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ESSAY/PERSONAL REFLECTIONS

The "do-not-resuscitate" order in palliative surgery: Ethical issues and a review on policy in Hong Kong

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ABSTRACT

A do-not-resuscitate (DNR) order, or "advance directive," is commonly seen in the cases of palliative patients who express a wish to withhold specific resuscitative therapies in the event of a cardiac arrest. With recent technological advances, there are increasing numbers of palliative patients who undergo surgical interventions to treat their symptoms and discomfort. The decision to suspend DNR orders for palliative surgery is always a matter for debate. The present article describes a case and the ethical issues involved and gives some practical suggestions for those facing similar problems. We also review the latest DNR policy in Hong Kong.

KEYWORDS: Cardiopulmonary resuscitation, Palliative care, Surgery, Anesthesiology, Do not resuscitate, Ethics

INTRODUCTION

A do-not-resuscitate (DNR) order is commonly issued by palliative patients who wish certain specific resuscitative therapies be withheld in the event of a cardiac arrest. With recent technological advances, more and more terminally ill patients undergo palliative surgical interventions (e.g., spinal surgery for cord compression, bypass surgery for intestinal obstruction, stent insertion for malignant dysphagia/gastric outlet obstruction). These procedures carry with them surgical and anesthesiological risks. A most perplexing issue arises when a palliative care patient presents to the operating room with an already-existing DNR order. The present article describes a case and the ethical issues involved and gives some practical suggestions for those facing similar problems.

CASE: MR. A

Mr. A, a 64-year-old man, was diagnosed with renal cell carcinoma with multiple lung and bone metastases who had a follow-up in our palliative clinic. He complained of increased right hip pain. X-ray revealed a large osteolytic lesion over the right femoral neck in August of 2013. He was admitted to our oncology ward, and I was designated his primary physician. An orthopedic surgeon was consulted, who offered open reduction and internal fixation to relieve pain and improve mobility. The patient wished to have the operation to maintain his mobility in order to attend his daughter's wedding in December. However, he was adamant that he did not want cardiopulmonary resuscitation (CPR) or intubation in case of cardiac arrest during the operation.

Mr. A's wife and daughter fully supported this decision. They both understood the reasons why he did not want CPR: they had had a terrible experience with the patient's brother a few years earlier, who sustained multiple bruises all over his chest and mouth following resuscitation for cardiac arrest on the medical ward and finally passed away within a couple of days.

The surgeon and anesthesiologist felt difficult about his refusal of resuscitation and intubation and thought that the DNR order should be suspended during the peri-operative period. They believed it was the anesthesiologist's responsibility to monitor

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the patient's vital signs and maintain his cardiorespiratory stability during the operation. They also feared the need to abide by the DNR order if the cause of the arrest was iatrogenic (e.g. due to anesthsia or surgical complications).

The purpose of palliative care is to improve the quality of life of patients and their families facing the problems associated with life-threatening illness. Being the physician-in-charge, I was required to respect the patient's autonomy and freedom of choice. It is essential to have open and sensitive communication among the patient, his family members, the orthopedic surgeon, and the anesthesiologist.

ETHICAL ISSUES INVOLVED IN THIS CASE

Autonomy

Autonomy is a concept related to respect. Healthcare professionals are required to respect patients' values and to inform and involve them in decision making. Mr. A wished to have the hip operation in order to attend his daughter's wedding. The operation called for general anesthesia and required him to be intubated. On one hand, he wanted to have a good quality of life and expected to survive after the procedure. On the other hand, he forbade resuscitation during the operation in the case of cardiac arrest. It sounds contradictory. However, in case of arrest, it would violate the patient's autonomy if one were to intervene and resuscitate when he was under anesthesia.

Beneficence

Beneficence (to do good) implies that one should always do their best for their patients. Offering open reduction and internal fixation of an impending right femur would relieve pain and improve a patient's mobility. In the case of perioperative cardiac arrest, ignoring a DNR order might seem to be beneficial for the patient. An anesthesiologist could be in control of the patient's vitals and correct for complications caused by either surgical or anesthesia interventions. In fact, the survival rate for intraoperative cardiac arrest is relatively high (~50%) compared to that of extra-operative cardiac arrest (10–30%) (Brindley et al, 2002; Sprung et al., 2003).

