Withdrawing Medically Futile Treatment

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Introduction

As our society ages, more individuals are faced with cancer diagnoses. Paralleling this general growth in the incidence of cancer, new and innovative therapeutic options continue to emerge. Some of these therapies offer hope to patients who previously may not have been candidates for aggressive treatment of their diseases and give patients more options for end-of-life care than ever before.

Against this medical backdrop, issues regarding patients' rights, autonomy, and medical ethics have gained increasing prominence. Many patients now approach clinical situations with an unprecedented level of sophistication and the expectation of exercising their autonomy more manifestly in clinical decision making. Although patient participation is beneficial, clinical and ethical dilemmas can arise when a patient stakes a claim to a therapy that the treating physician believes is futile. This vignette considers the factors physicians take into account when evaluating whether certain treatments are medically futile and should be withdrawn and the ethical obligations of physicians as they transition patients from futile treatment to supportive care.

Vignette

Mr Bridges (Mr B) is a 69-year-old professor of agriculture who presented to his primary care physician complaining of fatigue that left him unable to work or exercise. On physical exam, Mr B was pale and tachycardic. There was no evidence of ecchymoses, adenopathy, or hepatosplenomegaly, and no history of fevers, weight loss, night sweats, or bleeding problems. Laboratory exams revealed hemoglobin of 6.5 g/dL and red cell indices suggesting a normocytic, normochromic anemia. His WBC at presentation was $3.5/\mu\text{L}$, with an abnormal WBC differential that included only 23% neutrophils and 1% peripheral blood blasts. Bone marrow morphology was normocellular with 40% to 50% cellularity; there was no clear evidence of dyspoiesis and 24% myeloblasts on morphology and flow cytometry. Cytogenetics were normal male karyotype. On the basis of these data, Mr B was diagnosed with acute myelogenous leukemia (AML).

Mr B was given a transfusion of packed RBCs (PRBCs) and immediately felt better. Because he felt well enough to work and exercise, he opted for regular transfusions instead of chemotherapy. However, once his transfusion frequency increased to once per week, Mr B opted to receive induction chemotherapy on an investigational treatment protocol. Mr B's induction course was complicated by neutropenic fever, bacteremia, and renal insufficiency leading to a profound

decline in his performance status and a protracted hospital stay. His leukemia failed to go into remission. Post-treatment bone marrow biopsy showed a hypocellular marrow (20% cellularity) with 35% residual myeloblasts.

In consultation with Mr B and his wife, the decision was made to discharge him to the comfort of his home and manage his symptoms with best supportive care. Mr B identified lethargy, poor appetite, and frequent nose bleeds as his major symptoms and was intermittently treated with antibiotics, appetite stimulants, and transfusions of PRBCs and platelets. Mr B and his wife understood that he would ultimately develop more bone marrow failure symptoms and die from AML.

For 2 months, Mr B showed no signs of physical deterioration. However, he showed no sustained improvement in his hematocrit or platelet count with transfusions. His energy level and appetite did not improve, and he began to lose weight. He was frustrated and often asked, "Why can't I just go ahead and die of this disease?" However, when the attending physician recommended hospice care, Mr B was adamant that he did not want to stop coming to the clinic for transfusions because he enjoyed his social interactions with the nurses and other patients. The attending physician explained that additional transfusions would have no clinical benefit. Mr B and his wife disagreed and asked that the transfusions be continued even if the chance that they might help was small. Stating that such therapy was futile, the physician refused.

