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Dialyzing the elderly: benefit or burden?

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The increasing number of people living beyond age 65 will be one of the most serious social problems of the next century. By the year 2040, 21% of the population of the United States will be over 65, and by the year 2050, 1 in 20 people in the U.S.A. will be older than 85[1,2].

The increase in the elderly population, along with the improvements and progress in nephrology in general, and dialysis in particular, will lead to an increase in the number of elderly people on dialysis, a trend that has already started and is present in all dialysis units in industrialized/developed countries.

The time has come, therefore, for the nephrology community to pay more attention to the problems of elderly patients, both before and during dialysis. To do that, nephrologists must learn the characteristics of geriatric medicine, and cooperate with family physicians, geriatricians and cardiologists, familiarizing themselves with developments in these specialities[1].

Though age cut-off points are not important for the individual patient, the established age of 65 as the definition of elderly may have to be revised upwards, and age 70 be considered as the right one. Many individuals between 65 and 70 years of age are now healthy, active and productive members of society. I believe that the decreasing funds in the pension plans of various countries, along with the increasing number of those over 65, will force countries to move the retirement age from 65 to 70. Those between 70 and 80 are fitter than those over 80, and these distinctions should be made whenever one studies various aspects of dialysis treatment in these patients.

For the individual patient, these groupings are not critical, because aging, though inexorable, proceeds at various rates. Therefore, individuals may age differently over a period of 10-30 years depending on genetic and environmental factors, making the elderly a most heterogeneous group. In geriatrics and in the nephrology of the elderly, the distinction between fit and frail elderly becomes very important, and therapeutic choices should therefore be adapted to the individual[1,3].

DIALYSIS DEMOGRAPHICS

Worldwide, there has been an increase in the number of elderly on dialysis, which is expected to continue over the next few decades. The steepest increase has occurred among those 75 years of age and over.

This increase is due to a number of factors, such as: a change in the attitude of nephrologists and referring physicians; aging of the general population; improved survival of the chronically ill; availability of sufficient dialysis facilities; technical improvements that improve dialysis tolerance; the development of various chronic peritoneal dialysis (PD) modalities; and the education of the general public[1,4-6].

METHODS OF TREATMENT OF ESRD

Once the elderly patient has reached the end stage, it seems that dialysis is the only option, except in Norway where 55% of those over the age of 65 receive transplants[3]. In all other countries, the percentage of those receiving transplants is less than 5%.

The choice of dialysis modality is influenced by what is available and the biases and financial interests of the individual nephrologist. When both dialytic modalities are equally available, the choice should be based on individual, medical, social and psychological factors[1,3,7].

Peritoneal dialysis allows the elderly to be dialyzed at home and is safer for those with diminished cardiovascular reserve, arrhythmias, peripheral vascular disease, or bleeding diathesis. Those who fail hemodialysis (HD) because of a lack of vascular ac-

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cess, those who live a long distance from a dialysis center, or those who live in a nursing home, will also do better on PD. A psychosocial evaluation may be important before starting PD, because those with a low-functioning family have a high probability of transferring to HD.

Despite these advantages of PD in the elderly, HD is the main treatment for elderly patients with end-stage renal disease (ESRD) in the United States, whereas in other countries like Canada, Australia and the United Kingdom, almost equal numbers of new elderly patients are treated by PD and HD[1].

OUTCOME

The heterogeneity of the elderly patients and the effect of comorbid condictions such as diabetes, malignancy and peripheral vascular and cardiovascular diseases on outcome explain the discrepancy among the different series[1].

The death rates for non-diabetics on HD and PD are similar, whereas for diabetics death rates are different, in that they are lower in younger diabetics on PD and higher in older PD patients than those on HD. Psychosocial factors such as the Karnofsky scale, and the wish for transplant, are important predictors of survival[8].

Survival in Europe between 1986-91 for those patients 65-75 years old was 62% after two years and 40% after four years. In Japan, two-year survival for those 75 and over is 55%, and four-year survival less than 35%. Piccoli reported from a group in Italy a 50% two-year survival for those 75-80 and 30% for those aged 80 and over[3].

Whereas survival has remained constant in some series[16], it has improved in others[9,18]. Thus in Italy[9] despite a significant increase in mean age from 71.3 ± 4.5 in the period 1981-85 to 72.7 ± 5.4 in the period 1986-92, the two-year survival increased significantly from 54.6% to 59%. A similar continuous improvement in survival over the last 12 years has been reported by Fenton et al. from Canada[6].

