Tokai J Exp Clin Med., Vol. 24, No. 1, pp.29-34, 1999

Nurses' Perspectives concerning Do-Not-Resuscitate (DNR) Orders

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(Received December 7, 1998; Accepted January 8, 1999)

The purpose of this study was to investigate the views of the nursing staff concerning do-not-resuscitate (DNR) orders at the Tokai University Hospital where a controversial incident occurred several years ago. A 'Questionnaire on DNR Orders' was circulated and the anonymous answers were collected two weeks later. The questionnaire was returned by 706 of 780 (90.5%) nurses from every ward/specialty, which revealed that 87% of the nurses felt that DNRs were occasionally necessary, with more than 40% of the nurses answering that they took part in DNR. Further, 36% of the nurses stated that patient consent was indispensable, and 64% thought that the patient's family and physician could decide DNR in the event the patient was physically unable to give consent. Moreover, 66% of the nurses expected the establishment of a DNR order sheet to be formulated as a matter of hospital policy; only 5% of the nurses thought that such an order sheet would not be necessary. Comparing these results with a previous study polling physicians at the Tokai University Hospital, nurses are more likely than physicians to think that patient consent is indispensable, and want the establishment of a standardized DNR order sheet as hospital policy.

There is, in fact, a "tacit understanding" between physicians and patients' families in medical practice in Japan. However, DNR is definitely a medical decision. Therefore it should be clearly stated in a standardized format, although such a procedure presently seems unlikely, in view of the Japanese traditional value system.

Key Words : Do-not-resuscitate (DNR), Cardiopulmonary resuscitation (CPR), Advance directives, Euthanasia

INTRODUCTION

In April 1991, a young physician working at the Tokai University Hospital gave an intravenous injection of potassium chloride to his terminally ill patient. He did so after repeated requests by the family to ease the patient's suffering. The physician was subsequently charged with murder and in March 1995, received a two-year prison term, suspended for Two years, because of the family's pressure to end the patient's suffering and because of the lack of a hospital system to manage this kind of situation.

The immaturity of a system to manage terminal settings is not restricted to the Tokai University Hospital, but is common in Japan. In addition, informing cancer patients of a true diagnosis is still uncommon, also related to the Japanese traditional value system [1]. Partly because of this traditional value system, there has been little discussion on cardiopulmonary resuscitation (CPR), advance directives [2], and do-not-resuscitate (DNR) methods [3]. Therefore, the Committee on DNR Orders was organized under the supervision of the hospital director one year prior to this investigation.

The first step for the committee was to solicit the opinions of the physicians and nurses working at the Tokai University Hospital concerning DNR orders. The physi-

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cians' viewpoints on DNR orders have been reported [4], with this article addressing the nurses' perspectives on DNR orders.

METHODS and SUBJECTS

The committee developed a "Questionnaire on DNR Orders" to investigate current conditions and general opinions on DNR/DNR orders of the Tokai medical staff. At the top of the questionnaire, DNR was defined as "CPR not performed even when cardiac arrestis observed."

The questionnaires were delivered to the section heads and chief nurses of all clinical departments, for distribution to every full-time physician (including residents) and nurses. The anonymous answers were collected two weeks later. In this article, the answers from the nurses will be tabulated and analyzed.

RESULTS

The answers were returned by 706 of 780 (91%) nurses who received the questionnaires. The gender of the participants was 32 male and 662 female (12 didn't answer) nurses. Their careers as nurses ranged from 1-40 years (mean ± S. D. = 5.6 ± 5.9 years), and their ages ranged from 20-63 years (mean ± S. D. = 26.5 ± 7.5). Of the 706 nurses, 496 (70%) had less than 8 years of experience. Concerning the experience of patient death, 43 nurses reported no experience, 300 had experienced patient death less than 10 times, and 450 less than 50 times. The wards of the nurses varied, and are listed in Table-1.

