

Review

Ethics review: Perioperative do-not-resuscitate orders – doing ‘nothing’ when ‘something’ can be done

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Abstract

Cardiopulmonary resuscitation (CPR) has the ability to reverse premature death. It can also prolong terminal illness, increase discomfort and consume enormous resources. Despite the desire to respect patient autonomy, there are many reasons why withholding CPR may be complicated in the perioperative setting. This review outlines these factors in order to offer practical suggestions and to provoke discussion among perioperative care providers. Although originally described for witnessed intraoperative arrests, closed chest cardiac massage quickly became universal practice, and a legal imperative in many hospitals. Concerns were raised by both health care workers and patient groups; this eventually led to the creation of the do-not-resuscitate (DNR) order. However, legal precedents and ethical interpretations dictated that patients were expected to receive full resuscitation unless there was explicit documentation to the contrary. In short, CPR became the only medical intervention that required an order to prevent it from being performed. Before the 1990s, patients routinely had pre-existing DNR orders suspended during the perioperative period. Several articles criticized this widespread practice, and the policy of ‘required reconsideration’ was proposed. Despite this, many practical issues have hindered widespread observance of DNR orders for surgical patients, including concerns related to the DNR order itself and difficulties related to the nature of the operating room environment. This review outlines the origins of the DNR order, and how it currently affects the patient presenting for surgery with a pre-existing DNR order. There are many obstacles yet to overcome, but several practical strategies exist to aid health care workers and patients alike.

Introduction

For health care professionals, whether doctor or nurse (and regardless of specialty), there are few things harder than not intervening when a patient suffers a cardiac arrest. In the perioperative setting, anaesthesiologists and surgeons often feel compelled to do everything possible. Reasons cited include a desire to save the patient, the extensive resuscitation training they possess, the resources invested in the planned surgery, concerns that the surgical insult or

anaesthetic administration may have precipitated the cardiovascular collapse, and even pressure to keep the operating room (OR) slate on track [1,2]. It is therefore little wonder that perioperative care providers may have substantial difficulty with do-not-resuscitate (DNR) orders. However, as many as 15% of patients with DNR orders will undergo surgery, whether provoked by their underlying terminal disease or for unrelated reasons [2]. Surgery often occurs to offer additional time, comfort, or quality of life. Examples include repair of pathological fractures, insertion of tracheostomy or gastrostomy tubes, bowel resections for obstruction, or vascular access surgery. Therefore, this topic is relevant to all those who are involved in their care.

This review considers the origins of the DNR order as it relates to anaesthesia and critical care practice. We examine the state of current opinion regarding the treatment of patients presenting for surgery with pre-existing DNR orders. As will become evident, whether closed chest cardiac massage or electrical countershock is performed constitutes only a small part of the necessary dialogue.

The history of cardiopulmonary resuscitation

Originally described in 1960 for witnessed intraoperative arrests [3], closed chest cardiac massage was subsequently applied to any patient experiencing cardiopulmonary arrest [4]. In short, dying in hospital meant having had CPR attempted. Poor survival statistics reflected its indiscriminate application. Furthermore, ‘resistance’ grew but was often secretive. The literature suggests that where resuscitation was believed to be futile or nonbeneficial, hospital staff conducted sham resuscitation attempts (‘slow codes’) or did not activate the ‘code team’ at all. Some institutions even developed secretive means of identifying those who would not qualify for a full resuscitative effort [4,5]. Concerns were raised regarding inadequate documentation, physician

accountability, and the fact that patients and their families were often excluded from the decision making process. Accusations of paternalism and covert decision making were made, and concerns were raised regarding an erosion of trust between health care workers and the public [4].

It was not until the mid-1970s that decisions not to resuscitate were first legalized. In the USA the American Medical Association first recommended that decisions to forego resuscitation be formally documented and communicated [6]. Furthermore, it was emphasized that CPR was intended for the prevention of a sudden, unexpected death – not the treatment of a terminal, irreversible illness [6]. Explicit DNR policies soon followed, and patients' right to self-determination was promoted. At the root of the debate, it was categorically assumed that the patient would always prefer resuscitation, and that anything to the contrary required their explicit consent. Critics have questioned such an approach and have argued that CPR was never intended (nor is it efficacious) in all situations [4]. Therefore, CPR should only be offered to those for whom it is medically indicated. However, the 1983 report of the President's Commission for the Study of Ethical Problems in Medicine disagreed; a resuscitation attempt was favoured in nearly all instances, and patients were presumed to have given implicit consent for CPR [4]. As such, CPR became the standard of care, and all patients were 'full code' unless clearly documented otherwise. CPR became the only medical therapy that required a physician's order for it to be withheld, hence the DNR order [7]. DNR orders have subsequently taken some time to gain widespread acceptance in all hospital environments. As is outlined below, the OR was one such environment [1].

