Biomedical Ethics and Nutrition Support

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Abstract

Many principles of biomedical ethics are inherent in the provision of artificial nutrition and hydration (ANH). The nutrition support registered dietitian (RD) is uniquely qualified to combine his or her knowledge of biomedical ethics and evidence-based medical nutrition therapy guidelines to promote improved patient outcomes. Increasing one's knowledge and comfort level with ethical issues in health care can expand the nutrition support dietitian's role as a vital member of a multidisciplinary health-care team.

Introduction

The emotional and ethical considerations of not recommending or removing ANH are complex, but RDs are the experts on the nutritional implications of what and how to eat and are often feeding and nutrition support. This article integrates principles of biomedical ethics through a case study. Many definitions of biomedical ethics exist. Bauchamp and Childress state that “ethics is a generic term for various ways of understanding and examining moral life” (1). Alternatively, Jonsen and associates argue that “clinical ethics is a practical discipline that provides a structured approach to assist physicians [health-care providers] in identifying, analyzing, and resolving ethical issues in clinical medicine” (2). For key terms and Internet resources regarding medical ethics, refer to Tables 1 and 2. We ask readers to question the assumptions and send questions/comments to the DNS Web site at www.dnsdp.org to continue the dialogue and debate on this important aspect of our profession.

Case Study

S.T. is a 43-year-old female admitted to the medical intensive care unit with sepsis, shock, and multisystem organ dysfunction due to *Staphylococcus aureus* infection. She is intubated and receiving mechanical ventilation. She also presents with acute renal failure, elevated liver enzyme concentrations, and a troponin leak. The medical team is planning to initiate continuous venous hemodialfiltration (CVVHDF) for continuous renal replacement therapy.

S.T. had been relatively healthy prior to this admission; the only significant aspect of her past medical history is hypertension that has been successfully treated with hydrochlorothiazide. She lives in an urban area and works as a mechanical engineer. She has been with her partner, A.T., for 12 years, and they have two children together, ages 9 and 6. S.T. is an only child. Her mother is deceased; her father is living in a small town 1 hour away. S.T. has never completed an advance directive for health care or appointed a health-care power of attorney.

Questions

1. Who should sign the consent for the central line placement, allowing the medical team to initiate CVVHDF?
2. Would this decision be made differently depending on the state in which S.T. lives?
3. What are the implications of S.T.’s critical illness and the ethical issues surrounding her condition?

Discussion

1. 2. Assuming a patient has not completed an advance directive or appointed a health-care power of attorney, most state statutes give priority to the spouse as the surrogate decision maker. However, some states place priority on physician and next of kin, consensus of interested persons, equal status among spouse and parents, or no priority stated (3). In the case of S.T., it is most likely that her father would be given priority as her surrogate decision maker because she did not complete an advance directive or appoint her partner as her surrogate decision maker prior to her critical illness. Although S.T.’s father may be the person recognized for providing consent for medical procedures, most medical teams would recognize the role that S.T.’s partner plays in her life and make every effort to gain consensus between S.T.’s father and A.T.

2. S.T. is critically/acute ill rather than in a persistent vegetative

Table 1. Terms and Definitions in Biomedical Ethics (1–6)

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<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Advance Directive</td>
<td>A legal document that outlines the health care a person would like to receive if unable to make medical decisions for him- or herself.</td>
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<td>Autonomy</td>
<td>Rational individuals should be permitted to be self-determining.</td>
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<td>Beneficence</td>
<td>Act in ways that promote the welfare of other people.</td>
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<td>Futility</td>
<td>Medical care that is ineffective or incapable of achieving a desired result despite heroic efforts.</td>
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<td>Health-care Power of Attorney</td>
<td>A person appointed to make health-care treatment decisions on behalf of the person who made this appointment if he or she does not have decision-making capacity.</td>
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<td>Justice</td>
<td>As far as possible, treat similar cases in similar ways.</td>
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<td>Nonmaleficence</td>
<td>“Above all, do no harm.” Act in ways that do not cause needless harm or injury.</td>
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<tr>
<td>Surrogate Decision-maker</td>
<td>A spouse, parent, other relative, friend, power of attorney, or other involved person who makes medical decisions for a patient if he or she lacks decision-making capacity or is unable to express his or her wishes.</td>
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state (PVS). The advance directive of the patient as well as the determination of whether the patient has permanent brain damage (e.g., PVS) that limits decision-making capacity or has decision-making capacity but is terminally ill is an important distinction. The American Dietetic Association (ADA) position paper on ethical and legal issues in nutrition, hydration, and feeding (4) is an excellent guide to assess clinical situations involving principles of biomedical ethics. Often, advance directives are used for patients with severe neurologic conditions or who are terminally ill. They may not be used during many acute illnesses.