Discussion

The majority of patients diagnosed with acute leukemia are over age 60 years. More than half of patients diagnosed with AML are not offered treatment beyond supportive care, largely due to the perception that chemotherapy is not beneficial. That said, a recent review of more than 1,000 elderly patients with AML demonstrated a small survival advantage in older adults with AML who receive more aggressive treatment.¹ A separate study demonstrated that older adults with leukemia are often excluded from the potential benefits associated with either chemotherapy or hospice.²

Older adults with AML must often decide between intensive induction chemotherapy and supportive care treatments, but little peer-reviewed information exists about what impact these treatment choices have on quality of life. The main form of supportive care involves transfusion of blood

products that increase patient physical performance and stamina. Nevertheless, transfusion support is associated with some risks, including alloimmunization, iron overload, infectious disease transmission, and cardiovascular compromise because of volume challenges. Evidence has suggested that the survival of transfusion-dependent patients with myelodysplasia is inferior to that of their non-transfusion-dependent counterparts.³ In addition, the benefit of transfusions is transient, and they frequently necessitate travel inconveniences.

Transfusions can be viewed as palliative or as life sustaining. However, no one would argue that transfusions have any curative potential. From a broader perspective, blood components are a valuable and limited resource, and the overall economic impact of transfusion dependence can be significant.^{4,5} The use of such resources in situations where said therapy is deemed to have no chance at providing a therapeutic benefit remains controversial.

Claims that a treatment option is futile have serious clinical and ethical consequences. Medical professionals have no ethical obligation to provide futile treatments, and are ethically obligated to transition a patient to palliative care when other treatments have no reasonable chance of providing benefit.^{6,7} Providing medically futile treatment at a patient's insistence is a failure to uphold this professional ethic.

Attempts at defining futility have been fraught with confusion, controversy, and debate.⁷⁻⁹ In general, the term "futility" refers to an action that will fail and ought not to be attempted.⁷ Thresholds for futility vary considerably among physicians whose assessments may vary based on their understanding of patients' prognoses and their previous experiences. Investigators have noted that there can be considerable prognostic disagreement even in regard to critically ill patients.¹⁰ Some physicians may determine a therapy is futile if it offers only a 10% or 20% chance of benefit, whereas other physicians only invoke the term futile when they perceive a 0% chance of success.¹⁰

Futility considerations are further complicated by the fact that futility can only be judged in relation to a specific therapeutic goal. Patients and physicians may disagree regarding what end the therapy is (or should be) serving. Such decisions are based on quality-of-life assessments and decisions about end-of-life care, which call for open communication and close collaboration between patients and physicians.

Many physicians have expressed more difficulty with withdrawing therapy as compared with withholding it.¹¹ Specifically, some physicians feel morally responsible for a patient's death when they are actively involved in withdrawing care, when they would not feel responsible under other circumstances.^{12,13} Most ethicists, however,

believe that there is no ethical distinction between withdrawing and withholding a futile therapy. Whether a physician withdraws or withholds a futile therapy has the same ethical implications if the intent (relief of suffering, avoidance of unwarranted intrusions/procedures, and so on) and the end (dignified death) are the same. In fact, reliance on the distinction between withholding and withdrawing of care can lead to management that sustains futile or unbeneficial therapies and unnecessarily delays the transition to more appropriate end-of-life care.

To avoid these clinical and ethical dilemmas, physicians must cultivate ongoing communication with patients. Open conversation and explicit outlining of therapeutic plans and expectations are critical to avoiding misunderstanding and unrealistic expectations. If a physician believes a therapy is futile and no longer warranted, the physician has no ethical duty to administer that therapy. However, the physician is obligated to discuss the situation with the patient or his or her surrogate; the physician should outline the patient's various therapeutic options and prognosis, and delineate the reasons why the physician believes the therapy in question is futile. Physicians must also make it clear that patients who discontinue futile therapy will still have access to a wide range of supportive care options and physician resources. In general, the physician should engage the entire medical team and family in this discussion. When disagreement arises regarding whether a therapy is futile and should be withheld or withdrawn, the physician should seek a second opinion and, on occasion, transfer the patient to another physician who is willing to provide the requested therapy. Some states have laws that standardize procedures for transfer under some circumstances.⁹ When questions about futile treatments arise, physicians should avail themselves of institutional resources such as the ethics committee, legal counsel, and hospital administration.

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