Although the questions and the optional

Table 1 Subjects (N= 706)

Gender	32 male and 662 female (12 didn't answer)
Age	20-63 years (mean 26.5 ± 7.5)
Years as a nurse	1-40 years (mean 5.6 ± 5.9)
Experienced Patient Death	0 (43 Ns.) -500 (1Ns.) (mean= 16.1 ± 34.6) 300 Ns.<10, 450 Ns.<50
Ward (Specialty)	2H & EICU (Emergency)= 47 ICU & CCU= 28 Outpatient Clinics= 21 Operation room= 42 3A (Obstetrics/Newborn)= 48 4A (Pediatrics)= 48 4B (Psychiatry)= 16 4C1 (Mixed)= 16 4C2 (Germ-free)= 16 5A (mainly Orthopedics)= 17 5B (Gynecology)= 19 5C (mainly Orthopedics)= 23 6A (Internal medicine)= 24 6B (Internal medicine)= 22 6C (Neuro-surgery)= 20 7A (Internal medicine)= 24 7B (Cardiology)= 25 7C (Internal medicine)= 23 8A (Internal medicine)= 19 8B (Surgery)= 26 8C (Surgery)= 23 9A (mixed, mainly Urology)= 28 9C (Otolaryngology)= 24 9B (mixed)= 21 10A (mixed)= 15 10B (mixed)= 21 10C (mixed)= 13 10D (mixed)= 14 Others= 9 Uncertain= 14

answers (the actual number and the percentages) are shown in Table-2, some findings are described below.

The answers to Question 1 revealed that 87% of the nurses felt that DNRs were occasionally necessary. More surprisingly, more than 40% of the nurses answered that they had participated in DNR, which was again demonstrated in the answers to Question 5. The clinical experience of the nurses who

Table 2 Questionnaire and Results

Question 1: Do you think that DNR is occasionally necessary ?	
a, Yes, and took part.	282 (42.0%)
b, Yes, but did not take part.	302 (45.0%)
c, No.	18 (2.7%)
d, Uncertain.	69 (10.3%)
Q2: If you selected (a) or (b) to Q1,	
(1) What are the reasons ? (Two or more answers are permissible)	
a, Dignified death would be expected.	60 (38.0%)
b, Economic burden on family.	61 (38.6%)
c, Heroic efforts would be meaningless.	37 (23.4%)
(2) Is patient's consent necessary in determining DNR ?	
a, Patient's consent (or living wills or alternatives) is indispensable.	206 (35.8%)
b, Patient's consent would be preferable, but if not available, the patient's family and the physician can decide.	368 (64.0%)
c, Others.	1 (0.2%)
(3) Who should make the final decision of DNR ?	
a, Patient, family, and doctor in charge.	252 (44.4%)
b, Doctor in charge and Ward director	103 (18.1%)
c, Direction from the hospital committee (e.g. DNR committee)	73 (12.9%)
d, Others	140 (24.6%)
Q3: 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.	4 (22.2%)
b, DNR is still legally problematic.	1 (5.6%)
c, It is uncertain when the decision should be made.	8 (44.4%)
d, It is uncertain who should make the decision.	5 (27.8%)
Q4: 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.	412 (94.9%)
b, Others	22 (5.1%)
Q5: Did you take part in DNRs ?	
a, Yes.	307 (43.5%)
How many ?	<10: 233, 10-20: 60, >20: 14
b, No.	308 (43.6%)
(No answers to Q.5 = 91 (12.9%)	
Q6: If you selected (a) to Q5,	
(1) What kinds of diseases ? (Two or more answers are permissible)	
Terminal cancer: 70, Others (Burn, Anoxic encephalopathy, CVD, etc.): 19	
(2) Who proposed DNRs ? (Two or more answers are permissible)	
a, Patients	36
b, Patients' family	20
c, Doctor in charge	277
d, Patients' family and Doctor in charge	145
e, Others	20
Q7: Would the establishment of a DNR order sheet be helpful ?	
a, Yes.	452 (66.4%)
b, No idea.	190 (27.9%)
c, No.	39 (5.7%)

answered that DNR was occasionally necessary was longer than that of the physicians who answered that although DNR was occasionally necessary they had not participated (mean ± S. D. = 6.4 ± 5.7 vs. 5.1 ± 6.0, $p<0.05$) The reasons for participating in DNRs were: to allow a dignified death (38%); undue economical burden on family (39%); and knowledge that their efforts would be meaningless (23%), as shown in Question 2 (1).