On hospital day 2, a consultation is requested to assess the patient for nutrition support. At this point, the medical team is unsure whether S.T. can tolerate enteral feedings, but they would like to avoid total parenteral nutrition (TPN) if possible.

Anthropometric measurements include:
- Height: 5 ft 7 in
- Admission weight: 151.5 lb (68.2 kg)
- Desirable body weight: 136.5 lb (61.4 kg)
- Current weight: 165 lb (74.3 kg)
- Body Mass Index (based on admission weight): 23.6

S.T. is receiving intravenous fluids of DSNS at 50 mL/h. A nasogastric tube has been placed for intermittent suction of gastric contents. No bowel sounds are present, and no bowel movements have occurred. Anuria is present. Key medications at this time include: ceftriaxone, gentamicin, nafcillin, clindamycin, calcium chloride, hydrocortisone, pantoprazole, lorazepam, fentanyl, norepinephrine, and vasopressin.

Laboratory results include:
- Sodium: 142 mEq/L
- Potassium: 4.3 mEq/L
- Chloride: 115 mEq/L
- Carbon dioxide: 19 mEq/L
- Blood urea nitrogen: 43 mg/dL
- Creatine: 1.9 mg/dL
- Glucose: 93 mg/dL
- Calcium: 6.0 mg/dL
- Ionized calcium: 3.84 mg/dL
- Phosphorus: 3.7 mmol/L
- Albumin: 1.5 g/dL
- Total bilirubin: 13.4 mg/dL
- Alkaline phosphate: 136 U/L
- Aspartate aminotransferase: 739 U/L
- Magnesium 1.4 mmol/L
- Blood glucose finger sticks: 92 to 123 mg/dL

Questions
1. During S.T.’s initial nutrition assessment, A.T. asks, “What is the best way to feed S.T. so she gets what she needs without making her any sicker?”
2. What principles of biomedical ethics are inherent to A.T.’s question?
3. Do you feel comfortable discussing your nutrition support recommendations with A.T. without her physician present?

Discussion
1. Some controversy still surrounds clinical indications for providing enteral nutrition support among patients requiring vasopressor/ inotropic medications (7–10), but it is well recognized that enteral nutrition may result in more favorable patient outcomes (e.g., reduced risk of infection) compared with parenteral nutrition (11). Starting TPN is prudent until fluid resuscitation is achieved, the patient is stable on vasopressor agents with a mean arterial blood pressure 70 mm Hg, and a jejunal feeding tube is placed (7). Careful initiation and monitoring of enteral feeding tolerance and a period of combined enteral feeding and TPN may be necessary until S.T. can safely tolerate goal rate enteral feedings.
2. A.T.’s question addresses the biomedical principles of nonmaleficence, the ethical principle of doing no harm, based on the Hippocratic maxim, primum non nocere; “first do no harm,” and beneficence, the ethical principle of doing good (4,5). The medical team is called upon to act in ways that promote the health and welfare of S.T. while avoiding unnecessary risks that could worsen her tenuous medical condition. In general, feeding once a patient is medically stable is better than not feeding. Religious and cultural issues may influence when to start feeding as well as implications for discontinuing feeding, but there is no ethical difference between starting, not starting, or discontinuing ANH.
3. Nutrition support dietitians routinely develop nutrition care plans for critically ill patients and make appropriate recommendations to the treating physicians. As a member of the health-care team, the nutrition support dietitian should be in close communication with team members to ensure that patients, family, and friends hear a consistent message. Although the dietitian is the nutrition expert on the health-care team, not all RDs feel comfortable discussing nutrition support options with patients or their surrogate decision makers. A survey of RDs in Louisiana found that of the 478

