Intensive Care Med (1996) 22:1003–1005

EDITORIAL

C. L. Sprung
L. A. Eidelman

Worldwide similarities and differences in the forgoing of life-sustaining treatments

Received: 22 January 1996
Accepted: 26 January 1996

This article was supported, in part, by the Walter S. and Alice Gorham Foundation

C. L. Sprung (✉) · L. A. Eidelman
Department of Anesthesiology and Critical Care Medicine, Hadassah University Hospital, P.O.B. 12000, Jerusalem, Israel 91120

"For this reason was man created alone, to teach that to destroy a single life is tantamount to destroying a whole world and to save one life is equivalent to saving a whole world."
Babylonian Talmud, Tractate Sanhedrin, page 37a.

Major changes have occurred in the practice of medicine during the last three decades [1, 2]. They have been due to major advances in science along with changes in the law and society. The successful experience with mechanical ventilation during the polio epidemic in the 1950s was followed by the indroduction of intensive care units (ICUs), closed chest massage and DC defibrillation [2, 3]. Death was considered a failure of medicine and was to be prevented at all costs [1]. Over the years, however, doctors have come to realize that despite great progress and sophisticated technologies, some patients can not be saved.

Twenty-five years ago, most patients died in ICUs after cardiopulmonary resuscitation (CPR). Currently, the forgoing of life-sustaining treatments (FLST) occurs in ICU patients around the world and most patients do not undergo CPR [4–13]. FLST takes place in 5–22% of patients admitted to an ICU [4–13] (Table 1) and the incidence is increasing [10]. The majority of patients dying in an ICU do so after the FLST (35–87%) [4–13] (Table 1). There are, however, great differences between countries. What is adopted morally and legally in one country may not be accepted in another. Although the withdrawal of ventilators and vasoactive drugs is considered passive euthanasia [14], it is legal and accepted practice in terminally ill ICU patients in North America, Europe and Australia [1, 15–17]. Active euthanasia may be permitted in these patients in Holland [18]. In Israel, however, the withdrawal of respirators and vasopressors leading to death in these patients is considered by many to be illegal and unethical [19, 20]. Thus, diverse cultural, religious, philosophical, legal and professional attitudes may lead to great differences in attitudes and practices in various countries and in different units within a country. In the United States, between 87–96% of physicians have withheld or withdrawn LST [21, 22] whereas in Europe 83% have withheld LST, 63% have withdrawn LST and 36% have practiced active euthanasia [17]. In this issue of *Intensive Care Medicine*, important contributions are made by Melltorp and Nilstun [12] documenting FLST procedures in Sweden and by Turner et al. [13] describing practices of FLST in England and South Africa.

There is a broad spectrum of FLST. Unfortunately, definitions, terminologies and actions are not always uniform, which leads to confusion. Decisions to FLST may be broadly classified as prospective or actual. As noted by Melltorp and Nilstun [12], resolutions to withhold therapies may be prospective for a hypothetical event (CPR for a future cardiac arrest) or be actual – made at a time when an action is required (intubation and ventilation for a current respiratory arrest). Decisions to withdraw treatments are typically actual and not prospective. Although many ethicists, clinicians and judges believe there is no moral difference between withholding and withdrawing life-sustaining treatments [23], many physicians have more trouble withdrawing than withholding LST [17, 21]. Depending on the type of patients, the country and the doctor's preferences, FLST in the ICU may vary from 1–87% withholding and 13–99% withdrawing [5–13] (Table 1). Withdrawal of therapy seems especially common in Australia, Canada and South Africa (Table 1) [8, 11, 13].

Table 1 Forgoing life-sustaining treatments (FLST) in the Intensive Care Unit (*FLST* foregoing life-sustaining treatments, *WH* withhold, *WD* withdraw)

Author	Country	Year	FLST/ Total patients	(%)	FLST/ICU Deaths	FLST WH	FLST WD	FLST hospital Survival	FLST ICU Discharge
Grenvik [4]	USA	1978	247/1752	(14)	62%	100%		6.9%	16%
Vincent [5]	Belgium	1989	168/2295	(7)	65%	87%	13%		
Smedira [6]	USA	1990	115/1719	(7)	58%[a]	19%	81%	0.9%	23%
Wilson [7]	USA	1992	101/1732	(6)					
Daffurn [8]	Australia	1992	27/413	(7)[b]	55%[a]	4%	96%	0%	22%
Murray [9]	Britain	1993	226/1025	(22)	61%[c]				
Koch [10]	USA	1994	237/2561	(9)	35%[a]	69%	31%	4.6%[d]	17%
Wood [11]	Canada	1995	71/1134	(6)	65%[a]	1%	99%	0%	31%
Melltorp [12]	Sweden	1996	34/600	(6)	79%[a]	35%	65%	18%[d]	50%
Turner [13]	England	1996	53/1010	(5)	82%	41%	59%	0%	0%
	South Africa		39/399	(10)	87%[a]	11%	89%	0%	18%

[a] Includes FLST in ICU and death on ward
[b] Approximation
[c] Deaths at 6 months
[d] Prospective WH; all DNR patients

When forgoing occurs, many health care professionals use the term "DNR – do not resuscitate". Subsequently (sometimes concomitantly and often sequentially) decisions are made to forgo other interventions. In the United States, vasopressors are typically withheld and mechanical ventilation withdrawn [6]. In Canada, 96% of patients were first classified DNR, then vasopressors discontinued and finally had mechanical ventilation withdrawn [11]. It is important to document [24] exactly which intervention will be continued and which will not. If specific orders are not written and reasons not documented [12], appropriate care may not be provided to the patients.

