

Original Article

Withholding or withdrawing dialysis in the elderly: the perspective of a western region of France

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Abstract

Background. In the US and Canada, dialysis discontinuation is one of the more frequent causes of death in elderly patients on haemodialysis, particularly after the age of 75. The aim of this study was to analyse the practices of some French nephrologists, 17 of whom (in six nephrology units) were interviewed for this study.

Methods. A questionnaire was formulated on the basis of a bibliographical search of the topic. A series of questions, initially open and then more targeted, regarding scientific and non-scientific factors influencing the decision to discontinue or refuse haemodialysis in elderly patients, were put to nephrologists.

Results. Psychological and physical deterioration emerged as the principal factors governing decisions to refuse or discontinue treatment. The interviewees felt that severe dementia (15 out of 17 nephrologists), irreversible neurological sequelae of a CVA (11 out of 17) and, paradoxically, patient refusal (10 out of 17) were factors to be taken into account in the decision to discontinue haemodialysis. Although the main reasons for refusing dialysis were cognitive disorders, severe dementia and irreversible neurological conditions, none of these factors were actually found to be in and of themselves decisive.

Conclusions. This study has shown that refusing or discontinuing dialysis are practices accepted by the vast majority of nephrologists in one region of France. Patient refusal is not a basis for denial or discontinuation of dialysis in elderly patients. Our investigation has demonstrated a consensus regarding decisions to refuse or discontinue dialysis.

Keywords: elderly; haemodialysis; refusal; renal insufficiency; withdrawing; withholding

Introduction

In Britain, Canada and the United States, the decision to discontinue haemodialysis is the principal cause of death among elderly patients on dialysis, especially among those over the age of 75. A study published in 1986 showed that discontinuation of haemodialysis was the cause of 22% of 704 deaths in 1766 patients being treated for end-stage renal disease and monitored between 1966 and 1982 [1]. These statistics have subsequently been confirmed by other studies, which revealed that between 6 and 26% of deaths were brought about by the decision to discontinue haemodialysis [2].

Little information is available that would help determine the number of deaths in continental Europe resulting from a decision to discontinue haemodialysis. One European study reported that the annual percentage was ~4% [3]. In France, between 1987 and 1990, discontinuation of haemodialysis accounted for 2% of all deaths. In the majority of cases, the decision to discontinue was taken because of severe intercurrent illness. A recent French study published in 2001 on the causes of death in a cohort of 1436 patients on haemodialysis concluded that, over the course of 1 year, 20.4% of the deaths occurred as a result of the discontinuation of dialysis [4].

At the beginning of the third millennium, the ageing of the population is an inexorable sociological phenomenon. Doctors, philosophers, sociologists and economists are now assessing how this will affect the present and future needs of the elderly. In the field of medicine, there is a trend towards specialization in geriatric nephrology. In fact, the average age of individuals standing to benefit from renal haemodialysis is constantly increasing, with an ever higher proportion of persons aged over 75. This will rapidly lead to an increase in problems related to the acceptance or rejection of requests to carry out or discontinue haemodialysis treatment in the elderly.

The objective of this study was to examine the current practices of nephrologists in a western region

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of France. A questionnaire was written on the basis of bibliographical information. In certain countries, although age is no longer an exclusion criterion, there is a tendency to rely upon other factors to discontinue or refuse haemodialysis. Brocker [5] demonstrated in his study that, in the US, age was no longer a criterion for the discontinuation of or refusal to start dialysis. Other illnesses were then focused upon by Brocker as factors potentially rendering renal dialysis futile: cancer, AIDS, terminal heart failure, pulmonary pathologies, peripheral vascular disease and incurable neurological diseases, such as Alzheimer's. Research conducted by Holley *et al.* [6] clearly demonstrated that severe neurological sequelae of stroke constitute sufficient justification for nephrologists in the US to refuse or discontinue dialysis. Hirsch *et al.* [7] recommended that renal dialysis be considered non-beneficial for patients with non-uraemic dementia, metastatic or refractory cancer, irreversible neurological diseases that significantly restrict mobility and daily activities, or multiple organ failures, and for patients for whom the provision of renal replacement treatment is technically impossible. A decision clearly expressed by the patient to forego medical treatment was also designated as a circumstance justifying discontinuation or refusal of haemodialysis. In France the medical decision to forego dialysis is deemed legitimate only if there is both a major loss of autonomy and isolation from the family or from society [8]. Through a questionnaire, we sought to obtain answers to two principal interrogations: what are the issues underlying nephrologists' decisions to discontinue or refuse renal dialysis treatment in the case of elderly patients?

