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Assessment of students' knowledge of cardiopulmonary resuscitation

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Summary

Introduction. First aid is a legal and moral obligation of every citizen. However, quite a widespread lack of knowledge, even among people completed the training, reduces the victim's chance of survival in an emergency. Just a quick response and properly given first aid at the scene witness decides about the experience of others.

Objective: The aim of the study was to assess the knowledge of students of medical and non-medical in the field of cardiopulmonary resuscitation.

Material and methods: The study included 137 students of two universities in Kielce, including 77 medical students and 60 non-medical students. In this study method was used diagnostic survey, based on an anonymous questionnaire by their own.

Results. Of the 14 questions in the field of cardiopulmonary resuscitation, there was the advantage of correct answers in medical students. Students of non-medical showed a higher knowledge only 2 questions. The low level of knowledge is concerned that the participation of

more than 80% of the respondents in training on first aid. Only a total of 33 students declare that they would be able to provide first aid at the scene.

Conclusions. The level of knowledge of cardiopulmonary resuscitation among students of medical and non-medical is unsatisfactory, which requires changes in education and promotion of training in this field.

Keywords: first aid, cardiopulmonary resuscitation, knowledge students

Streszczenie

Wstęp. Udzielanie pierwszej pomocy to obowiązek prawny i moralny każdego obywatela. Jednak dość powszechny brak wiedzy, nawet wśród osób po ukończonym szkoleniu, zmniejsza szanse na przeżycie poszkodowanego w sytuacji nagłej. Tylko szybka reakcja i prawidłowo udzielona pierwsza pomoc świadka na miejscu zdarzenia decyduje o przeżyciu drugiego człowieka.

Cel. Celem pracy była ocena wiedzy studentów kierunków medycznych i niemedycznych z zakresu resuscytacji krążeniowo-oddechowej.

Materiał i metody. Badaniem objęto grupę 137 studentów dwóch uczelni wyższych w Kielcach, w tym 77 studentów kierunków medycznych i 60 studentów kierunków niemedycznych. W przeprowadzonych badaniach posłużono się metodą sondażu diagnostycznego, w oparciu o anonimowy kwestionariusz ankiety własnego autorstwa.

Wyniki. Spośród 14 pytań z zakresu resuscytacji krążeniowo-oddechowej, zanotowano przewagę prawidłowych odpowiedzi u studentów kierunków medycznych. Studenci kierunków niemedycznych wykazali się większą wiedzą tylko w 2 pytaniach. Niski poziom wiedzy niepokoi fakt uczestnictwa ponad 80% badanych w szkoleniach dotyczących pierwszej pomocy. Tylko 33 studentów ogółem deklaruje, że potrafiłoby udzielić pierwszej pomocy na miejscu zdarzenia.

Wnioski. Poziom wiedzy z zakresu resuscytacji krążeniowo-oddechowej wśród studentów kierunków medycznych i niemedycznych jest niezadawalający, co wymaga wprowadzenia zmian w systemie kształcenia i promocji szkoleń z tego zakresu.

Słowa kluczowe: pierwsza pomoc, resuscytacja krążeniowo-oddechowa, wiedza studentów

Introduction

First aid at the scene, and above all the knowledge of cardiopulmonary resuscitation (CPR) are an important link in the chain of survival. A young, active, and above all very large social group are students. In Kielce, the student community population is 197,724 inhabitants [1]. Are 3 public universities (including nonresident didactic center) and 6 private universities. That is why it is so important to the current guidelines of the European Resuscitation Council (ERC) were well known to students. First aid is a set of actions taken to rescue people unable to sudden health threat made by a person in the scene, including the use of open to the general market of medical devices and medicinal products [2]. Every person should know the rules and give first aid before the arrival on the scene of qualified emergency services. Save human life and health, reducing the effects of injuries and sudden illnesses and care for the victims is the main objectives of first aid. In 2015, the ERC has announced new guidelines for cardiopulmonary resuscitation. They accord experts from different countries, disciplines and cultures in the field of medical practice in resuscitation, supported by current knowledge, experience and conducted research [3]. As a direct threat to life defines the Law of 8 September 2006 the State Medical Rescue as a "state involving sudden or anticipated in the short term onset of symptoms worsening health, the direct consequence may be severe damage to bodily functions or bodily injury or loss of life, requiring immediate medical emergency treatment and treatment "[2]. Quick response and immediate emergency action taken by the witnesses several times increase the chances of survival victim, as well as improve its quality by limiting the neurological sequelae. Numerous studies carried out among different social and professional groups show that, despite held courses in first aid, knowledge and the willingness in this aspect are alarmingly low level [4]. It is therefore necessary training, which should take place regularly and cyclically, which will help consolidate and upgrade their knowledge.

