

Perspectives of Iranian Medical Students About Do-Not-Resuscitate Orders

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ABSTRACT

Objective: To study the attitudes of Iranian medical students towards the do-not-resuscitate (DNR) decision.

Methods: In this cross-sectional study, 220 medical students (110 interns and 110 residents) of Tehran University of medical sciences were selected. They asked to answer to the questionnaire which included two items: first item consisted of demographic questions (age, sex, and level of education); second item included questions about DNR Orders which derived from a previous study conducted by Hosaka et al.

Results: A total of 185 questionnaires returned (Response rate (RR=84%)). Ninety five were residents and ninety were interns. Seventy four percent of residents and 53% of interns felt that DNR order is sporadically necessary. Near 30% of interns and 40% of residents had participated in DNRs in their study period and the most case was the patient with terminal cancer. The most common person who decided DNR orders were physicians.

Most participants believed that DNR cards are useful for establishing in clinical settings.

Conclusion: As DNR is definitely a medical decision, it should be clearly discussed with patients and their families. So, it should be provided in standard format in medical situations.

Keywords: DNR, Iran, medical students, attitude

INTRODUCTION

Cardiopulmonary resuscitation (CPR) is an emergent medical procedure which should be done for patients referred to emergency departments with cardiac arrest to rescue them from death (1). The CPR is not suc-

cessful in all cases. The total success rate of CPR has been reported to be near 14% with higher success rate in gynecological patients and lower rate in infectious diseases cases (2).

Until now, there are a lot of discussions about Do-Not-Resuscitate (DNR) decision in different cultures and countries. For making DNR decision, an appropriate consensus sho-

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uld be done due to patients autonomy, decision of medical team and patient's family preferences (3,4).

Different factors such as ethical concerns about end of life decisions, legal issues, patient and patient's family preferences and proper medical indications should be considered.

Patient's situation, prognosis, quality of life, cost of intensive care services for end stage patients, a feeling of burden to others and family's desire to take care of the patient or not, play important roles in DNR decision (5-7).

Nowadays, DNR orders are considered in many countries but in some countries such as Iran, this order is not routine and most physicians and patients are not familiar with this order.

The goal of this study was to assess attitudes toward DNR among Iranian medical students. □

MATERIALS AND METHODS

In this cross-sectional study, which conducted between September 2012 and February 2013, 220 medical students (110 interns and 110 residents) of Tehran university of medical sciences were randomly selected by means of stratified random sampling method regarding different strata (internship: 7th and 8th year of curriculum; and residency). The enrolled cases were contacted via either email or face-to-face contacts.

They asked to answer to the questionnaire which included two items: first item consisted of demographic questions (age, sex, and level of education); second item included questions about DNR orders which derived from a previous study conducted by Hosaka et al. (8). (We contacted the mail address hosaka@is.icc.utokai.ac.jp to get permission from corresponding author, but the address was invalid).

All participants asked to answer to the questionnaire during one week. We sent a reminder with the questionnaire if they did not return the questionnaire after one week.

Statistical analyses performed with SPSS software version 18.0, (Statistical Product and Service Solutions, SPSS Inc., Chicago). Results are presented as mean $\pm$ SDs, and frequencies. The χ^2 test with Fisher's exact test was applied for categorical variables.

P -value <0.05 was considered statistically significant. □

RESULTS

A total of 185 questionnaires returned (Response rate (RR=84%)). Ninety five were residents and ninety were interns. Mean age of all participants was 27.9 ± 4.1 years and 121 were females (65.4%) (Table 1). □

DISCUSSION

In current study we found that 74% of residents and 53% of interns felt that DNR order is sporadically necessary.

In a previous study, Hosaka et al reported that near 60% of physicians in their survey felt that DNR is essential in some situations(9) while Arai et al reported that 97% of Japanese physicians believed that DNR is indispensable. Moreover, 70% answered that they had participated in DNRs during their practice (10).

Almost 30% of the interns and 40% of the residents who participated in this survey, had participated in DNRs in their study period. The most common case that they had participated in his/her DNR procedure was a patient with terminal cancer.

In Hosaka et al study, 43% of nurses who participated in the study, had contributed in DNRs, of whom 70% were participated in DNRs of terminal cancer patients (8).

Participants of our study believed that patient's preference is essential in DNR order but in their practice, mostly doctors proposed DNR. It can show that although, medical students respect patient's autonomy, in practice, they do not consider this factor as much as they should.