In the case of elderly patients, either of sound mind or with cognitive disorders, how do nephrologists react to requests to discontinue or to refusals of haemodialysis?

Subjects and methods

All nephrologists practicing haemodialysis both within and outside dialysis units in the French regions of Loire-Atlantique, Vendée, Iles et Vilaines and Maine et Loire were contacted and interviewed. All agreed to participate and a face-to-face interview was planned. The younger nephrologists were not excluded because of age; the sample studied comprised those nephrologists in the region practicing haemodialysis in dialysis centres. Nephrology interns, however, did not take part in the study, as they do not yet possess a certified, independent and validated haemodialysis practice.

The only exclusion criterion, attendance at a group interview, was applied retrospectively. Only one interview was excluded. The questionnaire was formulated on the basis of bibliographical research on the discontinuation and refusal of haemodialysis in elderly patients.

On the basis of this bibliographical information, we formulated a semi-directive questionnaire on the subject of haemodialysis discontinuation or refusal in patients aged over 65. Individually, the practitioners were requested not to provide information about their qualifications or status

prior to the interview, or about the nature and duration of their professional experience with dialysis. Initially, the questionnaire dealt with the subject of elderly patients opting to forego haemodialysis. Practitioners were then each asked to provide a personal, subjective estimate of the number of occasions on which they had received a request to not initiate or to discontinue haemodialysis during their careers. These nephrologists were then asked to explain the actual reasons for the decisions they make with regard to the initiation (or non-) of haemodialysis or its discontinuation. Their reasons were then categorized into scientific and non-scientific factors. Subsequently, the potentially influential factors culled from our bibliographical research were presented to the practitioners for consideration. Might a practitioner have personally influenced a patient's decision to forego treatment? We also covered the following aspects: patient age (which was divided into four 10 year blocks, from 65 to 95 and above); the patient's place of residence (whether treated at home with or without a caretaker, in a rest home, long-term hospitalization, or residing with a host family); the patient's level of dependency (from independent to totally dependent); the patient's level of cognitive function (confusion and slight, average and severe dementia); the cost of dialysis; the decision to forego treatment made by patients of sound mind, or by cognitively impaired patients or by their families; quality of life; and presence of severe and irreversible neurological disease, metastatic or refractory cancer or multiple organ failure. For each aspect, might a practitioner have personally influenced a patient's decision to forego treatment? For discontinuation of dialysis, the same interview schema was applied, with the only difference being that lower limb arteriopathy was added to the list of factors that could influence the practitioners' decision to discontinue dialysis. Practitioners were then questioned on the three situations in which repeated requests may have been made to discontinue or forego treatment by, (i) an elderly patient of sound mind, (ii) an elderly incapacitated patient with altered cognitive functioning and the patient's family, and (iii) a person close to an incapacitated patient. The practitioners then had an opportunity to discuss any regrets that may have developed with regard to the decisions they made to discontinue or to refuse dialysis or its discontinuation to elderly patients. Finally, the practitioners were asked if they had obtained the patient's consent before each dialysis session.