As most deaths in the ICU are expected [17], there is time to deliberate and discuss FLST with the staff and family. The decision to FLST may be made because it is believed the patient may survive but the chances are extremely slim. Under these circumstances, the judgement to prospectively forgo only CPR and continue all other therapies may occur. At the other extreme is the patient who is believed to have no hope of surviving and on whom the staff has given up who may have the actual withholding and/or withdrawing of several treatments. Occasionally, however, an actual decision must be made immediately, as the patient quickly becomes unresponsive to maximal vasopressor or ventilatory interventions.

When is the possibility of FLST first brought up and decided? Different doctors have diverse thresholds. Decisions are usually based on some combination of the nature and course of the acute and chronic diseases, specific organ dysfunction (especially the brain), the number and severity of multiple organ dysfunction, the response to treatment, the doctor's assessment of prognosis and a patient or surrogate request. The various conditions associated with FLST in the medical literature include severe sepsis or shock, severe neurologic, cardiac and/or respiratory dysfunction, multiple organ system failure, disorders unresponsive to maximal therapy, malignancies and severe underlying diseases [8–11, 13]. Patients who have FLST have more organ system failure [11] and longer ICU stays [5, 6, 11] than patients who do not.

Patients decision-making capacity for FLST was found in only 0–10% of ICU patients [6, 8, 11, 13]. In the United States, most determinations are made by family members, acting as surrogates for patients, using a substituted judgement or best interest standard [25]. Most individuals want their family to decide for them [26] and families predict patient wishes better than doctors [27]. Physicians rather than patients or families decide when FLST is an issue [6, 12, 13] and doctor, rather than patient, values predominate in decisions to FLST [28, 29]. This may be because doctors believe these are medical decisions [28], they are unwilling to provide futile or inappropriate treatment [28, 30] or they have their own biases regarding FLST [29]. In Europe, some physicians believe they can represent the patient's best interest without seeking a surrogate's approval [31]. Although many end-of-life decisions have been framed in medical terms such as futility [2, 30, 32], they are often subjective, ethical determinations [2]. There is extreme doctor variability in defining a patient's prognosis [33] or futility [34] and in decisions of FLST [2, 35]. Doctors have decided FLST unilaterally [22, 31, 34] and occasionally have done so without the knowledge or consent or even over the objection of the patient or surrogate [22]. Physicians should not confuse value judegements with medical indications for treatment [2].

Not all patients who have FLST die: 0–18% survive, typically DNR patients as opposed to patients undergoing terminal weaning (Table 1). One of our ICU attendings or consultants has great difficulty writing DNR orders because he believes this causes providers to treat the patient differently, without the same enthusiasm and aggressiveness. DNRs sometimes come to mean "do not

care". This should never occur. Judgements for individual patients are based on clinical decision-making and not on infallible prognostic scoring systems. In fact, none of the current systems can accurately predict which specific patient will die [8, 36]. When physicians were provided with a prediction of a patient's outcome, the doctor's use of ICU monitoring and treatments changed [9]. Decisions to FLST can become self-fulfilling prophecies even in those patients who might have survived [2].

Despite the great scarcity of critical care beds throughout the world, patients who have therapies forgone and who doctors believe will die are usually not discharged from the ICU (0–50% discharged (Table 1)). This is not an efficient use of a scarce resource. It may be justified, however, because of the lack of another appropriate facility for a labor-intense patient and the strong bond between providers and patient and family, which is difficult to break at a critical time without feelings of abandonment.

Most patients and families want providers "to do everything". We must realize that "doing everything" that is best for a patient may not mean starting adrenaline or performing CPR, but rather may connote FLST. The duty of the physician is not only to sustain life but also to relieve pain and suffering and not to prolong the dying process.