These results may improve even further with changes in dialysis technology and policies, along with changes in support therapy (erythropoietin, antihypertensive treatment, etc.) as well as with greater cooperation between nephrologists, geriatricians, family physicians, cardiologists, etc.

Results may be further improved for elderly patients on PD (even those with multiple comorbid conditions) with the use of home nurses[10]. Although the mortality rate of elderly patients on dialysis is higher than that of younger dialysis patients, comparisons should be made with their cohort population. Thus, while at 75 years of age dialysis increases the risk of death five times as compared to individuals of the same age not on dialysis, at 45 the risk of death increases 20 times, emphasizing the beneficial effect of dialysis in the elderly as compared to younger patients[1].

Finally, survival on a particular life-support treatment should be compared with that of treatments for other diseases. Thus, the over 80% five-year survival of renal failure patients 0-34 years of age is similar to the survival of those with Hodgkin's disease, but superior to those with lymphatic leukemia (70%) and lung cancer (40%). For those 65 and over, the five-year renal failure survival of less than 20% is superior to that of those with lung cancer, but inferior to those with colon cancer (35%) and prostatic cancer (48%)[6].

PSYCHOLOGICAL ASPECTS OF THE ELDERLY ON DIALYSIS

ESRD is a severe illness that requires a change in lifestyle by both patients and the family, especially in the elderly. Common handicaps are a decrease in socioeconomic status, changes in family roles, the restriction of social activities, and sexual problems. A large percentage of these patients have major depressive episodes.

It should be emphasized, however, that although depression is frequent among elderly patients on dialysis, age is not significantly related to the patient's depression nor the severity of the symptoms. Depressed and non-depressed patients do not differ significantly in age.

In a comparative study of 349 elderly patients on dialysis with 354 controls, Kutner et al.[11] found that dialysis patients were more functionally disabled, had a decreased ability to do things they would like to do and had a lower level of perceived mastery of their lives. On the contrary, Kjellstrand et al.[12], in a descriptive study of elderly patients on HD, reported good quality of life among them. Most of them were doing well and were at home (73%), 90% had good contact with other people, 86% spent much time outdoors, 71% enjoyed life and 73% of them had a Karnofsky scale of over 80. More recent results by Moody et al.[13] have been similar.

SOCIAL ASPECTS OF THE ELDERLY ON DIALYSIS

Although most older people living in the community are cognitively intact and fully independent in their daily activities, a substantial number who are

not confined to a major institution report major limitations in activity due to chronic disease.

Often elderly patients are concerned that they will become a burden to their families and prefer to maintain an independent household and to use peer groups for support; also their ability to draw upon past experiences often enables them to adhere to a complex medical treatment better than any other group[14].

An adequate social support system, of which the family unit is the crucial component, is important to the outcome of elderly patients on any form of chronic dialysis. In home dialysis, such support determines the patient's ability to remain in the community and avoid institutional care. Without strong family support, impaired mental function and physical disability increase the likelihood of institutionalization, and diminish the potential for successful home dialysis.

Continuous ambulatory peritoneal dialysis (CAPD) performed by trained home nurses provides the elderly patient with a convenient, comfortable and safe means of home dialysis in a familiar environment without reliance on other family members. Such CAPD, with its low reported rate of hospitalization and PD-related complications, should be considered as an alternative to center dialysis. A close-knit team of home nurses is necessary to prevent «burn out» of enthusiasm and to reduce patient admission for the sole purpose of giving the helper a break[15].

ETHICAL ISSUES IN THE ELDERLY ON DIALYSIS

The elderly as a burden to the family

With regard to family, we are living now in an environment where the wisdom of old people is not considered an asset and is often challenged by the younger generation. Furthermore, with both husband and wife working, looking after an elderly parent who is on dialysis and has problems with his or her daily activities (and if there is no hope of a substantial inheritance) becomes a burden. The interest and the will may be present initially, but after some experience with home or hospital dialysis, along with the thrice weekly trips to the hospital and frequent hospitalizations, family members realize they cannot cope. They often give up, asking for the hospital to take over the care of the patient or trying to have him or her admitted to a chronic care facility. This leads to feelings of isolation and desperation in the patient, and is often the underlying cause for the request for the dialysis to be withdrawn.