Results

During the course of the study, 17 interviews were conducted in six different nephrology hospitals. The durations of the interviews were between 30 min and 2 h 30 min (average, 1 h 15 min). We interviewed 10 female practitioners and seven male practitioners. Their ages ranged between 30 and 60; the average age was 44.2 for the female practitioners and 45.4 for the male practitioners. Their number of years of experience in haemodialysis ranged from 4 years to 33 years (average, 20.7 years) (Table 1). Refusal of haemodialysis to elderly patients is defined as non-initiation of extrarenal purification treatment in a patient with end stage renal disease (ESRD). Only one practitioner had never refused starting an elderly patient on haemodialysis. The factors underlying such decisions are shown in

Table 1. Number of years of experience with haemodialysis in the practitioners interviewed

0–5 years	1
5–10 years	2
10–15 years	1
15–20 years	4
20–25 years	3
25–30 years	3
>30 years	3

Table 2. Non-medical factors governing refusals to initiate by nephrologists

Autonomy	5
Quality of life	6
Suffering	4
Patient refusal	8
Family refusal	0

Table 3. Medical factors governing refusals to initiate haemodialysis by nephrologists

Cognitive disorders	11
History of sickness	0
Antecedents	0
Diagnosis	0
Prognosis	12

Tables 2 and 3. The principal non-scientific factors not to start haemodialysis were the refusal of the patient and quality of life (if major social disruption was involved). The scientific factors influencing the decision not to offer haemodialysis were cognitive disorders and prognosis. Cognitive disorders were, undeniably, the most significant factor influencing physicians' refusal to start haemodialysis. For 88% of the nephrologists interviewed, severe dementia was considered to be a condition that justified denying dialysis. Irreversible neurological sequelae of stroke would influence 64% of nephrologists to take the same position. Refusal by the patient would influence the course 58% of practitioners would take. For more than one-third of them, metastatic or refractory cancer, multiple organ failure or deterioration of quality of life would also have a bearing on decisions to deny haemodialysis. Table 4 shows all of the factors that could be taken into account in reaching the decision not to initiate haemodialysis in elderly patients.

Each of the nephrologists interviewed had at some time or another decided to discontinue haemodialysis of elderly patients; nine of them stated that they had discontinued haemodialysis on more than 10 occasions each. Medical and non-medical factors were considered for discontinuation of haemodialysis in the same manner as for haemodialysis refusal. The principal reasons for discontinuation were physical and mental deterioration and, to a lesser extent, somatic complications (five out of 17 practitioners) and the development of intercurrent illnesses (two out of 17). For the practitioners studied, cognitive disorders were the principal

Table 4. Factors potentially influencing the decision to discontinue the haemodialysis of elderly patients

95 years old and more	4/17
Home with help	4/17
Home without help	1/17
Retirement home	3/17
Hospital	3/17
Total loss of autonomy	3/17
Severe dementia	15/17
Patient refusal	10/17
Family refusal	1/17
Quality of life	6/17
Severe neurological disorders	11/17
Metastatic cancer	6/17
Multi-organ failure	6/17

Table 5. Medical factors governing discontinuation of haemodialysis

Physical degradation	13
Psychological degradation	15
Others pathologies	3
Complications of renal failure	5

conditions leading to discontinuation of haemodialysis. Also, discomfort during haemodialysis and, for a minority of practitioners (three out of 17), refusal by the patient to continue dialysis, and deterioration in the patient's quality of life were the basis for these decisions to discontinue treatment. Tables 5 and 6 illustrate the factors governing such decisions. The nephrologists interviewed stated that, from among the factors involved, severe dementia (15 out of 17 nephrologists), severe and irreversible neurological sequelae of stroke (14 out of 17) and, paradoxically, refusal by the patient (11 out of 17) would be foremost among the factors governing their decision to discontinue haemodialysis (Table 7). Refractory or metastatic cancer, multiple organ failure and, to a lesser extent, advanced age (95 and above) and total loss of independence were considered to be other, non-priority, factors that would be taken into account when deciding to discontinue haemodialysis. The majority of nephrologists interviewed do not discontinue haemodialysis when faced with a patient's refusal: 12 of them would not agree to stop dialysis if a patient of sound mind were to ask repeatedly to forego haemodialysis; 13 of them would continue with haemodialysis if a patient with a cognitive disorder repeatedly asked to forego haemodialysis; 15 of them would not discontinue haemodialysis if discontinuation were requested by the family (in the case of a patient with cognitive disorders). Two practitioners expressed regret over having discontinued haemodialysis. One practitioner had discontinued dialysis because of the patient's severe heart failure; *a posteriori*, continuing haemodialysis might have improved the patient's condition. The other nephrologist's decision to discontinue was made quite some time ago, and today this nephrologist would not discontinue for the reason used then (age). However,

