

Międzywydziałowa Katedra i Zakład Zdrowia Publicznego Akademii Medycznej w Lublinie
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*Evaluation of classes in medicine of catastrophe
by students of Faculty of Medicine
at the University School of Medicine in Lublin*

Ocena zajęć z medycyny katastrof w opinii studentów
Wydziału Lekarskiego Akademii Medycznej w Lublinie

The purpose of teaching medicine of catastrophe is: getting health service professionals acquainted with specific procedures used in case of mass casualties situations and preparing them for performing medical selection and other organisational activities, as well as making proper therapeutic decisions in order to bring help to a maximum number of casualties. It means switching from individual therapy to collective one and learning the skill of interdisciplinary cooperation (2, 7).

The Minister of Health and Social Welfare introduced medicine of catastrophe as a compulsory subject for students of all faculties and majors into the Polish medical schools curriculum on 1 February 1992. The project of the curriculum for medicine of catastrophe was elaborated by President of Polish Society of Emergency and Medicine of Catastrophe Professor Wojciech Gaszyński. The actual shape and scope of medicine of catastrophe course was left to the schools to decide (1, 4). At the University School of Medicine in Lublin the Inter-faculty Chair and Department of Public Health has been entrusted with organising and running the classes in medicine of catastrophe.

The programme of the medicine of catastrophe course at the Lublin School is different for various faculties. In the Faculty of Medicine the course is held in the fifth year and consists of 45 hours of classes (15 classes of 3 hours each) and 30 hours of lectures. The student groups are composed of 10 people while the lectures are held for the whole year. The classes include training on organisational and rescue activities in mass casualties situations. The issues concerning psychology and epidemiology of a disaster as well as health care as part of the state defence system are discussed. During the classes students are trained in practical activities of individual and collective rescue performed in consecutive phases of a rescue action. They also prepare the students for a difficult role of rescue action organisers.

We cannot foresee a disaster but thanks to appropriate organisational and rescue activities we can considerably limit its outcomes. Medicine of catastrophe, as an interdisciplinary subject is taught in

all schools of medicine in Poland and its aim is to prepare future doctors to undertake action in case of a disaster (3, 8).

PURPOSE

The purpose of the study was: a) to learn the opinion of the students of the 5th year of Faculty of Medicine on the medicine of catastrophe course taking into account general perception of the course, its contents and didactic methods, b) making use of the students' opinions in order to improve the curriculum and teaching methods of the medicine of catastrophe course.

MATERIAL AND METHODS

480 students of the 5th year of the Faculty of Medicine at University School of Medicine in Lublin were included in the study in the period between 1996 and 1998. The study group consisted of 252 women (52.5%) and 228 men (47.5%) aged 24–26. The students were asked to fill in a questionnaire prepared by the authors of the study. The questionnaire was anonymous and was distributed through a direct method. The questionnaire has been attached to this paper.

RESULTS

The evaluation of the classes in medicine of catastrophe is presented in Table 1. Due to the fact that we have not encountered any influence of gender on the study results, the questions have not been classified in this respect.

Within 13 classes evaluated by the students the highest average mark of 4.5 (on a 1 to 5 scale) was given to the classes on: circulatory–respiratory resuscitation, principles of inserting a needle into central and peripheral veins and dressing of wounds of various body parts. High marks of over 4 were given to classes on: improvised, transport and therapeutic immobilisation; head, neck, chest and abdomen injuries and desmurgy. The lowest mark was given to the classes on planning and organising of medical help in mass accidents and disasters – 2.85.

The teaching methods evaluation is presented in Table 2. 43.9% evaluated the usage of audio–visual teaching aids as good (4) while 12.3% considered it to be poor (1 and 2). Average mark was 3.66. Among 480 students 64% evaluated the way of making use of teaching aids and materials as very good (5) while only 0.6% rated it as poor (1). As many as 90.4% students rated intelligibility of the information as 5 and 4, and the way of combining theory with practice during the classes received the average mark of 4.08.

The third part of the questionnaire consisted of students' own comments and suggestions concerning medicine of catastrophe course. Within the 480 students 90% suggested the necessity of organising revision classes. However there were no specific suggestions or expectations towards the method and timing of this kind of classes. A small number of students, 76 people (16%), suggested new

Table 1. Evaluation of the subject-matter for the classes in medicine of catastrophe according to the inquired students (on a scale from 1 to 5)

No.	Subject	Mark					Average
		1	2	3	4	5	
1	Cardio-respiratory resuscitation of adults	0	0	6	29	445	4.91
2	Cardio-respiratory resuscitation, intubation	0	0	12	30	438	4.88
3	Cardio-respiratory resuscitation of new-borns, infants and children	0	0	29	120	331	4.62
4	Principles of inserting a needle into central and peripheral veins	0	5	35	103	337	4.60
5	Dressing of wounds of various body part	2	11	28	136	303	4.51
6	Desmurgy	9	12	52	169	237	4.27
7	Improvised, transport and therapeutic immobilisation	3	9	40	175	251	4.38
8	Head, neck, chest and abdomen injuries	3	12	50	194	219	4.28
9	First aid and thermal and chemical injuries treatment	3	29	92	193	163	4.00
10	Pulling out and carrying out, transportation of the injured and sick	18	38	113	199	112	3.64
11	Medicine of catastrophe as a new branch of medical studies	59	102	120	118	81	3.13
12	Behaviour in radioactive contamination area	47	86	169	146	32	3.06
13	Planning and organising medical aid in mass accidents and disasters	78	87	163	129	22	2.85

subjects for the classes within the medicine of catastrophe programme. They were: bladder catheterisation, performing lumbar puncture, caring for injured and sick patients, evacuation from a sinking ship. 220 inquired students (46%) indicated the necessity to introduce the following new teaching aids into the course: transport splints and modern stretchers used for transport and evacuation of injured patients.