Only 35.8% of the nurses considered patient consent (or living wills or alternatives) to be indispensable, whereas 64% thought the patient's family and the physician could decide on whether or not to resuscitate. Similar findings were demonstrated in the answers to Question 6 (2) by those who proposed DNRs. All cases of DNRs were initiated by the family and doctor in charge except one case which was requested by the patient himself.

Also, 66% of the nurses requested the establishment of a DNR order sheet as hospital policy, while only 5.7% of the nurses answered that such an order sheet is not necessary, as demonstrated in Question 7. However, there were no significant differences in the length of the careers between the physicians who wanted the establishment of the DNR order sheets and those who didn't. (mean ± S. D. = 6.0 ± 6.5 vs. 5.3 ± 4.4, Mann-Whitney U-test)

DISCUSSION

The answers were returned from 90.5% of the nurses, which was much higher than expected and in strong contrast with 37% for the physicians [4]. Also, these answers were collected from nurses of various ages, duration of experience, and clinical specialties. Although these findings might have the typical limitations of a questionnaire survey, the data likely reflect the general perspectives of the nurses working at the Tokai University Hospital. Also, the high rate of return reflects the sincere and concerned attitude of the nurses toward this serious topic.

In this study, the most striking finding was that 86% of the nurses felt that DNR was occasionally necessary, very similar to the 90% of the physicians that answered like wise [4]. Also, it is noteworthy that more than 40% of the nurses answered they had participated in DNRs (this rate reappeared in the answers to Question-5), while more than 60% of the physicians had done so [4]. According to a survey by Arai et al. [5] on the trustee members of Japanese medical societies, 97% of physicians felt that DNR was occasionally necessary and more than 70% answered that they actually performed it, which was very similar with our findings. It is possible to say that DNRs are not uncommon in clinical practice in Japan, although this issue has neither been officially discussed nor legalized. According to a questionnaire survey by Chiyo et al. [6], DNR would be highly acceptable in some situations by critical care physicians, primary care physicians, nurses, and the public.

However, there was a difference between physicians and nurses in the answers to Question-2 (2) inquiring whether the patient's consent was necessary in determining DNRs. This study revealed that 35% of the nurses answered that the patient's consent (or living wills or alternatives) are indispensable in DNRs, while only 14% of the physicians in our previous study [4] and 11% in the study by Arai [5] answered that the patient's consent is indispensable. Also, in our study, 64% of the nurses answered that the patient's family and the physician could decide DNR without the patient's consent, while 85% [5] and 78% in the previous study [4] of the physicians thought so. It is still unclear whether the family's consent can replace the patient's consent to DNR, because there has been no judicial ruling on DNR.

This study was based on the unfortunate incident that happened at the Tokai University Hospital. The decision of the Yokohama District Court on the 'Tokai euthanasia case' clearly outlined four conditions required for active euthanasia to take place as follows: *(1) Pain is intolerable. (2) Death is imminent. (3) No alternative method for alleviating suffering is available.* and *(4) The patient's own request or consent must be obtained.* More importantly, at the same time, it also outlined the conditions required for passive euthanasia in terminal care settings as follows: *(1) Death is inevitable. (2) Patients propose to discontinue the treatment* and *(3) Physicians certify that the ongoing treatment is meaningless and it is discontinued for natural death.* Among these conditions, the court

added an annotation to the second condition that patient consent be frequently ascertained so that it could be replaced by presumed consent. In other words, the family could give consent for incompetent patients, due to the critical illness. This is a case of passive euthanasia but not a case of DNR. It is still doubtful whether DNR decided by the family and doctor in charge is legal, since there has been no judicial ruling on DNR.