The situation prior to the 1990s

Before the 1990s, formal policies to accommodate the perioperative patient with a DNR order were rare. Consequently, decisions were typically left to the attending surgeon and/or anaesthesiologist, and DNR orders were routinely suspended during the intraoperative and immediate post-operative periods [8,9]. In 1991, several articles criticized this widespread practice [5,8,9]. In effect, concerns were raised that patients were forced to compromise their autonomy and right to self-determination in order to qualify for surgery. This led to a policy of 'required reconsideration', and three distinct courses of action were identified. The American Society of Anesthesiologists formalized this policy in a set of guidelines approved in 1993 and updated in 1998 [10].

The policy of required reconsideration

Following discussions with the patient or his/her surrogate, the DNR order could be formally rescinded with the patient's informed consent; it could be left in place, specifying an outline of the patient's goals and objectives; or it could be left in place, detailing an exhaustive list of the procedures and

interventions that the patient would permit. A detailed discussion of these approaches may be obtained in the articles by Waisel and Truog [1,7]. However, what must be emphasized is that, although the policy of required reconsideration is well founded, its application necessitates closer examination of the OR environment.

Challenges of adhering to an intraoperative do-not-resuscitate order

The reasons for reluctance to adhere to a pre-existing DNR order during the perioperative period may be divided into two main categories: concerns regarding the DNR order itself and difficulties related to the nature of the OR environment.

With regard to the DNR order, anaesthesiologists may be appropriately sceptical of what they read in the patient's chart; after all, up until that time, they probably know little about the patient. In addition, the surgeon may not be the patient's primary physician. Although this argues strongly for the need to visit such patients preoperatively, it should be appreciated that anaesthesiologists are accustomed to adjusting preoperative orders in order to optimize patients for surgery. Furthermore, the rationale for and events leading up to the writing of the DNR order will be questioned. When was the order last updated? Why was it written? With whom was it discussed? By whom was it written? Was accurate prognostic information provided to the patient? Did the patient actually possess an illness commonly regarded as terminal? To what extent did the clinician influence the eventual decision? This final question is especially pertinent, given the disparity in opinions among physicians regarding the prognosis of various conditions [4,11]. In this regard, surgeons and anaesthesiologists are no different from any other physician taking over the care of a new patient; they will err on the side of treating aggressively unless certain that they should do otherwise. Moreover, there are significant discrepancies between physician estimates of and patient self-reporting regarding resuscitation preferences [12]. Advanced directives are also problematic; they are often out of date, and either overly restrictive (i.e. 'no life support') or vague ('treat me aggressively unless my disease is irreversible') so as to make specific decision making difficult. It is impossible for advanced directives to address adequately the myriad of clinical situations that may be encountered in the operative setting. This includes not only chest compressions or electrical countershock, but also what would constitute excessive vasopressor dosing or an inappropriate duration for resuscitation. Add to this a non-communicative patient, the absence of a surrogate decision maker to provide verification, and evidence suggesting poor patient-surrogate congruence [13,14] and the physician may be placed in a very difficult position. Legally, where documentation is unclear (or the physician is unable to authenticate it), US statutes have dictated that life-sustaining treatment must be continued [4]. Practically, it is hardly surprising that OR staff tend to favour aggressive intervention.