Table 6. Non-medical factors governing discontinuation of haemodialysis

Loss of autonomy	0
Cognitive disorders	15
Quality of life	2
Pain	6
Family refusal	0
Patient refusal	3

Table 7. Factors liable to influence the discontinuation of haemodialysis in the elderly

85–95 years old	1/17
95 years old and more	3/17
Home with help	1/17
Home without help	2/17
Retirement home	3/17
Hospital	3/17
Total loss of autonomy	4/17
Severe dementia	15/17
Cost of dialysis	1/17
Patient refusal	11/17
Family refusal	1/17
Severe neurological disorders	14/17
Metastatic cancer	4/17
Multi-organ failure	4/17
Arterial pathology	3/17

half of the practitioners spontaneously disclosed regretting their decisions not to refuse to start dialysis. They felt that they had consciously made decisions that were cruel to their patients, because they had put them through the treatment.

Discussion

History of haemodialysis in elderly

The provision of renal replacement therapy to elderly patients with ESRD has gone through two phases. In the early 1960s, the Seattle Artificial Kidney Center systematically refused to provide haemodialysis to individuals over the age of 45 [9]. Until 1980 in Great Britain very few patients over the age of 60 commenced haemodialysis treatment [10]. In 1981 in Canada, only 25% of patients receiving haemodialysis were over 65 years old. In the 1980s in continental Europe, elderly patients receiving haemodialysis constituted 9% of the total number of patients on haemodialysis [11]. Increases in financing provided specifically for dialysis, and technical progress made in the provision of renal replacement treatment are two factors that have enabled the oldest ESRD patients to receive such treatment. At the end of 1994, ~650 000 ESRD patients worldwide were receiving a form of renal dialysis: 85% were receiving haemodialysis, 15% were receiving peritoneal dialysis. In the US, 47% of patients receiving haemodialysis are aged over 65, and it is predicted that this proportion will increase to 60% [12]. In Canada, the proportion is over 40%. In France, patients over 60 currently constitute over

half of those requiring dialysis, though they constitute only a quarter of the French population. In 1997, 25 000 patients in France were on dialysis, 90% of them on haemodialysis.

The population of active nephrologists in the region can be characterized by their age, sex and number of years practicing haemodialysis. The experience of the nephrologists currently practicing haemodialysis has developed over the years as a generation of doctors 'imposed' this technique, accepted it and developed it. They led a long fight, so that they could take control, especially of elderly persons with terminal kidney failure. They had to, like the nephrologists in other countries, work hard to gain acceptance of the increased use of the technique.

Refusal to initiate haemodialysis

The reasons given by the interviewed nephrologists for refusing initiation of haemodialysis in elderly patients were confirmed by the responses they gave to individual patient selection criteria in the questionnaire. Advanced dementia and severe neurological sequelae of stroke were the two conditions that had the most significant influence on the decision of whether or not to provide dialysis. These responses are consistent with the statistics in the available literature [5,6]. Refusal to initiate haemodialysis is a decision made by the vast majority of nephrologists. However, the refusal of the patient did present them with complications. Autonomy of the patient to exercise freedom of choice is an ethical principle. The Belmont report in the US criticized the principle of respect for an individual's autonomy, which forces doctors to abide by the decisions and preferences of patients. Freedom of choice must be exercised with full knowledge of all relevant considerations and on the basis of reliable, clear, specific and appropriate information.

