surveys were grouped according to the time at which the survey was applied and the total of the sample. The sum of the selected items was added up and the percentages were calculated for each of the selected responses. Subsequently, a comparative analysis of these values was made with respect to the correct answer.

To determine the internal reliability of the questionnaire, the Kunder Richardson test # 20 (KR20) was applied twice. First, using the results of the first 15 respondents. On the second occasion, all respondents were included. On both occasions, the reliability index obtained was classified as very good, according to the Debelis rating scale.

RESULTS

Forty percent of the respondents did not select the correct answer related to the definition, nor to the causes of syncope. Regarding the initial evaluation and multidisciplinary care, the percentage of correct answers reached 74 % and 71 % respectively. The opposite result was obtained in relation to the diagnosis and risk stratification of syncope in the emergency department, where 80 % of the answers were incorrect. The results of the survey application are considered reliable.

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Table 1. Distribution of respondents according to answers to each question

Correct answer	Ítems	Questions	No.	%
Which of these statements about the definition of syncope is correct?				
	a	The loss of consciousness is transient and of short duration, usually no more than 2 minutes	6	18
	b	Syncope is always preceded by prodromal symptoms	4	11
√	**c**	Presyncope should be evaluated similarly to syncope.	21	60
	d	None of the above	4	11
Which of these statements about the causes of syncope is correct?				
	a	Prodromal symptoms are more common in syncope of cardiac cause.	7	20
	b	Situational syncope associated with a specific event, such as urination or swallowing, is the most common in adults.	3	9
	c	Syncope occurring in a sitting or lying position is related to benign causes.	4	11
√	**d**	None of the above	21	60
Which of these statements about the initial evaluation of syncope is correct?				
	a	Imaging studies are recommended for all patients with a syncopal episode.	4	11
	b	Anamnesis and physical assessment are non-specific and sensitive methods for assessing syncope.	3	9
	c	A 12-lead resting electrocardiogram is recommended only when syncope of cardiac cause is suspected	2	6
√	**d**		26	74
Which of the statements about the diagnosis and risk stratification of syncope is correct?				
	a	Risk stratification of patients with syncope will always be performed in the emergency department.	10	29
√	**b**	The clinical features of the syncopal event are useful in the causal and pathophysiologic diagnosis of syncope	7	20
	c	For risk stratification for major cardiovascular events we will rely on the application of risk scales.	15	42
	d	None of the above	3	9
Which of the following statements about multidisciplinary care of syncope is correct?				
	a	Only patients classified as High Risk will be evaluated by Cardiology.	3	9
	b	Patients classified as Low and Intermediate Risk do not require further evaluation	3	9
√	**c**	Multidisciplinary care is recommended for all patients with syncope.	25	71
	d	None of the above	4	11

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DISCUSSION

We found that a high number of professionals were unaware of the definition and main causes of syncope.

Syncope episodes may be preceded by characteristic or prodromal symptoms (dizziness, feeling faint, weakness, fatigue, visual and auditory disturbances) or may occur without prior symptoms. Presyncope describes just the period before syncope; but it is also used to describe a state, reflecting the same pathophysiology as syncope, but less severe, in which there is a feeling of imminent loss of consciousness without it actually occurring. It should be evaluated similarly to syncope.

All forms of syncope share cerebral hypoperfusion and arterial hypotension as the final common pathway. They differ in the mechanisms of hypotension. Commonly the main causes of syncope are divided into 3 groups with common pathophysiology and risk; and each of them includes other causes of syncope. [6,7,8] reflex or neuromediated syncope (vasovagal, situational, carotid sinus stimulation/hypersensitivity and atypical forms of presentation); Cardiac Syncope (dysrhythmias, valvular disease, structural disease and other cardiovascular causes); orthostatic hypotension mediated syncope (volume depletion, distributive shock and autonomic dysfunction). The clinical expression of the main forms is closely linked to their pathophysiology, which is important when it comes to establishing the differential diagnosis.[6,7,8]

The knowledge related to the initial evaluation of syncope obtained better results compared to the rest of the items. The initial evaluation of the patient with transient loss of consciousness has several objectives. First, the rapid identification of life-threatening or life-threatening conditions for immediate attention in the emergency department. Then to establish whether or not it is syncope, as well as to define the underlying disease and/or the causative mechanism of syncope.[9,10,11] Then to proceed to risk stratification and prioritization.

