Ethical Issues in the Care of Vulnerable Chronic Kidney Disease Patients: The Elderly, Cognitively Impaired, and Those From Different Cultural Backgrounds

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Numerous ethical issues such as the appropriate initiation or withdrawal of dialysis are inherent when one cares for patients with chronic kidney disease (CKD). Conflicts concerning decisions to withhold or withdraw dialysis often involve particularly vulnerable CKD patients such as the elderly, those with cognitive impairment, or those who come from different cultural backgrounds. Issues related to renal replacement therapy in vulnerable or special CKD populations will be explored within an ethical framework based on the principles of autonomy (self-determination), beneficence (to maximize good), nonmaleficence (to not cause harm), and justice (what is due or owed).

Index Words: Ethics; Chronic kidney disease; Decision making; Withdrawal from dialysis; Cross-cultural

The ethical principles of autonomy (self-determination), beneficence (to maximize good), nonmaleficence (to not cause harm), and justice (what is due or owed) influence all aspects of medical decision making, including those involving renal replacement therapy. Autonomy is implicit in informed consent, beneficence and nonmaleficence in decisions to offer renal replacement therapy, and the principle of justice underlies renal replacement therapy decisions in which scarcities of dialysis resources, donor organs for kidney transplantation, or financial issues are concerns. Although there are virtually unlimited resources for traditional dialysis in North America, the principle of justice may impact dialysis decisions when one considers more expensive but potentially advantageous therapies like daily dialysis.[1] In the less developed world, justice may play a more prominent role in ethical decision making regarding renal replacement therapy. Regardless of the country of origin, special patient groups may be more subject to treatment decisions that hinge on ethical principles. Such patient groups include the elderly, the cognitively impaired, and those in cultural minorities or with cultural backgrounds different from that of their health care providers. Issues related to renal replacement therapy in vulnerable or special chronic kidney disease (CKD) populations will be explored within an ethical framework based on the principles of autonomy, beneficence, nonmaleficence, and justice.

Discussion

Ethical Issues With the Elderly and CKD

The elderly comprise the fastest growing segment of the dialysis population[2,3]: octogenarians and nonagenarians beginning dialysis increased by 57% between 1996 and 2003.[3] One-year mortality for the very elderly who initiated dialysis was 46% in a study of 13,577 patients.[3] Older age, high numbers of comorbid conditions, and nonambulatory status were all predictors of death.[3] Interestingly, a recent report of mortality among dialysis patients took the novel approach of examining excess mortality using standardized mortality ratios in years 1 to 5 after the first dialysis treatment.[4] These investigators found that older ESRD patients, when compared with their age peers, actually had lower excess mortality than younger ESRD patients, especially in the first 3 years of dialysis.[4] This analysis suggests that predicting and interpreting survival of ESRD patients is in part dependent

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1548-5595/08/1502-0014$34.00/0
doi:10.1053/j.ackd.2008.01.004

on the method of analysis, emphasizing the importance of autonomy and beneficence in decision making about the initiation of dialysis. However, despite the vagaries of survival analysis among ESRD patients, ESRD clearly confers a relatively high mortality in the young and the old. Considering the principle of beneficence, is dialysis of benefit in the elderly with CKD?

There are few studies examining the survival of CKD patients on dialysis compared with those treated conservatively, but the available studies show that elderly CKD patients who begin dialysis live longer than those who do not.[5,6] In a study of French octogenarians with CKD, survival was significantly better in those who began dialysis compared with those treated conservatively (median survival of 28.9 months in patients undergoing dialysis *v* 8.9 months in the conservatively treated group, $P < .0001$)[5] In this single-center cohort study of 146 consecutive octogenarians, independent predictors of death within 1 year on dialysis were poor nutritional status, late referral, and functional dependence.[5] Interestingly, the burden of comorbid conditions was comparable in the dialyzed and conservatively treated groups, suggesting that comorbidity per se was either not primary in decision making or considered "pejoratively in the context of late referral, poor functional status, or social isolation."[5] A recent retrospective analysis of stage 5 CKD patients greater than 75 years of age also found significantly better survival among patients who started dialysis than those who were treated conservatively; the 1- and 2-year survival rate was 84% and 76% in the dialysis group (n = 52) compared with 68% and 47% in the conservatively treated group (n = 77).[6] However, in contrast to the French study, the survival advantage was lost in patients with high comorbidity scores, especially when ischemic heart disease was present, leading the authors to conclude that comorbidity should be a major factor in advising patients to initiate or withhold dialysis.[6] One small Italian study showed that a very low protein diet was safe and allowed postponement of dialysis in stage 5 CKD patients older than 70 years of age with a mortality rate equal to those who began dialysis.[7]

Thus, like younger CKD patients, survival in the elderly is generally improved with the initiation of dialysis despite an overall high mortality for those on dialysis. Furthermore, like younger CKD patients, the survival of the elderly on dialysis is affected by nutritional and functional status as well as the presence of comorbid conditions. However, these factors may be weighed differently in dialysis decision making among the elderly compared with their younger cohorts. Should all CKD patients, therefore, be offered dialysis regardless of age and medical status? With the high and rising incidence of the elderly initiating dialysis, is withholding chronic dialysis from the elderly a rare event?

There are few studies to help answer these questions. One prospective study of referral of CKD patients for dialysis was performed in West Virginia by Sekkarie and Moss.[8] Primary care providers withheld nephrology referral from 42 (22%) patients, and nephrologists withheld dialysis from 7% (25/332) of patients referred to them by primary care providers over a 1-year study period.[8] Reasons for nonreferral to nephrology by primary care providers included old age, neurologic impairment, end-stage organ failure other than kidney (eg, heart, liver, or lung), metastatic cancer, the presence of multiple comorbid conditions, and patient or family refusal. Details on the effect of age on referral or nonreferral were not provided. Retrospective cohort studies and cross-sectional surveys of nephrologists from the 1990s have repeatedly found that neurologic impairment is the most often cited reason for withholding dialysis, but increasing patient age is a common factor.[9-11]

The clinical practice guideline, *Shared Decision-Making in the Appropriate Initiation of and Withdrawal from Dialysis*, provides evidence-based recommendations about withholding and withdrawing dialysis.[12] In the guideline, appropriate criteria for withholding dialysis include patient or surrogate wishes, profound neurologic impairment, the presence of a nonrenal terminal condition, or a medical condition that precludes the technical process of dialysis.[12] Age, per se, is not listed as a criterion for withholding dialysis but clearly impacts patient survival and therefore is a factor