

SHOULD ALCOHOLICS COMPETE EQUALLY FOR LIVER TRANSPLANTATION?

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[1] Until recently, liver transplantation for patients with alcohol-related end-stage liver disease (ARES LD) was not considered a treatment option. Most physicians in the transplant community did not recommend it because of initial poor results in this population and because of a predicted high recidivism rate that would preclude long-term survival. In 1988, however, Starzl and colleagues reported one-year survival rates for patients with ARES LD comparable to results in patients with other causes of end-stage liver disease (ESLD). Although the patients in the Pittsburgh series may represent a carefully selected population, the question is no longer, Can we perform transplants in patients with alcoholic liver disease and obtain acceptable results? But, Should we? This question is particularly timely since the Health Care Financing Administration (HCFA) has recommended that Medicare coverage for liver transplantation be offered to patients with alcoholic cirrhosis who are abstinent. The HCFA proposes that the same eligibility criteria be used for patients with ARES LD as are used for patients with other causes of ESLD, such as primary biliary cirrhosis and sclerosing cholangitis.

SHOULD PATIENTS WITH ARES LD RECEIVE TRANSPLANTS?

[2] At first glance, this question seems simple to answer. Generally, in medicine, a therapy is used if it works and saves lives. But the circumstances of liver transplantation differ from those of most other lifesaving therapies, including long-term mechanical ventilation and dialysis, in three important respects:

Nonrenewable Resource

[3] First, although most lifesaving therapies are expensive, liver transplantation uses a nonrenewable, absolutely scarce resource -- a donor liver. In contrast to patients with end-stage renal disease, who may receive either a transplant or dialysis therapy, every patient with FSLD who does not receive a liver transplant will die. This dire, absolute scarcity of donor livers would be greatly exacerbated by including patients with ARES LD as potential candidates for liver transplantation. In 1985, 63,737 deaths due to hepatic disease occurred in the United States, at least 36,000 of which were related to alcoholism, but fewer than 1000 liver transplants were performed. Although patients with ARES LD represent more than 50 percent of the patients with ESLD, patients with ARES LD account for less than 10 percent of those receiving transplants (*New York Times*, April 3, 1990:B6 [col 1]). If patients with ARES LD were accepted for liver transplantation on an equal basis, as suggested by the HCFA, there would potentially be more than 30,000 additional candidates each year. (No data exist to indicate how many patients in the late stages of ARES LD would meet transplantation eligibility criteria.) In 1987, only 1182 liver transplants were performed; in 1989, fewer than 2000 were done. Even if all donor livers available were given to patients with ARES LD, it would not be feasible to provide transplants for even a small fraction of them. Thus, the dire, absolute nature of donor liver scarcity mandates that distribution be based on unusually rigorous standards -- standards not required for the allocation of most other resources such as dialysis machines and ventilators, both of which are only *relatively* scarce.

Comparison with Cardiac Transplantation

[4] Second, although a similarly dire, absolute scarcity of donor hearts exists for cardiac transplantation, the allocational decisions for cardiac transplantation differ from those for liver transplantation. In liver transplantation, ARESLD causes more than 50 percent of the cases of ESLD; in cardiac transplantation, however, no one predominant disease or contributory factor is responsible. Even for patients with end-stage ischemic heart disease who smoked or who failed to adhere to dietary regimens, it is rarely clear that one particular behavior caused the disease. Also, unlike our proposed consideration for liver transplantation, a history of alcohol abuse is considered a contraindication and is a common reason for a patient with heart disease to be denied cardiac transplantation. Thus, the allocational decisions for heart transplantation differ from those for liver transplantation in two ways: determining a cause for end-stage heart disease is less certain, and patients with a history of alcoholism are usually rejected from heart transplant programs.

Expensive Technology

[5] Third, a unique aspect of liver transplantation is that it is an expensive technology that has become a target of cost containment in health care. It is, therefore, essential to maintain the approbation and support of the public so that organs continue to be donated under appropriate clinical circumstances -- even in spite of the high cost of transplantation.

General Guideline Proposed

[6] In view of the distinctive circumstances surrounding liver transplantation, we propose as a general guideline that patients with ARESLD should not compete equally with other candidates for liver transplantation. We are *not* suggesting that patients with ARESLD should *never* receive liver transplants. Rather, we propose that a priority ranking be established for the use of this dire, absolutely scarce societal resource and that patients with ARESLD be lower on the list than others with ESLD.