The elderly as a burden to the health-care team

Although it is the responsability of the health-care team to look after their patients with equal care and interest, I have often witnessed that the elderly, with their myriad problems and unexpected complications, do not get the care they deserve. Health-care providers should be patient and attend to all their problems, which often are not medical. A team approach with the help of social workers and psychiatrists is very important. Setting realistic goals, which are different than those of younger patients, is also very important. Often, learning about their elderly patients' histories, who they were and what they have achieved in life, can help health-care providers to have increased respect for them.

The elderly as a burden to society

The care of the elderly, and specially those on dialysis, contributes substantially to the increase in health-care costs. Their increasing numbers, lower functional status and multiple significant chronic illnesses necessitate closer monitoring and expanding nursing care. As a result, society, through its legislators, questions the appropriateness of the utilization of expensive health-care technology for this segment of the population. Some have gone even further and recommended that a patient's age should be used to ration and limit technically sophisticated treatments, which in turn would lead to a substantial saving[1,2,7]. The most eloquent voice among the latter is that of Daniel Callahan, who proposes that age, than need, should be the criteria for the elimination of health-care resources[16]. He argues that we should shift our attitudes from aging and the goals of medicine towards the rationing of expensive treatment.

Callahan believes that medicine must refocus its efforts in the elderly away from the curing of disease and the extension of life to an ethic of caring and compassion. Instead of focusing on individual rights to health care, individual good and the topics of advocacy, autonomy and freedom of choice, Callahan believes that we should focus on social welfare, societal good and the balancing and prioritizing of benefits[2,16,17].

In arguing that life-extending treatment should be curtailed after a certain age, Callahan's basic thesis seems to be that biotechnology is used to extend life regardless of its quality. Specifically concerning dialysis, Callahan writes: «Dialysis represents precisely the kind of technology that should not be sought or developed in the future. It does not greatly increase the life expectancy (an average of only five

years) and for most the gain is at the price of a doubtful or poor quality of life and an inability to achieve earlier levels of functioning».

I believe this assessment is both arrogant and false. As mentioned before, Kjellstrand and several other authors have shown that elderly patients on dialysis have a particularly high level of life satisfaction but, irrespective of that, when did «an average increase of only five years» become a negligible gain in medicine?

FUTILITY AND MANAGED CARE

Two other ways in which society tries to handle the burden of health care to the elderly are 1) the concept of futility and 2) managed care.

I am not surprised that the concept of futility sprang up in our vocabulary during the last 5-10 years, when cost containment became a main concern. Agreeing that providers are not obliged to provide treatments that are deemed futile is the first step in this process. It is difficult to argue against this. However, agreeing on what is futile treatment and who would decide on it is an other issue. If the physician is mainly concerned with societal good, and not the patient's interests, it is easier and less painful for the physician to refuse a treatment «because it is futile» rather than «because there is no money».

In managed care, where the lowest bidder will be granted the care of a group of patients with a fixed amount of money, I am sure that the elderly, who often will require expensive care and referrals to specialists, will be shortchanged, otherwise the healthcare provider may not make a profit or even may lose money. This is a convenient way of transferring the responsibility of restricting provision of care from the managed care organization to the provider, and at the same time allowing both parties to make a profit, albeit at the cost of the elderly and other vulnerable groups[18].

PHYSICIANS AND THE PROVISION OF HEALTH CARE TO THE ELDERLY

Physicians play a major role in the provision of care, especially to the elderly. With regard to providing dialysis to the elderly, physicians, consciously or unconsciously, have for years restricted access for various reasons. If this is to be avoided, physicians will have to make a conscious effort to recognize these reasons and avoid them.

Over the last 20 years, there has been a gradual increase in the percentage of elderly on dialysis, along with a constant increase in the mean age of new dialysis patients. As long as these curves do not level off, this means that elderly patients are rejected from dialysis and still remain untreated.

Recent surveys indicate that nephrologists are less blased now against accepting the elderly for dialysis, even up to the age of 90[1,19], although they indicate that in the case of cost restrictions, the elderly will be the first to be refused treatment[19,20].

There is also a bias by primary care physicians against referring elderly patients to nephrologists[14]. The reasons are unclear, but include lack of resources, poor prognosis and judgment about quality of life. In a recent survey of nephrologists and primary care physicians who were asked to review 14 case-scenarios and report whether they would refer or accept these patients for dialysis, it was shown that more patients would have been accepted by the nephrologist than would have been referred by the family physicians.