Non-Malfeasance

Non-malfeasance (to do no harm) means that the healthcare professional should not do anything that might harm their patients. There are potential risks and burdens associated with the performance of CPR. For Mr. A, it is irrelevant if the cardiac arrest was iatrogenic or not. Most important to him were the sequelae of CPR, including physical and mental status post-arrest, any trauma to his body, and the need to be cared for in ICU, which was a strange environment, and be hooked up to life-sustaining technology. Although resuscitation could reverse a premature death, it could also prolong terminal illness and suffering and increase a family's anxiety. Many patients may develop neurological complications after resuscitation (so-called "post-resuscitation syndrome"). This is a condition caused by unstable vascular tone, cerebral edema, calcium fluxes, and the like. At the bedside, it can be manifested by difficult-to-control convulsions, generalized myoclonus, persistent coma, or brainstem dysfunction. Moreover, the majority of the CPR survivors suffer from long-term neurological impairment. An international study conducted in 20 hospitals across 8 nations reported only 23% with good neurological recovery, while 9% awakened without a good neurological recovery, and 66% never regained consciousness among the 6-month survivors of CPR (Abramson, 1985).

Justice

Justice implies fairness. This means to treat patients fairly and balance the needs of individuals with those of society. It is a standard practice to have surgery in a case like Mr. A's, no matter whether or not he had a DNR order. We should not preclude a patient from an operation that would improve his mobility and pain control.

The main ethical issue in our case was to balance the patient's autonomy and the potential benefit of CPR in the case of perioperative cardiac arrest. Patients presenting for palliative surgery should not be, as described by Robert Walker, forced to weigh the benefits of surgery against the risks of unwanted resuscitation (Walker, 1991). According to the U.S. Patient Self-Determination Act of 1990 (effective December of 1991), a patient's right to self-determination is the gold standard for medical ethics, taking precedence over benefit (Panetta, 1990). Several articles in the literature have pointed out that routine suspension of perioperative DNR violates a patient's right to self-determination (Cohen & Cohen, 1991; Walker, 1991). The Hospital Authority of Hong Kong updated the guidelines for its "do-not-resuscitate" policy in June of 2014 (Liu, 2008; HAHO Operations Circular, 2002; HAHO Operations Circular no. 9, 2014). Instead of using the old term "do-not-resuscitate," the more descriptive "do not attempt cardiopulmonary resuscitation" (DNACPR) was used. This term emphasizes that the decision is strictly limited to initiation of CPR in the case of

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cardiopulmonary arrest and does not imply that the patient would or would not be receiving other life-sustaining treatments. So for Mr. A, it would be unethical and inappropriate to withhold the surgery because of the presence of his DNR order.

I held a multidisciplinary meeting together with Mr. A, his relatives, the orthopedic surgeon, and the anesthesiologist before the operation. We explained the goals of the surgery and discussed the procedures of the operation and the accompanying sedation. Mr. A was informed that the procedures involved with sedation constituted integral aspects of anesthetic management (e.g., intubation, mechanical ventilation, and administration of vasopressin drugs). General anesthesia requires intubation in our hospital. Mr. A and his relatives understood well the potential life-threatening problems involved during the perioperative period. They agreed on intubation and the use of vasopressin during the procedure but refused any chest compression or defibrillation in case of cardiac arrest. We documented the discussion in the medical record and informed other staff involved in the operating room. Finally, Mr. A had the fixation of his right hip uneventfully and is now having rehabilitation training.