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Questions
1. What actions should the medical team take to develop a care plan that is ethically appropriate?
2. Should the medical team attempt to lighten S.T.'s sedation and evaluate whether she can participate on any level during discussions about her plan of care?
3. How can the medical team members adhere to their values of beneficence and nonmaleficence while honoring a patient's (or surrogate decision maker's) value of autonomy?

Discussion
1. If the medical team has not already done so, they may choose to involve the hospital's biomedical ethics committee or consultant. Typically, biomedical ethics committees or consultants function on a consult basis to facilitate discussion among patients/surrogate decision makers, interested friends and family, and members of the health-care team to analyze the critical issues and outline a range of ethically appropriate options for ongoing care (4, 5, 13). A sample ethical deliberative process is shown in Table 3. This 13-step process begins with clarifying the moral question, which in the case of S.T. might be, “Is ongoing, aggressive medical care, including major surgery, ethically appropriate given her grave prognosis?” In a complex case such as this one, more than one moral question probably will be present. After phrasing the key questions, the ethical deliberative process proceeds through steps that include re-creating the context, naming the stakeholders, identifying the stakeholders' ways of ethical thinking, identifying practical limits, balancing the patient's known beliefs with the best interests of the patient, searching for possible options, and justifying options for recommendations (4). Use of this process should aid in reaching an acceptable consensus among S.T.'s father, A.T., and the health-care team.

2. The first question is whether the patient can adequately address the issue if appropriate sedation is withheld. Some critically ill patients can express their wishes for ongoing medical care to their physicians (14), but this possibility is less likely for most patients in this population. Tonelli (15) has analyzed the ethical question “Must we always attempt to involve critically ill patients in end-of-life decisions?” The physician should remove sedation and/or analgesia for most critically ill patients to attempt participation in a discussion about their care plans. Tonelli argues that this question goes beyond the apparently conflicting ethical principles of autonomy, beneficence, and nonmaleficence. Rather, he outlines three criteria that if met, may make it allowable to withdraw supportive care from a patient without attempting to involve him or her in the decision process. Proposed criteria include: 1) cessation or lightening of sedation and/or analgesia will produce significant physical and/or emotional discomfort for the patient; 2) prognosis for survival and/or quality of life is very poor; and 3) surrogate/family members are in agreement that the patient would not wish for continued support under such circumstances or clear, unambiguous written directives express patient preferences. S.T.'s case meets the first and second criteria, but the third is more challenging if the medical team and/or biomedical ethics committee/consultants cannot gain consensus between S.T.'s father and A.T. Although S.T.'s father is the recognized surrogate decision maker, an ideal outcome recognizes the role A.T. plays as S.T.'s partner of 12 years and co-parent of her children.

3. Autonomy and patient self-determination is a highly valued ethical principle in the United States (4, 5, 13-17). However, valuing autonomy at the expense of causing physical and emotional pain to a critically ill patient is equally unethical, as illustrated by Tonelli (15). It is not easy to balance competing ethical principles, and any such balance can be tenuous. Ethical issues arising in the care of critically ill patients often are multifaceted, and appropriate clinical decision making may appear ambiguous at times. However, maintaining open dialogue between the health-care team and the patient/surrogate decision maker throughout a patient's medical course...
Table 3. Suggested Ethical Deliberative Process