Table 2. Evaluation of the teaching methods at the classes in medicine of catastrophe according to the inquired students (on a scale from 1 to 5)

No.	Teaching method	Mark					Average
		1	2	3	4	5	
1	The usage of audio-visual teaching aids	18	41	118	211	92	3.66
2	The usage of teaching aids and materials	0	3	33	137	307	4.56
3	Intelligibility of teaching	0	7	39	313	121	4.14
4	Combining theory and practice	6	12	59	264	139	4.08

DISCUSSION

Analysis of the inquiry results shows that the subject matter for the classes in medicine of catastrophe has been positively evaluated by the students (average mark 4.33). The most popular classes among students are the ones on circulatory-respiratory resuscitation, principles of inserting a needle into central and peripheral veins and dressing of wounds of various body parts. These are the classes in which the students can learn some skills useful in a doctor's daily work. Many sophisticated teaching aids are used during these classes including: phantoms for training of circulatory-respiratory resuscitation of adults and children, intubation, insertion of a needle into central and peripheral veins and surgical stitching. The comments in the third part of the questionnaire indicate that thanks to these classes many students had the first chance to perform first aid activities. Lack of this kind of activities was also pointed out by large portion of inquired students of University School of Medicine in Warsaw (5).

The lowest marks were given to the classes on planning and organising of medical help in mass accidents and disasters and behaviour in a radioactively contaminated area. It results mainly from verbal nature of the class and lack of possibility of presenting this subject in a different way.

The analysis of the outcome of the second part of the inquiry indicates that the students highly evaluated the methodology of the teaching process. The classes are taught using modern teaching methods making use of above mentioned teaching aids (phantoms, computer programmes, films etc.) by well prepared staff. The way of teaching the classes, in which the practical study of therapeutic procedures is stressed in such cases as acute circulatory-respiratory failure, severe bleeding, multi-organ injury, shock and thermal and postradiation injuries gives students a chance to obtain skills necessary for applying medical aid. Getting the students acquainted with mass casualties specificity, necessity of medical segregation, psychology and epidemiology of a disaster prepares them for the role of rescue action organisers (6).

In the third part of the inquiry it should be noted that the number of suggestions for introduction of new subjects in the medicine of catastrophe course is small. However, the students suggested enriching the program with new teaching aids, which will allow for implementing new rescue activities necessary on site of an accident. In order to consolidate the obtained knowledge students also suggested the necessity for organising revision and additional trainings in medicine of catastrophe.

CONCLUSIONS

1. Classes in medicine of catastrophe, a new branch of medical studies, have been highly rated for their subject-matter and organisation by students of 5th year of Faculty of Medicine at the Medical University in Lublin.

2. Small number of students' suggestions concerning new subjects for the classes proves that the curriculum of medicine of catastrophe course was well prepared.

3. Introduction of new teaching aids may contribute to increasing the level of the didactic process.

4. It is necessary to organise postgraduate training in medicine of catastrophe.

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STRESZCZENIE

Medycyna katastrof to nauka o masowym zaopatrzeniu rannych i chorych przy ograniczonych środkach oraz konieczności prowadzenia segregacji medycznej. W Polsce 1 lutego 1992 roku decyzją Ministra Zdrowia i Opieki Społecznej medycyna katastrof jako przedmiot obowiązkowy dla studentów wszystkich wydziałów i kierunków wprowadzona została do programu nauczania uczelni medycznych. W Akademii Medycznej w Lublinie realizację zajęć z zakresu medycyny katastrof powierzono Międzywydziałowej Katedrze i Zakładowi Zdrowia Publicznego. Celem pracy było poznanie opinii studentów V roku Wydziału Lekarskiego na temat przedmiotu medycyna katastrof oraz wykorzystanie jej w celu udoskonalenia programu i form kształcenia z tego zakresu medycyny. Badaniem objęto w latach 1996–1998 480 studentów, którzy anonimowo wypełniali przygotowaną przez autorów celem tego badania ankietę. Z analizy ankiety wynika, że zajęcia z medycyny katastrof zostały przez studentów wysoko ocenione pod względem merytorycznym i organizacyjnym. Niewielka ilość propozycji nowych tematów ćwiczeń ze strony studentów świadczy o właściwym opracowaniu programu nauczania medycyny katastrof. Wprowadzenie nowych pomocy naukowych może przyczynić się do podniesienia poziomu dydaktycznego. Konieczne jest prowadzenie szkolenia podyplomowego z tego zakresu.

APPENDIX

QUESTIONNAIRE, PART I

How do you evaluate, on a scale from 1 to 5, the following classes of the completed medicine of catastrophe course:

1. Circulatory–respiratory resuscitation of adults
2. Circulatory–respiratory resuscitation, intubation
3. Circulatory–respiratory resuscitation of new-borns, infants and children
4. Principles of inserting a needle into central and peripheral veins
5. Dressing of wounds of various body parts
6. Desmurgy
7. Improvised, transport and therapeutic immobilisation
8. Head, neck, chest and abdomen injuries
9. First aid and thermal and chemical injuries treatment
10. Pulling out and carrying out, transportation of the injured and the sick
11. Medicine of catastrophe as a new branch of medical studies
12. Behaviour in radioactive contamination area
13. Planning and organising medical aid in mass accidents and disasters

QUESTIONNAIRE, PART II

How do you evaluate, on a scale from 1 to 5:

1. The usage of audio-visual teaching aids
2. The usage of teaching aids and materials
3. Intelligibility of teaching
4. Combining theory and practice

QUESTIONNAIRE, PART III

Student's opinion and comments on the course in medicine of catastrophe