These results indicate the current conditions of DNR in medical practice in Japan are as follows: *DNRs are not uncommon, which was demonstrated by the fact that 60-70% of the physicians and 40% of the nurses participated in DNRs. While 35% of the nurses answered that the patient' s consent is indispensable in DNRs, only 11-14% of the physicians answered so. In contrast, physicians are more likely to think that the patient' s family and physician could decide DNR in the absence of patient consent*. The family' s role in the decision-making process in medical practice is frequently observed, especially in oncology settings, which is mainly derived from the fact that telling the truth to cancer patients is still rare in Japan. [1]

In our previous study [4], it was demonstrated that there was little trouble when DNRs were performed. However, only 70% of the physicians indicated that DNRs were recorded, which suggests physicians' resistance to clearly documenting this procedure in patients' medical records. DNRs are not legally problematic if consent (by living wills or their alternatives) are given by the patients themselves. However, the physicians' reluctance to clearly recording the procedure in the medical record reflects the fact that most DNRs are proposed and decided by the patient' s family and doctor in charge. Such decision making processes without the patients' clear consent are frequently observed in clinical practice in Japan.

As demonstrated in our study, two-thirds of the nurses desired the establishment of a standardized DNR order sheet as hospital policy, and only 6% answered that such an order sheet was not necessary. There was no significant difference between the career years of the nurses who answered one of the options. In the previous study [4], only half the physicians wanted the establishment of a standardized DNR order. In other words, nurses are more likely to request the establishment of a standardized DNR order sheet as hospital policy than physicians. However, these findings will not necessarily promote the establishment of a standardized DNR order sheet because there has been little hospital-based discussion on this topic. As demonstrated in this study, there are differences in the attitude toward DNR decisions, in some respects similar to those reported abroad. According to the study by Eliasson et al., the responsible nurses did not agree that DNR orders were appropriate in 6 out of 84 cases designated DNR. [7] Because of such differences, Lofmark et al. proposed a DNR decision-making model where the skills of the responsible physicians and the responsible nurses were combined to investigate the conditions suitable for a DNR decision. [8]

Moreover, adopting a hospital policy permitting DNR and then actually doing so is quite different. In a general hospital in the U. S., Swig et al. demonstrated the results of an interview with attending physicians [9]. Of 69 physicians, 57 were aware of the hospital policy, and 49 were in agreement. However, 36 answered that CPR should be offered to all patients, regardless of benefit. This is related with the result of this study, in that a formal DNR order sheet was not needed in spite of the fact that 90% of the physicians felt that DNR was occasionally necessary and that more than 60% admitted actual participation. Moreover, there is a difference in the attitude toward the DNR order and its performance between British and American teaching hospitals. According to a study by Mello & Jenkinson [7], although the American and British hospitals had adopted similar formal protocols for DNR decision making, in practice the British physicians often made decision unilaterally, whereas the American physicians sought patient or surrogate consent in every instance. The British decision making model enables physicians to reduce the inappropriate use of resuscitation at the expense of patient autonomy, in contrast with the American approach of respecting patient autonomy.

There are several characteristics of medical practice in Japan which might explain the hesitation to establish DNRs. First of all, clinical practice in Japan has been characterized by a 'tacit understanding' among

the patients, their families, and the doctors in charge. Its background is consistent with the fact that Japanese physicians have been less likely to talk about suicide, advance directive, dignified death, and other issues related to death. [10] However, this 'tacit understanding' in medical practice is ambiguous and changeable, as shown by the 'Tokai euthanasia case'. [1]

Second, it is common in Japan that physicians will expect the patient's family to make decisions rather than the patients themselves, even in deciding whether to continue life support or not. In our study, we found that many DNRs were performed after decisions by families and physicians.

DNR is definitely a medical decision. Therefore, it should be clearly expressed in a standardized format, although such a procedure may not be readily accepted because of Japanese traditional values.

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