1. Clarify the moral question — the first statement of the moral problem

2. Re-create the context
   a. Gather data
   b. Relevant facts
   c. Relevant values

3. Name stakeholders and their relationships

4. Identify ways of ethical thinking used by the stakeholders
   a. Rules thinking: ethics is about doing what is right by following the rules
   b. Roles thinking: ethics is about being true to yourself and following your sense of virtue
   c. Goals thinking: ethics is about producing good outcomes regardless of the rules and virtues

5. Determine practical limits to the situation: policies, laws, standards, and codes

6. Center on balancing the patient's known beliefs and preferences with the best interests of the patient

7. Respect advance directives

8. Assume the patient has decisional capacity

9. If decisional capacity is in question, determine decisional incapacity and select substitute decision maker if necessary

10. Restate the ethical problem

11. Search for possible options

12. Test the various options
   a. Check through each option for:
      (1) Rules: Is it right?
      (2) Roles: Can I feel good about this?
      (3) Goals: What good will it do?
   b. Keep asking: What is the fitting response?

13. Justify the option selected for recommendation
   a. Keep the patient's best interest at the center of options
   b. Always provide a description of what will likely happen if this decision is made
   c. Provide a clear action plan for each option recommended, i.e., suggestions of practical pathways

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Conclusion

The issues involving biomedical ethics, nutrition support, and the role of the RD are well-addressed in the ADA position paper on ethical and legal issues in nutrition, hydration, and feeding (4). This paper is a valuable resource for nutrition support dietitians who may feel conflicted about the ethical and pragmatic issues of nutrition support for critically ill, terminally ill, or severely neurologically impaired patients.

Legal cases addressing the intensive care patient and provision of ANH are limited. Most deal with persistently unconscious patients or dementia patients. The common rule of thumb has been to follow the patient's wishes, but often such wishes are not known by friends, family, or the health-care team. The best solution frequently is a joint decision reached by the multidisciplinary medical team, the patient (if possible), and family or friends. The principle of intent is important. Because the United States Supreme Court ruled in Cruzan that ANH is a medical treatment that can be accepted, refused, or discontinued (4), the medical team always must keep in mind the intended purpose of providing ANH to patients.

If feeding can extend quality of life, it should be used. If feeding cannot achieve this goal, it may be regarded as futile care, depending on the beliefs of the patient/family. The issue for the nutrition support dietitian is knowing the difference. When there is hope of medical recovery, nutrition should not be an issue; it is a basic component of medical treatment. For the acutely ill patient in whom there is a potential for meaningful recovery, nutrition must be a component of the treatment plan, and it is the nutrition support dietitian's responsibility to promote this aspect of care. Conversely, if survival is unlikely, instituting nutrition support is neither advisable nor helpful to the patient. As part of the multidisciplinary care team, we must combine our knowledge of biomedical ethics with evidence-based clinical guidelines to support the best possible care for our patients.

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The Nutrition Care Process and Standardized Language of Dietetics: Implications for the Nutrition Support Dietitian

Pam Charney, MS, RD, CNSD

Abstract

The American Dietetic Association (ADA) formally adopted the Nutrition Care Process (NCP) as a framework for dietetics professionals to use in critical thinking when providing nutrition care. The NCP is a four-step process that includes nutrition assessment, nutrition diagnosis, nutrition intervention, and nutrition monitoring and evaluation. The NCP includes a standardized language of nutrition care, the Nutrition Care Process (NCP) as a framework for dietetics professionals to use in critical thinking when providing nutrition care. The NCP is a four-step process that includes nutrition assessment, nutrition diagnosis, nutrition intervention, and nutrition monitoring and evaluation. (CPT) terminologies, both of which are physician-focused. ADA's Board of Directors asked the Standardized Language/NCP Committee to develop a standardized language of dietetics for use by dietetics professionals in all care settings. The first version of the Standardized Language of Dietetics focuses on terms used to identify nutrition diagnoses that RDs are

Clinical information management systems evolved over the last 25 years of the 20th century, with the goal of facilitating information management and improving patient care. Optimal functioning of these systems requires adoption of agreed-upon terms and definitions. A standardized language (or standardized terminology) is a structured vocabulary in which terms accepted