Aim

The aim of the study was to assess the knowledge of students of medical and non-medical in the field of cardiopulmonary resuscitation.

Material and methods

The study included 137 students of two public universities in Kielce, including 77 medical students and 60 non-medical fields. The survey was conducted from December 2016 to February 2017 years. The research was voluntary and those involved agreed to participate in

them. Method was used diagnostic survey, using the author, anonymous questionnaire, which was developed on the basis of the Resuscitation Council Guidelines 2015 laws governing the obligation to provide first aid and current literature. The first part of the questionnaire consisted of demographic data such as gender, age, place of residence and the course of study. The second part is the level of students' knowledge of cardiopulmonary resuscitation. It has been determined based on the result of the knowledge test consisting of 14 questions. Each of the questions are assigned numerical scores. The correct response is assigned 1 point, improper or no response 0 points.

Results

In this study it participated 137 students, including 77 students from medical faculties (73 women and 4 men) and 60 students from non-medical fields (34 women and 26 men). Among the respondents in the study 78.10% were women, while men are 21.90% of the study population. The largest group among the students, were people age 20 - 27.74% of the study population and people in 23 years - 22.63% of the study population. Only 0.73% of the analyzed population of university students are aged 19 years. Slightly higher (1.46%) is characterized by the percentage of students at the age of 29 years. The results show that more than half of the respondents (63.50%) are persons whose place of residence is the village, while 16.79% of the analyzed population, as a place of residence identified large cities (over 100 thousand. Inhabitants), and 19, 71% indicated a small town (less than 100 thousand. Inhabitants). From a situation in which there was a need first aid to the victim met only 13 respondents, who represented 9.49% of the study population and were only students of non-medical fields. 86.86% of respondents said they have additional training in first aid, and only 24.09% of the surveyed population answered that they would be able to provide first aid to the victim, including only 15.58% of medical students and 35.00% of non-medical students .

Students responded in writing to the 14 questions in the field of cardiopulmonary resuscitation. Each question is assigned 4 replies, including only one correct. In Table 1 are shown the knowledge test questions, checking the level of knowledge of the respondents in the field of cardiopulmonary resuscitation and the results among different groups of students.

Collective results indicate that students in medical studies gave 64.47% of correct answers, and the non-medical students of 51.67%. All the students showed a low knowledge of CPR as it gave a total of only 58.86% of correct answers.

Table 1. Results of the test students' knowledge (own work).

	Question	The correct answer	Students of medical faculties	Students of non-medical	generally, students
1.	What is a priority on the scene?	Security	67 (87.01%)	28 (46.67%)	95 (69.34%)
2.	When should begin cardiopulmonary resuscitation - breathing?	When you find that the victim is not breathing	71 (92.21%)	57 (95.00%)	128 (93.43%)
3.	With the help of the senses which should be assessed at the victim breathing?	By means of all these senses (vision, hearing, touch)	70 (90.91%)	47 (78.33%)	117 (85.40%)
4.	Do you know how many breaths and chest compressions if you need to perform during cardiopulmonary resuscitation - breathing?	30 compressions / 2 breaths	55 (71.43%)	46 (76.67%)	101 (73.72%)
5.	Enter the number for ambulance	999	49 (63.64%)	45 (75.00%)	94 (68.61%)
6.	In children cardiopulmonary resuscitation - breathing should start	5 rescue breaths	47 (61.04%)	21 (35.00%)	68 (49.64%)
7.	In what position should be placed in a pregnant woman during cardiopulmonary resuscitation - breathing?	On the left side	37 (48.05%)	14 (23.33%)	51 (37.23%)
8.	In victims who came to a sudden cardiac arrest from respiratory causes (drowned, hanged man) should begin cardiopulmonary resuscitation - breathing from:	5 rescue breaths	39 (50.65%)	22 (36.67%)	61 (44.52%)
9.	Do you know where in Kielce are AEDs (automated external defibrillators)?	Yes	7 (9.09%)	9 (15.00%)	16 (11.68%)
10.	In your presence occurred in the patient	Begin cardiopulmonary	8 (10.39%)	10 (16.67%)	18 (13.14%)

