APPLICABILITY OF THE CONCEPT OF 'DO NOT ATTEMPT RESUSCITATION' IN THE EMERGENCY DEPARTMENT

Aslı Şener[1], pınar hanife kara[1], and erden erol ünlüer[1]

[1]Affiliation not available

March 10, 2021

Abstract

Introduction : The issue of Do Not Attempt Resuscitation (DNAR), which is still being debated all over the world, is extremely complex and has not yet been discussed extensively in our country. Our aim in this study; to determine the place of DNAR in emergency services and the applicability of DNAR concept. Materials and Methods: This study was designed as a cross-sectional survey in Turkey. The questions were designed to examine physicians' approaches to the concept of DNAR, whether they apply this concept and why. Results: A total of 246 physicians were reached. Sixty-nine physicians (30%) stated that they used DNAR in practice and metastatic terminal stage malignancy patients were found to be the most accepted DNAR group. There was a statistically significant difference between physicians' anxiety about physical violence. Discussion: In order to increase the quality of CPR, patients should be well analyzed. The applicability of the concept of DNAR in our country is not legally possible. However, this situation does not prevent the emergence of patients who will not benefit from treatment in the clinic. Conclusion: It is best to establish a committee on DNAR and redefine the legal rules within certain norms.

INTRODUCTION

The purpose of resuscitation is saving life, better health, relieving pain, decreasing cobormidities and respecting the patient's decisions, rights and privacy (1). Additionally, regarding cardiopulmonary resuscitation (CPR), the very important aim is to prevent death (2). Although general rule being the urgent treatment for cardiac arrest, there are several occasions where not performing CPR is more convenient. In a study, it is shown that 54,9% of patients would not benefit from CPR (3). CPR should be performed to patients whom will benefit the most. Inevitable failure should not be accepted.

Do Not Attempt Resuscitation (DNAR) means do not perform resuscitation. However, in various centers Allow Natural Death (AND) replaces DNAR (1). DNAR definition should be well understood. Some physicians understand DNAR just not performing CPR whereas some advocate not providing any medical support to the patient. Not providing any medical support to the patient is not accepted; neither in our county nor in the whole world. Real DNAR decision only suggests not performing CPR. Next step should be determining the person making the DNAR decision. DNAR decision should be taken when the patient is having a cardiac arrest and needing CPR. This decision is too much important to be made by a single person. In our country, at CPR performing, ending and resuscitating, usually health givers are managing the relations between the families showing a paternalist approach. This paternalist approach is seriously criticized in developed countries and is slowly replaced with ethical attitudes involving the patient and his/her relatives (2). CPR decision should be made not just in arrest occasions but also regarding the underlying disease and the patient's personal evaluation and current situation. Another important issue is the variations in health givers' religious beliefs, occupations, ethnic features, and social status (3). In order to maintain a standard management, clinicians, medical ethic specialists, forensic medicine specialists,

lawyers, sociologists, religion experts and representatives of all different culture groups should be involved to make a concrete decision (4).

Since DNAR term is not legitimately accepted in our country so it is not performed. However, this does not change the number of patients whom will not benefit from CPR performance. The 'slow codes' (showing inefficient resuscitative efforts initiatively) occurring in such occasions is not an appropriate method (1). This application is a moral burden for the decision maker. It results in ethical bias among health givers, misinterpretation and damages the saver-patient relationship (1). Additionally, it also raises the CPR incidence of the country and decreases the successful CPR rate (5). DNAR being fiercely debated among the world and it is not generally discussed in our country, yet.

Our aim in this study is to evaluate the role of DNAR in emergency theaters and to determine the practicability of DNAR term.

MATERIALS AND METHODS

Our study is a cross-sectional survey study. The survey questions are prepared by the researchers and distributed to the participants via e-mail. The participants are informed about the thesis study and data are collected via e-mail. Questions are focused on the attitudes of physicians for DNAR definition, application of DNAR and the reasons of application. The identity information of participants is not collected while constituting the survey forms. All the emergency specialists whom have answered the survey are involved to the study. The study protocol was approved by the local ethics committee.

Statistical Analysis

SPSS® (Statistical Package for Social Sciences) for Windows 21.0 is used for statistical analysis of the data. Average and standard variation for numeric variants; number and percentage for categorical variants are given as definitive statistics. Chi Square and Fisher's Exact test for intergroup comparisons for categorical data is used. Since the distributions were not normal (Kolmogorov Smirnov $p<0,05$) in numerical variations, intergroup comparisons are done via Mann Whitney U for two groups, Kruskal Wallis H for more than 2 groups are used for statistical analysis. Results are accepted as statistically significant if $p<0,05$ in 95% confidence interval.