OBJECTIONS TO PROPOSAL

[7] We realize that our proposal may meet with two immediate objections: (1) Some may argue that since alcoholism is a disease, patients with ARESLD should be considered equally for liver transplantation. (2) Some will question why patients with ARESLD should be singled out for discrimination, when the medical profession treats many patients who engage in behavior that causes their diseases. We will discuss these objections in turn.

Alcoholism: How Is It Similar to and Different from Other Diseases?

[8] We do not dispute the reclassification of alcoholism as a disease. Both hereditary and environmental factors contribute to alcoholism, and physiological, biochemical, and genetic markers have been associated with increased susceptibility. Identifying alcoholism as a disease enables physicians to approach it as they do other medical problems and to differentiate it from bad habits, crimes, or moral weaknesses. More important, identifying alcoholism as a disease also legitimizes medical interventions to treat it.

[9] Alcoholism is a chronic disease, for which treatment is available and effective. More than 1.43 million patients were treated in 5586 alcohol treatment units in the 12-month period ending October 30, 1987. One comprehensive review concluded that more than two thirds of patients who accept therapy improve. Another cited four studies in which at least 54 percent of patients were abstinent a minimum of one year after treatment. A recent study

of alcohol-impaired physicians reported a 100 percent abstinence rate an average of 33.4 months after therapy was initiated. In this study, physician-patients rated Alcoholics Anonymous, the largest organization of recovering alcoholics in the world, as the most important component of their therapy.

[10] Like other chronic diseases -- such as type I diabetes mellitus, which requires the patient to administer insulin over a lifetime -- alcoholism requires the patient to assume responsibility for participating in continuous treatment. Two key elements are required to successfully treat alcoholism: the patient must accept his or her diagnosis and must assume responsibility for treatment. The high success rates of some alcoholism treatment programs indicate that many patients can accept responsibility for their treatment. ARESLD, one of the sequelae of alcoholism, results from 10 to 20 years of heavy alcohol consumption. The risk of ARESLD increases with the amount of alcohol consumed and with the duration of heavy consumption. In view of the quantity of alcohol consumed, the years, even decades, required to develop ARESLD, and the availability of effective alcohol treatment, attributing personal responsibility for ARESLD to the patient seems all the more justified. We believe, therefore, that even though alcoholism is a chronic disease, alcoholics should be held responsible for seeking and obtaining treatment that could prevent the development of late-stage complications such as ARESLD. Our view is consistent with that of Alcoholics Anonymous: alcoholics are responsible for undertaking a program for recovery that will keep their disease of alcoholism in remission.

Are We Discriminating Against Alcoholics?

[11] Why should patients with ARESLD be singled out when a large number of patients have health problems that can be attributed to so-called voluntary health-risk behavior? Such patients include smokers with chronic lung disease; obese people who develop type II diabetes; some individuals who test positive for the human immunodeficiency virus; individuals with multiple behavioral risk factors (inattention to blood pressure, cholesterol, diet, and exercise) who develop coronary artery disease; and people such as skiers, motorcyclists, and football players who sustain activity-related injuries. We believe that the health care system should respond based on the actual medical needs of patients rather than on the factors (e.g., genetic, infectious, or behavioral) that cause the problem. We also believe that individuals should bear some responsibility -- such as increased insurance premiums -- for medical problems associated with voluntary choices. The critical distinguishing factor for treatment of ARESLD is the scarcity of the resource needed to treat it. The resources needed to treat most of these other conditions are only moderately or relatively scarce, and patients with these diseases or injuries can receive a share of the resources (i.e., money, personnel, and medication) roughly equivalent to their need. In contrast, there are insufficient donor livers to sustain the lives of all with ESLD who are in need. This difference permits us to make some discriminating choices -- or to establish priorities -- in selecting candidates for liver transplantation based on notions of fairness. In addition, this reasoning enables us to offer patients with alcohol-related medical and surgical problems their fair share of relatively scarce resources, such as blood products, surgical care, and intensive care beds, while still maintaining that their claim on donor livers is less compelling than the claims of others.

REASONS PATIENTS WITH ARESLD SHOULD HAVE A LOWER PRIORITY ON TRANSPLANT WAITING LISTS

[12] Two arguments support our proposal. The first argument is a moral one based on considerations of fairness. The second one is based on policy considerations and examines whether public support of liver transplantation can be maintained if, as a result of a

first-come, first-served approach, patients with ARESLD receive more than half the available donor livers. Finally we will consider further research necessary to determine which patients with ARESLD should be candidates for transplantation, albeit with a lower priority.