The initial diagnostic evaluation includes a detailed medical history of previous and current attacks, from eyewitnesses, in person or by telephone interview, if necessary. Describe the triggering factors, previous symptoms; what happened during the episode and during the recovery process. The date and chronology of previous syncopal episodes, their duration and frequency. As well as personal pathological history of heart disease or other diseases, use of drugs; and family pathological history of sudden death and/or familial heart disease. [12,13] It will also include physical examination, blood pressure measurements in the supine, standing and sitting positions and in both arms. Presence of cardiac and carotid murmurs, signs of aortic stenosis, heart failure or arrhythmias).

Basic complementary examinations are sufficient, in most cases, to establish a diagnosis. All patients should undergo a 12-lead electrocardiogram and long D II, complete hematology and glycemia. Only a limited group of patients with atypical forms of presentation will require additional tests.

In the aspects evaluated on the diagnosis and risk stratification of syncope, only 20 % chose the correct answer, which indicates that the deficit of knowledge on this aspect reaches 80 % of the respondents.

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In many occasions it will not be easy to establish a diagnosis or to differentiate it from other possible causes. The main differential diagnosis is with epilepsy,[10] and with falls in the elderly. Other entities that can simulate syncope (cerebrovascular disease, metabolic disorders, intoxications, etc.) are also of interest.[13]) Once the other possible causes have been excluded, it is necessary to identify the cause of syncope. The clinical features related to the syncopal event can be very orienting. When the initial evaluation does not lead to a diagnosis, the next step is to perform risk stratification for major cardiovascular events.[14,15] The application of risk scales has not shown superiority over clinical judgment.[15] The elements obtained in the initial evaluation (anamnesis, physical examination, electrocardiogram and hematology) will guide us to possible benign conditions or more serious causes.[16]

Patients with no pathological findings in the initial evaluation and no criteria to be classified as high risk will be classified as low risk. They will be patients without heart disease, with reflex or non-reflex hypotensive syncope. In high-risk patients[2,9,12,13] the probability of a cardiac cause of syncope is higher. This includes patients with structural heart disease and primary electrical disorders which, in turn, are risk factors for sudden death and total mortality in these patients.

Patients with intermediate or moderate risk are the most difficult to define, since they have characteristics of both groups and do not meet criteria for high or low risk.[17] They are ideal candidates for evaluation in syncope units.

Further evaluation of the evaluated patients will be determined by the established risk; as well as their referral and management, ambulatory or in-hospital. Patients classified as low risk can be managed on an outpatient basis with appropriate education. Those classified as high cardiovascular risk will require urgent complementary studies and hospitalization.[2] And the intermediate risk patient will require reevaluation in an observation unit or in the syncope unit if available.[18]

The need for multidisciplinary care for syncope was identified by 71 % of the respondents. Patients classified as high risk and intermediate or moderate risk should be evaluated by Cardiology in the emergency department before referral. Patients diagnosed with chronic non-communicable diseases (NCDs), patients with known structural heart disease, compensated or not, and those with pacing devices will also be evaluated in the emergency department. All necessary interconsultations suggested by the clinical evaluation will be requested. Hospitalization may be necessary,[18] in the presence of any potentially serious coexisting disease requiring hospitalization; in the presence of associated (traumatic) injuries resulting from syncope or when the proposed treatment plan requires hospitalization, or urgent tests not available in the emergency department are needed. Also patients with repeated syncopal episodes (uncontrolled malignant vasovagal syncope or intense orthostatic hypotension) and in whom it has not been possible to rule out the cardiovascular etiology of syncope.

CONCLUSIONS

The application of the survey was useful to evaluate the level of knowledge of physicians about syncope and its management in the emergency department. There is a deficit of knowledge in aspects related to the management of syncope in the emergency department.

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Interest conflict
The autors declare that does not exist an interest conflict

Authorship Contribution
All authors participated in the conceptualization, research, formal analysis, writing-initial draft, writing-revising, and editing.

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