The second factor that hinders intraoperative observance of the DNR order is the nature of the OR environment itself. Many consider intraoperative maintenance of cardiorespiratory stability central to the function of an anaesthesiologist. Rather than constituting extraordinary intervention, 'resuscitation' is what the anaesthesiologist does, and why he or she is present! Although vasopressor administration may represent unusual treatment outside the OR, it is commonplace in a surgical suite. Many may draw the line at chest compressions or electrical countershock, but it is easy to see how the boundaries may become blurred. To some, the very fact that an individual is 'approved' for surgery implies that he or she is expected to survive. In addition, all intraoperative arrests should be witnessed, and therefore survival rates should be higher [15]. As a result it can be argued that these arrests differ greatly from the typical unwitnessed arrest, and therefore so should the philosophy of care. For all of these reasons, asking a surgeon or anaesthesiologist not to intervene is asking for a fundamental change in mindset.

Death in the operating room

What is rarely highlighted are the everyday stressors placed upon those in the OR setting. Should a patient deteriorate, there is typically no time for family discussion, let alone consultation with other health care providers (including, for example, clinical ethicists). Should the patient ultimately die, then the OR may be out of service for hours. Many other procedures may be subsequently postponed or cancelled. All in all, the OR is a poor environment for end-of-life care; there is no provision for family visitation, or administration of religious rites, or lengthy debriefing of the OR staff. It may seem aggravating to critical care staff to assume the care of a post-arrest patient rushed from the OR, especially with very little chance of survival. However, it requires a pragmatic understanding of the alternative – a death in the intensive care unit may at least offer respite to the family and dignity to the patient.

Philosophically, there may also be an important difference between the perception of a ward death versus that of an OR death. As one author put it [16], "when the patient of an internist dies, the natural question his colleagues ask is, 'what happened?' When the patient of a Surgeon dies, his colleagues ask, 'what did you do?'" Surgical acts of commission (versus medical acts of omission) increase not only the likelihood of feelings of guilt, but they may also have legal ramifications. In order to combat this phenomenon, such deaths should be classified as 'expected' (versus 'unexpected'), and any subsequent morbidity and mortality review should examine the appropriateness of the patient's refusal of aggressive treatment, whether documentation was adequate, and whether care was consistent with the patient's expressed wishes [5]. Just because a patient dies does not mean that blame must automatically be apportioned. Unfortunately, institutional policies have been slow to reflect this [2,17].

Practical strategies

It is important that all such patients be seen by the anaesthesiologist and/or surgeon preoperatively. Pre-emptive multidisciplinary discussion is recommended and should include the patient and/or patient's representative surrogate, the anaesthesiologist, the surgeon, and the intensivist who may be called upon postoperatively [7]. Multidisciplinary discussions allow time to address the complex ethical and practical issues. If the DNR order is subsequently rescinded (as is often the case), then the time period and circumstances under which it is to be re-enacted should be specified [5]. Patient preferences for specific interventions such as chest compressions and electrical countershock should be explored. Such frank and open discussions promote a sense of trust between the patient, the physician and the health care team at large. Furthermore, 'autonomous medical choices are usually enhanced rather than undermined by the input and support of a well-informed physician' [18]. Consideration should be given to early ethics consultation [19], and documentation should always be rigorous. The specifics should ultimately be reviewed with the entire OR team to ensure that everyone understands the underlying philosophy of care. In nonemergent circumstances, dissenting staff may ethically decline to participate, providing that alternative providers may be found [5]. In the case of a patient with an illness not commonly regarded as terminal, securing staff compliance may be even more difficult. However, given competent and informed refusal of care, patient autonomy must be respected. A patient should not be refused appropriate operative management simply because the surgical team is uncomfortable with their wish not to receive full CPR. Of note, this is why many patients are hesitant to establish DNR orders in the first place; patients and their families often feel that they will be regarded and treated differently [12]. Perhaps Prendergast and Puntillo [20] put it best: 'A major goal in conversations with patients is to reassure them that they will be treated as aggressively as is consistent with their wishes, but that their physicians' goal is to understand those wishes should curative efforts fail.'

Conclusion

CPR has the potential to reverse premature death. Sadly, it also has the potential to prolong inevitable death, to cause discomfort, to increase emotional distress and to consume enormous resources. Despite the ardent desire to sustain life, medical professionals can withstand the temptation to intervene when they are faced with the patient who wishes not to be resuscitated. Rather than perceiving that they are doing nothing, something has indeed been done; the wishes of the patient have been respected, their autonomy has been preserved and they have been allowed to die with dignity. Complying with these wishes represents one of the greatest challenges that we as physicians must face.

Competing interests

The authors declare that they have no competing interests.

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