Fairness

[13] Given a tragic shortage of donor livers, what is the fair or just way to allocate them? We suggest that patients who develop ESLD through no fault of their own (e.g., those with congenital biliary atresia or primary biliary cirrhosis) should have a higher priority in receiving a liver transplant than those whose liver disease results from failure to obtain treatment for alcoholism. In view of the dire, absolute scarcity of donor livers, we believe it is fair to hold people responsible for their choices, including decisions to refuse alcoholism treatment, and to allocate organs on this basis.

[14] It is unfortunate but not unfair to make this distinction. When not enough donor livers are available for all who need one, choices have to be made, and they should be founded on one or more proposed principles of fairness for distributing scarce resources. We shall consider four that are particularly relevant:

- To each, an equal share of treatment.
- To each, similar treatment for similar cases.
- To each, treatment according to personal effort.
- To each, treatment according to ability to pay.

It is not possible to give each patient with ESLD an *equal share*, or, in this case, a functioning liver. The problem created by the absolute scarcity of donor livers is that of inequality; some receive livers while others do not. But what is fair need not be equal. Although a first-come, first-served approach has been suggested to provide each patient with an equal chance, we believe it is fairer to give a child dying of biliary atresia an opportunity for a *first* normal liver than it is to give a patient with ARESLD who was born with a normal liver a *second* one.

[15] Because the goal of providing each person with an equal share of health care sometimes collides with the realities of finite medical resources, the principle of *similar treatment for similar cases* has been found to be helpful. Outka stated it this way: "If we accept the case for equal access, but if we simply cannot, physically cannot, treat all who are in need, it seems more just to discriminate by virtue of categories of illness, rather than between rich ill and poor ill." This principle is derived from the principle of formal justice, which, roughly stated, says that people who are equal in relevant respects should be treated equally and that people who are unequal in relevant respects should be treated differently. We believe that patients with ARESLD are unequal in a relevant respect to others with ESLD, since their liver failure was preventable; therefore, it is acceptable to treat them differently.

[16] Our view also relies on the principle of, *To each, treatment according to personal effort*. Although alcoholics cannot be held responsible for their disease, once their condition has been diagnosed they can be held responsible for seeking treatment and for preventing the complication of ARESLD. The standard of personal effort and responsibility we propose for alcoholics is the same as that held by Alcoholics Anonymous. We are not suggesting that some lives and behaviors have greater value than others -- an approach used and

appropriately repudiated when dialysis machines were in short supply. But we are holding people responsible for their personal effort.

[17] Health policymakers have predicted that this principle will assume greater importance in the future. In the context of scarce health care resources, Blank foresees a reevaluation of our health care priorities, with a shift toward individual responsibility and a renewed emphasis on the individual's obligation to society to maximize one's health. Similarly, more than a decade ago, Knowles observed that prevention of disease requires effort. He envisioned that the next major advances in the health of the American people would be determined by what individuals are willing to do for themselves.

[18] To each, treatment according to ability to pay has also been used as a principle of distributive justice. Since alcoholism is prevalent in all socioeconomic strata, it is not discrimination against the poor to deny liver transplantation to patients with alcoholic liver disease. In fact, we believe that poor patients with ARESLD have a stronger claim for a donor liver than rich patients, precisely because many alcohol treatment programs are not available to patients lacking in substantial private resources or health insurance. Ironically, it is precisely this group of poor and uninsured patients who are most likely not to be eligible to receive a liver transplant because of their inability to pay. We agree with Outka's view of fairness that would discriminate according to categories of illness rather than according to wealth.

Policy Considerations Regarding Public Support for Liver Transplantation

[19] Today, the main health policy concerns involve issues of financing, distributive justice, and rationing medical care. Because of the many deficiencies in the U.S. health care system -- in maternal and child health, in the unmet needs of the elderly, and in the millions of Americans without health insurance -- an increasing number of commentators are drawing attention to the trade-offs between basic health care for the many and expensive, albeit lifesaving, care for the few.

[20] Because of its high unit cost, liver transplantation is often at the center of these discussions, as it has been in Oregon, where the legislature voted to eliminate Medicaid reimbursement for all transplants except kidneys and corneas. In this era of health care cost containment, a sense of limits is emerging and allocational choices are being made. Oregon has already shown that elected officials and the public are prepared to face these issues.