	to airway obstruction (choking), and loss of consciousness. You acknowledge that the victim is not breathing. What should I do first?	resuscitation - breathing of 30 chest compressions			
11.	Getting CPR - breathing should be discontinued if:	When the victim starts to breathe	66 (85.71%)	38 (63.33%)	104 (75.91%)
12.	Visual, auditory and tactile diagnosis of airway and breathing correctness should last no longer than?	10 seconds	56 (72.73%)	28 (46.67%)	84 (61.31%)
13.	In which case, you should give up the airway by bending the head back?	Suspected spinal injury	72 (93.51%)	39 (65.00%)	111 (81.02%)
14.	What is the depth and frequency of oppression should get the person performing in the unconscious?	5 to 100 cm / min	51 (66.23%)	30 (50.00%)	81 (59,12%)

Discussion

To provide assistance to a person in danger life or health laws oblige. Every man should know the legal consequences of abandoning the first aid. Really about the legal consequences of not providing first aid to a man in need of emergency in the state, says the Act of 6 June 1997. Penal Code (Journal of Laws 97.88.553) Art. 162 "Whoever the man is in a situation threatening an immediate danger of loss of life or serious bodily injury is not assisting, being able to do without exposing himself or another person in danger of death or serious bodily injury shall be punished by imprisonment of up to 3 years" [5]. A survey carried out on its student population shows that, a large group of respondents did not know the current guidelines of the European Resuscitation Council and that in the event of an urgent not be able to provide first aid. Similar results in their study shows Skitek et al. Based on the study the authors state that the level of knowledge of first aid among students is insufficient [6]. Once the basic activities concerning first aid could be heard in the school during the course of the Civil Defense. Today, unfortunately, learning these skills is possible only in school, when the teacher or director wants his students to assimilate these skills. Repents is great ignorance and lack of interest on the basic steps of cardiopulmonary resuscitation among young people. Very often accidental completing training in preparation for the execution of

such activities, also is not reflected in reality. The best courses are those organized by those involved, eg. From the Red Cross. It participate in the qualified first aid course, which lasts 66 hours, ending with a state examination and gives the title of lifeguard, which is valid for three years.

Most people see a man in need of assistance does nothing, or calls an ambulance. Why do nothing? The reasons are many. Firstly, they do not know how to give first aid, and secondly they are afraid that ill will provide first aid and meet them for criminal liability, and third are simply insensitive to the problem of others, believe that it is none of their business.

According to the Police Headquarters in 2016 there was 33,664 traffic accidents, which resulted in 3026 people were killed and 40,766 people were injured. It is worrying that compared to 2015 there were more victims of the 1 076 people, including 88 fatalities and injured about 988 people. In 2015, according to the most recent data published final CARE database of selected European countries, the highest rate of kill per 100 accidents were recorded in Poland - 8.9 [7]. The statistics do not indicate how many of those victims granted or not granted first aid. Causes of death of the victims of accidents shows that in many cases it was possible to rescue victims provided to take appropriate action on the spot [8].

Building public awareness of the usefulness of the knowledge of first aid can be carried out since the early school years, to the seminars academic. Important it is to enter the universities educational and information projects, which would be aimed at changing the awareness and raise the level of public awareness.

Conclusions

1. Students of medical faculties are far more knowledgeable about CPR. The introduction of compulsory courses in first aid directions on non-medical profile seems to be a necessity resulting from the low level of knowledge of students.
2. It is to improve teaching methods among students of medical and non-medical, which will allow for better preparation for a possible confrontation with situations of danger to human health and life.
3. Training includes theoretical and practical training in cardiopulmonary resuscitation should be organized regularly at every level of academic education. Teaching should be entrusted to persons who have appropriate qualifications and current first aid certificates.

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