RESULTS

Total of 246 emergency specialists and trainees were included to the study. The average age of the group was 33,25+/- 5,09. The demographic features of the participants are shown in Table 1.

Among participants, 69 (30%) mentioned that they use DNAR in practice and 65 (26,5%) think that the DNAR decision should be made by the physician. 78 participants (31,7%) mention that they understand not performing CPR as DNAR due to inefficiency principal. Metastatic terminal stage malignancy patients are found the most DNAR patients (n=187; 76,3%). DNAR decision making compared among the titles of physicians, emergency specialists are the most physicians making this decision ($p<0,05$).

One hundred and fifty-one physicians (59,2%) mentioned that they did not receive DNAR request from the patients' relatives. When DNAR request of the patient or his/her relatives rate compared with the medical center, there is not a statistically significant difference among groups. However this request is found the highest in private hospitals. As the relationship between title of the physician and the DNAR request rate compared, the academic titled physicians found to be the most request taking group which is found statistically significant ($p<0,05$). Only 12 physicians /11,4%) officially recorded DNAR request. 84 physicians (36,1%) mentioned that DNAR application in emergency theater will be safe if this procedure is confirmed by law. This rate is found to be higher in female group (n=30; 51,7%).

It is not statistically significant among groups whom share and do not share their DNAR decision making with the relatives of the patients. The most of the reservation of not sharing DNAR decision with patient's relatives is found to be the legal uncertainty which is statistically higher than other causes ($p<0,05$). When not sharing DNAR decision with the relatives and the physician's working place compared, physical violence

is found to be statistically significant (p<0,05). This ratio is found most in research and training hospitals [70 (60,9%)] and least in private hospitals [2 (28,6%)]. When the titles of the physicians and not sharing DNAR decision compared, the disturbance of physical violence is found least in academic titled physicians [11 (31,4%)] and most in trainees [26 (60,5%)] last then 2 years. The relationship between reservation for not sharing DNAR decision with relatives and the working years in emergency theater is analyzed and psychological, physical and verbal violence and other causes did show a statistical significance (p<0,05). Psychological, physical and verbal violence is determined as a reservation among physician working less than 10 years in the emergency service. Violence reservations rates in physicians working in emergency theater more than ten years found lower compared to other groups. Although a statistically significance for reservations due to legal mistrust is not observed it is found lower in physicians working more than 10 years in emergency service.

DISCUSSION

We have two main conclusions in our study. Especially DNAR being illegal in our country constricts the entire steps towards its application. Second, DNAR still stands a responsibility fully taken by the physicians which they cannot explain in all terms.

AHA guidelines suggest that if not eligible, health givers should not be forced to perform CPR (6). Patients and their relatives have the most right to speak about DNAR decision in Switzerland. In Europe and in our country, the paternalist approach, in which externalizes patients/relatives, is still in use. Yang et al has showed that physicians believe they are the only authority in DNAR decision (7). Park et al suggest nurses should be involved in DNAR decision while communicating with the health givers and patients/relatives (8). 30% of our participants mentioned that they are actively applying DNAR while 26% think that the decision is physician's responsibility. This points that only 4% of the physicians think that patients/relatives should be included in decision making. Most of the physicians who are not willing to take full responsibility of self-made DNAR decision are still performing CPR although they know the patient will not benefit from it. Nevertheless, another study shows that inadequate knowledge about DNAR keep physicians from this application (9). In the study of McIntosh et al, patients', relatives' and physicians' awareness is been tried to raise with simple efforts and they have made it (10). We did not make query about DNAR education which is limitation of our study. As being a traditional society with being most of its citizens belonging to Muslim religion accompanied by low sociocultural level, we believe these factors lack DNAR decision in our country. Religion is one of the most significant aspect for DNAR decision-making process. Most of Muslims, with the faith of God's healing power and hope, prefer CPR neglecting the prognosis of the underlying disease (11). With this background and DNAR term being currently illegal, it seems impossible to debate about DNAR with relatives in our country. Initially, a well-organized study should be maintained and then legal basis should be prepared. Afterwards, the ideal way of language should be determined for community norms to share DNAR with patients/relatives.

The most important determinants in DNAR decision are found to be prognosis of the disease and expected life quality (12). The most DNAR requests belong to malignant tumors, dementia, cerebrovascular disease sequels (13). Compatible with literature, in our study, "metastatic terminal stage malignancy patients", elder patients with multiple comorbid diseases and patients with concrete evidence for irreversible death patients were found to have tendency for DNAR. This result shows that our physicians still accept CPR as a treatment and are aware of the fact that it should not be performed to those that will not benefit from it. Regardless of the underlying disease prognosis, if the patient requests CPR, it should definitely been performed. Whoever decides to limit or end life support to a patient, one should preserve the principles of providing necessary health care and not initiate or end unnecessary acts. Compatible with literature, the most important factor influencing DNAR decision is found to be inexpediency principle. As the experience of the physician decreases, DNAR acceptance increases. Academic titled physicians might trust themselves more due to their experience and knowledge or might be more cautious for malpractice incidence. As the training experience decreases due to long hours of work might diminish the physician's time and energy and might give up more easily.