[21] In our democracy, it is appropriate that community mores and values be regarded seriously when deciding the most appropriate use of a scarce and nonrenewable organ symbolized as a "Gift of Life."

[22] As if to underscore this point, the report of the Task Force on Organ Transplantation recommended that each donated organ be considered a national resource for the public good and that the public must participate in decisions on how to use this resource to best serve the public's interests.

[23] Much of the initial success in securing public and political approval for liver transplantation was achieved by focusing media and political attention not on adults but on children dying of ESLD. The public may not support transplantation for patients with ARESLD in the same way that they have endorsed this procedure for babies born with biliary atresia. This assertion is bolstered not only by the events in Oregon but also by the results of a Louis Harris and Associates national survey, which showed that lifesaving therapy for premature infants or for patients with cancer was given the highest health care priority by

the public and that lifesaving therapy for patients with alcoholic liver disease was given the lowest. In this poll, the public's view of health care priorities was shared by leadership groups also polled: physicians, nurses, employers, and politicians.

[24] Just because a majority of the public holds these views does not mean that they are right, but the moral intuition of the public, which is also shared by its leaders, reflects community values that must be seriously considered. Also indicative of community values are organizations such as Mothers Against Drunk Driving, Students Against Drunk Driving, corporate employee assistance programs, and school student assistance programs. Their existence signals that many believe that a person's behavior can be modified so that the consequences of behavior such as alcoholism can be prevented. Thus, giving donor livers to patients with ARESLD on an equal basis with other patients who have ESLD might lead to a decline in public support for liver transplantation.

SHOULD ANY ALCOHOLICS BE CONSIDERED FOR TRANSPLANTATION? NEED FOR FURTHER RESEARCH

[25] Our proposal for giving lower priority for liver transplantation to patients with ARESLD does not completely rule out transplantation for this group. Patients with ARESLD who had not previously been offered therapy and who are now abstinent could be acceptable candidates. In addition, patients lower on the waiting list, such as patients with ARESLD who have been treated and are now abstinent, might be eligible for a donor liver in some regions because of the increased availability of donor organs there. Even if only because of these possible conditions for transplantation, further research is needed to determine which patients with ARESLD would have the best outcomes after liver transplantation.

[26] Transplant programs have been reluctant to provide transplants to alcoholics because of concern about one unfavorable outcome: a high recidivism rate. Although the overall recidivism rate for the Pittsburgh patients was only 11.5 percent, in the group of patients who had been abstinent less than 6 months it was 43 percent. Also, compared with the entire group in which one-year survival was 74 percent, the survival rate in this subgroup was lower, at 64 percent.

[27] In the recently proposed Medicare criteria for coverage of liver transplantation, the HCFA acknowledged that the decision to insure patients with alcoholic cirrhosis "may be considered controversial by some." As if to counter possible objections, the HCFA listed requirements for patients with alcoholic cirrhosis: patients must meet the transplant center's requirement for abstinence prior to liver transplantation and have documented evidence of sufficient social support to ensure both recovery from alcoholism and compliance with the regimen of immunosuppressive medication.

[28] Further research should answer lingering questions about liver transplantation for ARESLD patients: Which characteristics of a patient with ARESLD can predict a successful outcome? How long is abstinence necessary to qualify for transplantation? What type of a social support system must a patient have to ensure good results? These questions are being addressed. Until the answers are known, we propose that further transplantation for patients with ARESLD be limited to abstinent patients who had not previously been offered alcoholism treatment and to abstinent treated patients in regions of increased donor liver availability, and that it be carried out as part of prospective research protocols at a few centers skilled in transplantation and alcohol research.

COMMENT

[29] Should patients with ARESLD compete equally for liver transplants? In a setting in which there is a dire, absolute scarcity of donor livers, we believe the answer is no. Considerations of fairness suggest that a first-come, first-served approach for liver transplantation is not the most just approach. Although this decision is difficult, it is only fair that patients who have not assumed equal responsibility for maintaining their health or for accepting treatment for a chronic disease should be treated differently. Considerations of public values and mores suggest that the public may not support liver transplantation if patients with ARESLD routinely receive more than half of the available donor livers. We conclude that since not all can live, priorities must be established and that patients with ARESLD should be given a lower priority for liver transplantation than others with ESLD.