In the study by Arai et al, 11% of physicians answered that patient's consent is indispensable for DNR (10) while in HOSAKA et al study, 35% of nurses replied that patient's consent is necessary in DNR (8). In Yang et al study, majority of physicians believed that only doctors should decide about DNR orders and only 5.4% believed that patients or patient's family's consent should be considered (1).

In their study, 78% believed that DNR order should be discussed with patients but it was not consistent with their local practice (1).

Some factors such as patient's medical situation, lack of time, fear about patient's and families reaction, religious beliefs, patient autonomy and available medical settings such as ICU (Intensive Care Unit) beds are leading factors for DNR decision making.

	Interns	Residents	p value
1. Do you think that DNR is sporadically necessary ?			
a, Yes, and took part.	29	42	0.04
b. Yes, but did not take part.	19	29	
c. No.	28	16	
d. Uncertain	12	8	
If you selected (a) or (b) to Q1:			
A. What are the reasons? (Two or more answers are permissible)	14	13	0.2
a, Dignified death would be expected.	7	4	
b, Economic burden on family.	11	28	
c. Heroic efforts would be meaningless	6	13	
d. a & b	5	8	
e. a & c	5	5	
f. b & c	2	1	
Is patient's consent necessary in determining DNR ?			
a, Patient's consent (or living wills or alternatives) is indispensable.	52	52	0.4
b, Patient's consent would be preferable, but if not available, the patient's family and the physician can decide.	32	40	
c, Others.	11	3	
Who should make the final decision of DNR?			
a. Patient, family, and doctor in charge.	61	60	0.3
b. Doctor in charge and Ward director	6	4	
c. Direction from the hospital committee (e.g. DNR committee)	20	29	
If you selected (c) to Q1, what was your reason?			
a. To prolong patient's life as long as possible is the physician's duty.	14	9	0.08
b. DNR is still legally problematic.	3	8	
c. It is uncertain when the decision should be made.	8	5	
d. It is uncertain who should make the decision	6	1	
After DNR is decided, what would you do ?			
a. CPR will not be performed, but other treatment (hyperalimentation, antibiotics, pressor agents, etc.) will be done when possible.	64	69	0.4
b. Others	26	26	
Did you take part in DNRs?			
a. Yes	28	42	0.03
b. No	62	53	
If you selected (a) to previous question: which disease?			
Terminal cancer	12	11	0.1
Burn	4	4	0.6
Encephalopathy	2	5	0.2
Heart arrest	3	5	0.5
Patient with HIV disease	4	6	0.1
Patient with TB	1	1	0.6
Coma due to trauma	0	2	0.1
Infant with congenital diseases	2	8	0.04
Who proposed DNRs? (Two or more answers are permissible)			
a. Patients	1	2	0.06
b. Patients family	5	3	
c. Doctor in charge	18	19	
d. Patient's family and Doctor in charge	3	17	
e. Other	1	1	
Would the establishment of a DNR order sheet be helpful?			
a. Yes.	35	43	0.03
b. No idea.	31	43	
c. No.	22	11	
Is it helpful to have DNR card?			
Yes	53	59	0.4
No	36	37	

TABLE 1. Attitude toward DNR among students.

Nowadays, DNR orders are not recorded in patient's medical files in Iran which could be due to physician's resistance to record this order. Until now, there is no legally suggestion for DNR orders in Iran and DNR sheets are not available.

As our results showed, most DNRs performed due to doctor's decisions without any records of consultation with patients or their families.

Previous studies implied that most patients and their families are not familiar with DNR term and discussion about this topic will impose stress and discomfort (11,12).

Autonomy decision of and the full consent of patients who are aware should be obtained before any decision. In cases that the patient could not communicate physicians should consider family's decision as the final decision. Close relatives such as father, mother, brother, sister and children and legal tutors, such as doctor in charge or legal representative could decide decision instead of the patient who could not decide.

As the general belief in Iran, resuscitation should be performed for all cases needing revitalization, although the odds of survival following resuscitation is not determined. Establishing

DNR order in hospitals is quite dissimilar in different countries according to cultures, religious, patient's autonomy level and physicians prefer. Iran is an Islamic country with much eastern influence. Unlike western countries, concepts such as DNR are not common in Iran and most physicians respect patients rest of life.

If patients and their families become familiar with DNR, it may help to establish this item in medical decision makings. Near 60% of medical students in current study supposed that DNR cards are useful in practice. If we could change the mind of patients and their families regarding the DNR, we could apply this order in practice very easily.

To establish policy for DNR in different countries, all above factors along with end of life values should be considered. □

CONCLUSION

As DNR is definitely a medical decision, it should be clearly discussed with patients and their families. So, it should be provided in standard format in medical situations.

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