In the study of Bedell et al, it is shown that only in 19% of patients who had received CPR had discussed it with their physician, and in 33% the family was consulted (14). Similarly DNAR decision was shared with 77-86% with the relatives; only 14-22% was discussed with the patient (15). Murphey et al showed in their study that 41% of elders wanted CPR performance. 22% of the patients whose discharge or survival rates determined as 10-17% accepted CPR performance –after fully informed about DNAR-. When discharge or survival rates dropped to 0-5%, CPR performance requirement decreased to 5% (16). As the community, our country is not prepared for DNAR condition. Our DNAR rate is found 40,1%. The cause of this might be related to cultural background of the population or beliefs against DNAR. However, if the necessary acknowledgement is ensured precisely, we believe this ratio will raise in our country. This seems possible only with obligatory legal regulations. In a study a special training is needed for DNAR elucidating because DNAR can be easilu misunderstood by the patient/relatives and usually understood as euthanasia (9). DNAR request ratios are found to be higher compared to other centers. We believe that this finding is not confident due to lack of adequate number of physicians. Physicians working more than 2 years have a higher number of CPR performances and so these physicians are more in dialog with patients/relatives as their team leader roles. This may explain the higher rates of DNAR demand of relatives.

Legal obligations for DNAR are not fully determined in our country (17). In couple of protocols signed with other countries entitle patients with right of DNAR whereas in some other protocols, patient him/herself is not permitted to end his/her life (18). There are a lot of similar situations. Best step towards bias is to specially work on only DNAR term and concrete legal obligations should be gathered. Currently DNAR performance and euthanasia are illegal and are punished as "first degree murder" [defined in law number 181; clause 43] in Turkey (19). For this reason, the CPR rate is high but the success rate is low in Turkey. There is not a national statistical data in our country.[5] In most countries DNAR orders are legally applicable. In our study, legal limitation is found to be the most determinant factor both for DNAR decision making, and sharing this decision with the patient' relatives. Nevertheless, this causes physicians secure their DNAR decision from the relatives and so relatives cannot have a right to object or agree DNAR decision. At field, slow codes which called 'cosmetic CPR' is preferred as DNAR. In our study, we had physicians who mentioned DNAR decision making but these decisions did not reflect to records. Knowing inefficient CPR but still continuing to perform CPR is a very big moral burden for physicians. This situation causes moral burdens to all CPR team and results in team trust.

Recently, it is observed that DNAR decision is more shared with patient/relatives in Europe (20). In our study, acknowledgement rate of the relatives is found very low. This tendency may result in neglect in patient rights and patient respect. Probably, honor and respect is the last but most important wish of a patient in the last moments (21). However in countries like ours where DNAR is illegal, DNAR decision is made without official recording and not informing the patient/relatives. The two major limitations of DNAR decision making seem to be legal problems and violence risks that physicians face in emergency theaters. These occasions are observed in government hospitals and education-training hospitals which is found to be statistically significant. This finding may be explained as 1.the sociocultural levels of patients admitting to government hospitals are relatively low and 2.the numbers of patients are much more higher compared to university hospitals. In a country where physicians are get killed by patient relatives, the insecurity of the physician for sharing DNAR decision is understandable. In country where DNAR is not discussed due to religious beliefs, doctors killed by patient's relatives are major hypocrisy. The increasing number of malpractice cases also result in legal insecurity.

CONCLUSION

As a result; patients should be analyzed carefully and CPR should be performed to those who will benefit the most. CPR should be directed regarding the experiences obtained from previous unsuccessful attempts. In this case, DNAR term is occurring; for DNAR decision legal confidence should be guaranteed to physicians. In our country, with current legal status, DNAR cannot be performed. DNAR is trialed equal to 'first degree murder'. However this situation does not prohibit patients that will not benefit from medical support. In situations where the patient is assumed to die eventually, using total effort result both financial and time

loss. Additionally utilizing all the resources to patients that will definitely not benefit may also result in reduced time and effort for those who may actually benefit. DNAR should be handled by a committee that should define the norms and legal aspects should be renewed. Necessary steps should be taken immediately; otherwise, physicians will continue to perform ineffective CPR with a huge moral burden and the rate of unsuccessful CPR will increase.

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