References

1. Sprung CL (1990) Changing attitudes and practices in forgoing life-sustaining treatments. JAMA 263:2211–2215
2. Sprung CL, Eidelman LA, Pizov R (1996) Changes in forgoing life-sustaining treatments in the United States: concern for the future. Mayo Clin Proc 71:512–516
3. Hilberman M (1975) The evolution of intensive care units. Crit Care Med 3:159–165
4. Grenvik A, Powner DJ, Snyder JV et al (1978) Cessation of therapy in terminal illness and brain death. Crit Care Med 6:284–291
5. Vincent JL, Parquier JN, Preiser JP et al (1989) Terminal events in the intensive care unit: review of 258 fatal cases in one year. Crit Care Med 17:530–533
6. Smedira NG, Evans BH, Grais LS et al (1990) Withholding and withdrawal of support from the critically ill. N Engl J Med 322:309–315
7. Wilson WC, Smedira NG, Fink C, McDowell JA, Luce JM (1992) Ordering and administration of sedatives and analgesics during the withholding and withdrawal of life support from critically ill patients. JAMA 267:949–953
8. Daffurn K, Kerridge R, Hillman KM (1992) Active management of the dying patient. Med J Aust 157:701–704
9. Murray LS, Teasdale GM, Murray GD et al (1993) Does prediction of outcome alter patient management? Lancet 341: 1487–1491
10. Koch KA, Rodeffer HD, Wears RL (1994) Changing patterns of terminal care management in an intensive care unit. Crit Care Med 22:233–243
11. Wood GG, Martin E (1995) Withholding and withdrawing life-sustaining therapy in a Canadian intensive care unit. CAn J Anesth 42:186–191
12. Melltorp G, Nilstun T (1996) Decisions to forgo life-sustaining treatment and the duty to documentation. Intensive Care Med 22:1015–1019
13. Turner JS, Michell WL, Morgan CJ, Benatar SR (1996) Withdrawal of life support. Frequency and practice in a London and a Cape Town intensive care unit. Intensive Care Med 22:1020–1025
14. Truog RD, Berde CV (1993) Pain, euthanasia, and anesthesiologists. Anesthesiology 78:353–360
15. Emanuel EJ (1988) A review of the ethical and legal aspects of terminating medical care. Am J Med 84:291–301
16. Fisher MM, Raper RF (1990) Withdrawing and withholding treatment in intensive care. Med J Aust 153:222–225
17. Vincent JL (1990) European attitudes towards ethical problems in intensive care medicine: results of an ethical questionnaire. Intensive Care Med 16:256–264
18. De Wachter MAM (1989) Active euthanasia in the Netherlands. JAMA 262: 3316–3319
19. Rosner F (1986) Euthanasia. In: Rosner F (ed) Modern medicine and Jewish ethics. Yeshiva University Press, New York, pp 189–207
20. Yael Shefer v. The State of Israel. C.A. 506/88. Psak Din 48 (1) 87
21. The Society of Critical Care Medicine Ethics Committee (1992) Attitudes of critical care professionals concerning forgoing life-sustaining treatments. Crit Care Med 20: 320–326
22. Asch DA, Hansen-Flaschen J, Lanken PN (1995) Decisions to limit or continue life-sustaining treatment by critical care physicians in the United States: conflicts between physicians' practices and patients' wishes. Am J Respir Crit Care Med 151: 288–292
23. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Deciding to Forgo Life-Sustaining Treatment. Ethical, Medical and Legal Issues in treatment decisions. Washington, DC, Government Printing Office, 1983, 73–77
24. National Conference on Cardiopulmonary Resuscitation and Emergency Cardiac Care (1974) Standards for cardiopulmonary resuscitation (CPR) and emergency cardiac care (ECC). JAMA 227:864–866
25. Weir RF, Gostin L (1990) Decisions to abate life-sustaining treatment for nonautonomous patients. Ethical standards and legal liability after Cruzan. JAMA 264:1846–1853
26. High DM (1988) All in the family: extended autonomy and expectations in surrogate health care decision-making. Gerontologist 28:46–51
27. Ouslander JG, Tymchuk AJ, Rahbar B (1989) Health care decisions among elderly long-term care residents and their potential proxies. Arch Intern Med 149: 1367–1372
28. Orentlicher D (1992) The illusion of patient choice in end-of-life decisions. JAMA 267:2101–2104
29. Christakis NA, Asch DA (1993) Biases in how physicians choose to withdraw life support. Lancet 342:642–646
30. Luce JM (1995) Physicians do not have a responsibility to provide futile or unreasonable care if a patient of family insists. Crit Care Med 23:760–766
31. Vincent JL (1993) Euthanasia in the intensive care unit. Anesthesiology 79:404
32. Truog RD, Brett AS, Frader J (1992) The problem with futility. N Engl J Med 326: 1560–1564
33. Poses RM, Bekes C, Copare FJ, Scott WE (1989) The answer to "What are my chances, doctor?" depends on whom is asked: prognostic disagreement and inaccuracy for critically ill patients. Crit Care Med 17:827–833
34. Curtis JR, Park DR, Krone MR, Pearlman RA (1995) Use of the medical futility rationale in do-not-attempt-resuscitation orders. JAMA 273:124–128
35. Cook DJ, Guyatt GH, Jaeschke R et al (1995) Determinants in Canadian health care workers of the decision to withdraw life support from the critically ill. JAMA 273:703–708
36. Chang RWS, Lee B, Jacobs S et al (1989) Accuracy of decisions to withdraw therapy in critically ill patients: clinical judgement versus a computer model. Crit Care Med 17:1091–1097