It is obvious that detailed and frank communication among the patient, his family, and the medical staff (surgeon, anesthesiologist, and primary medical team) is essential when dealing with patients who have a DNR order and need a palliative surgery. The American Society of Anesthesiologists (ASA), the American College of Surgeons (ACS), and the Association of Perioperative Registered Nurses (AORN) have all published guidelines emphasizing how essential and necessary it is to have good communication among the involved parties and to have precise documentation of the relevant aspects of that communication (American Society of Anesthesiologists, 1993; American College of Surgeons, 1994; American Association of Perioperative Nurses, 2014). When reviewing advance directives/DNR orders with patients, the status of these directives should be clarified and modified based on patient preference. The details of the operation and anesthetic procedures (e.g., intubation, use of vasopressin, chest compression) have to be clearly explained. In many cases, a satisfactory outcome can be achieved with one of the three following alternatives:

1. A full attempt at resuscitation
2. A limited attempt at resuscitation defined with regard to specific procedures. (This is similar to Mr. A's case. He agreed on intubation and the use of vasopressin but refused chest compression).
3. A limited attempt at resuscitation defined with regard to the patient's goals and values. (This means that the patient or designated surrogate allows the anesthesiologist and surgical team to use their clinical judgment in determining which resuscitation procedures are appropriate in the context of the situation and the patient's stated goals and values.

When conflicts arise, consulting another surgical or anesthesiology team for another opinion or alternative management may be helpful. If necessary, asking for help from the medical ethics team at the hospital may help to resolve conflicts (Scott & Gavrin, 2012; Ewanchuk, 2006).

In Hong Kong, there are no particular guidelines on perioperative procedures for patients with a DNR order. There are also no particular laws or regulations concerning DNR/CPR or care for the terminally ill. Indeed, DNR is treated as a medical decision in Hong Kong, that is, the physician can decide based on the best interests of the patient. This is similar to the situation in other Asian countries like Japan (Santonocito et al., 2013; Masuda et al., 2001). Nevertheless, the Code of Professional Conduct of the Medical Council of Hong Kong (2009) stipulates care for the terminally ill in §J34:

- Where death is imminent, it is the doctor's responsibility to take care that a patient dies with dignity and with as little suffering as possible. A terminally ill patient's right to adequate symptom control should be respected. This includes problems related to physical, emotional, social, and spiritual aspects.
- Doctors should exercise careful clinical judgment, and whenever there is disagreement between doctor and patient or between doctor and relatives, the matter should be referred to the ethics committee of the hospital for advice. In case of further doubt, direction from Court may be sought, as necessary.

In addition, there are recommendations and guidelines issued by the Hospital Authority concerning discussion of DNR orders (Hospital Authority, 2010):

- Although a request for DNR is a medical decision, it is always desirable to involve patients and family members in discussions and to be sensitive to their feelings and reactions.

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- DNR refers to no CPR only and does not mean "no active care." Other symptom control or comfort measures should be offered or continued to enhance quality of dying.
- Interventions should be assessed with a balance in terms of risks and rewards for the individual patient. Interventions should be separately discussed with respect to the DNR order, as each may carry different purposes
- The DNR order requires constant review and updating.

Because of the traditional culture, most Hong Kong patients would follow what their doctors say, and the medical system tends to treat patients in a paternalistic manner. Due to busy operating room schedules and the little time available to discuss the complex concerns about surgery and anesthesia, many doctors tend to directly ask patients to suspend the DNR order during the perioperative period. Some of our doctors even purposely do not sign the DNR order to prevent surgical teams from refusing to operate.

In Mr. A's case, we learned that good communication among the patient, family members, and the other parties, including the surgeon and anesthesiologist, is of utmost importance. Whenever time permits, a detailed and open discussion should include everyone important to the patient's care from the preoperative to the postoperative periods. As palliative specialists, we should take the initiative to connect different parties to obtain a consensus that would most benefit the patient while not just ignoring the DNR order. Future guidelines should be established that especially focus on palliative surgery in Hong Kong, which could be applied at such institutions as the Hong Kong Society of Surgery and the Hong Kong College of Anesthesiology.

In conclusion, a DNR order is simply a decision not to initiate CPR. It does not imply withholding or withdrawing all other treatments or interventions. In a palliative operation (e.g., repair of a pathological fracture, bypass surgery for intestinal obstruction, insertion of tracheostomy or gastrostomy tubes), there are many therapeutic actions employed during resuscitation that are also integral to anesthetic management. It is necessary for the patient and their families to be thoroughly informed, and for the surgeon/anesthesiologist to be involved in detailed discussions and fully aware of the patient's goals and values before operating.

CONFLICTS OF INTEREST

The author states that he has no conflicts of interest to declare.

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