This study showed that most would refer if the patient or relatives whished treatment, stressing the importance of public education on what nephrology can offer. Metastases and dementia were considered a contraindication for dialysis[14].

PHYSICIANS, COST CONTAINMENT AND THE ELDERLY WITH ESRD

Although the continuous increase in the elderly dialysis population indicates a decreasing bias on behalf of nephrologists towards dialyzing their elderly patients, recent cost containment concerns have made some physicians conscious of their social responsibilities and on their own they have started recommending that perhaps we should reconsider our position towards accepting the elderly for dialysis[21].

Whereas I accept that physicians have an obligation to optimize the use of public funds and avoid wastage, I do not think that age per se should be used as a criterium for providing such services. When we doubt the wisdom of providing dialysis to an individual, such as one with dementia or a painful cachectic disease in terminal stage[1], this should be presented as a recommendation to the patient and not as an arbitrary decision.

Physicians have a moral obligation to treat everybody equally, independent of age, gender, race, religion, country of origin or political belief[22]. When they are hindered in doing so by external factors directly or indirectly applied on them, they have the obligation of acting as their patients' advocates and speaking out on their behalves. The final decision on whether the quality of life on dialysis is

acceptable should be left up to the patient, and in this respect a trial of dialysis is appropriate, with the understanding that if things do not work out and the patient wants to discontinue dialysis, his or her wishes will be respected. If the patient requests that dialysis be discontinued, he/she should not be abandoned and should be cared for to the end, along with his or her family.

Geriatric ethics cannot differ from general medical ethics, which considers access to health care as part of every citizen's right. The fact that life expectancy is limited for the elderly is no justification for the refusal of treatment; such an attitude would lead to the refusal of health care for patients with acquired immune deficiency syndrome (AIDS) or cancer, who have an even shorter survival time than the elderly on dialysis[1].

Physicians shouls not make policy decisions regarding the dialysis of the elderly when such explicit policies in fact do not exist. At the same time, we should continue analyzing our results so that we will be able to present new elderly patients with the facts before they make their decisions.

As for those physicians who are overwhelmed by their social responsibility as citizens, I would like to remind them that their primary responsibility is towards their patients, and unless they show this unequivocally they will be unable to earn their patients' trust and expect them to follow their advice when things get bad. Furthermore, if physicians do not act as advocates on behalf of their patients, nobody will.

DIALYSIS OF THE ELDERLY - BENEFIT OR BURDEN?

I think that I have shown, and I hope convincingly, that dialysis in the elderly prolongs life, and for a large percentage, this life is of a good quality. I believe that this is a benefit for the patient.

There is no doubt that the elderly, especially those with ESRD, have multiple comorbid conditions that lead to increased hospitalization, referrals to specialists, and an overall increased use of the health-care system. This leads to an increase in the costs for their management.

If indeed costs are the only things that our society is concerned about, and let us not forget that when I say society I mean all of us, there is no doubt that dialysis in the elderly becomes a burden to society, and in that respect, everybody who is in need becomes a burden to society.

I believe, however, that it is up to us to decide what kind of a society we want to be. I think that to earn the title of a civilized and caring society, we must first care for those in need amongst us. Once this becomes a priority, I believe that taking care of the needs of the elderly will not be looked upon as a burden. However, before we, the medical profession, attempt to guide society in changing its priorities, we have to search our hearts, rededicate ourselves to our oath of service and emphasize in everything we do our commitment to the care of our patients and the primary importance of our relationships with our patients.

I propose that when we are faced with competent elderly patients with ESRD, we should present them with the bare facts of what dialysis means and can provide, answer all their questions and help them make their own decision, which thereafter we should respect. If they are uncertain about their choice, a treatment trial may be appropriate. If the prognosis is a grave and we believe that such treatment would be futile, but the patient or his or her relatives insist on that treatment be instigated, we should avoid confronting them. Instead, we should allow them the necessary time and energy to discuss the reasons behind their decisions and to educate their relatives about the futility of their decision. It takes considerable time, but it is time well spent.

I believe also that we have an obligation to educate the public continuously about the rights of elderly individuals to equal justice and dignity. Being elderly does not make a person less of an individual. We have an obligation to be their advocates and to speak out on their behalves against any rationing of treatment. Advocacy for our patients is an ethical principle, as important as beneficence, non-maleficence, justice and respect for the patient's autonomy, and I believe we should inculcate in into our students from the beginning of their training. I see this paper as my opportunity to advocate for the rights of elderly patients with ESRD.

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