In the US, 20% of renal dialysis candidates chose to forego haemodialysis. One of the findings of our study was that the younger nephrologists respect this principle of freedom of choice [13]. By contrast, the more senior nephrologists tended to resist a patient's decision to forego dialysis. Since they are aware of the benefits of haemodialysis, they are of the opinion that refusal to initiate by a patient means that they have not sufficiently convinced the patient of these benefits. This is a conviction borne out of experience with, for example, patients with respiratory distress (produced by ESRD-related vascular overload), who previously having refused extra renal treatment, receive emergency haemodialysis, and are greatly improved by the procedure (and subsequently decide to continue with chronic dialysis treatment). Some authors, aware of the benefits of haemodialysis, argue vehemently in favour of providing haemodialysis, unless there is a clearly identifiable contraindication, and then re-evaluating the management 3 months into the dialysis treatment. It should be noted that epidemiological statistics concerning survival rates in elderly

patients do provide grounds for optimistic prognoses. Indeed, observations made of survival on haemodialysis both in France [4] and in the US and Canada [14] reveal that 55% of patients over the age of 70 might still be alive 2 years later, and 25% of elderly patients on haemodialysis could be surviving 5 years later.

To a certain extent, this approach of insistence on initiating haemodialysis in elderly patients appears to be governed by compassion. In relation to nephrology specifically, compassion becomes exaggerated, with the practitioner feeling compelled to persuade patients to agree to haemodialysis. All nephrologists continue caring for patients with ESRD irrespective of the patients' position with regard to dialysis. The role of compassion in making professional recommendations has been demonstrated in the UK, the US and Canada, and also in the countries of southern continental Europe; compassionate decision-making enables nephrologists to continue to protect the most vulnerable and frail of their patients.

However, both young and experienced nephrologists facing decisions to refuse to initiate haemodialysis refer, and will continue to refer, a patient to another colleague. They are aware that one practitioner may be more inclined to refuse to initiate treatment than another. A second consultation with a colleague might favour the development of greater trust, and enable the wishes of the patient to be understood more fully.

Although cognitive disorders, severe dementia and severe and irreversible neurological conditions in the candidates under consideration justified refusal to start haemodialysis, in no case did any of these factors totally determine the final decision. In fact there was nothing systematic about the decision-making process. Practitioners viewed the patient both from a clinical and a social point of view. They based their decision on a risk/benefit assessment, taking into account advantages and disadvantages: 'what will be the benefit of dialysis for the patient?' the nephrologists asked themselves.

The benefit of beginning haemodialysis and maintaining life is intrinsically linked to the patient's social condition. When there is no social interaction, haemodialysis would appear to be inappropriate and futile, irrespective of the underlying condition. By contrast, continuing social interaction, even against the background of a disease with a highly uncertain or terminal prognosis, would mean that the patient could still continue to benefit from the treatment. In the latter circumstance, many practitioners were willing to begin haemodialysis for a very short period.

Discontinuation of haemodialysis

US studies report that discontinuation of haemodialysis is generally the first or second highest cause of death in elderly patients, and the third highest for younger patients [2]. Kjellestrand [15] demonstrated that cerebral accidents, dementia and serious and acute conditions are the principal pathologies cited for the

decision to discontinue haemodialysis in incapacitated patients and possibly also in those who are still of sound mind. The nephrologists interviewed were of the opinion that physical and psychological deterioration (Table 6) were the principal criteria motivating their decision. Cognitive disorders, considered as a part of the dementia's manifestations occurring concurrently with severity of the disease and severe neurological disorders were, and are, the principal pathologies leading to the discontinuation of haemodialysis. Recent epidemiological statistics confirm that, in France, haemodialysis is discontinued principally if the patient has dementia, but more generally if as a result of physical and psychological deterioration he or she is dependent on others for daily activities [4]. Discomfort during haemodialysis sessions and aggressive, agitated patients who cry out or require sedation are continuing concerns for practitioners with regard to the decision to continue treatment. If such disruptive patient responses are not sufficiently abated by appropriate normal measures, then discontinuing haemodialysis may be proposed.

In France, the patient's refusal to continuing treatment is not taken into account. Changes in the law that disapprove of treatment refusal are already beginning to be accepted by nephrologists. In fact, 10 of the practitioners we interviewed were of the opinion that patient refusal to continuing could influence their decision. Neu and Kjellestrand's study [1] established that patients chose to interrupt dialysis generally after 3 years. In the US, it is the patient who initiates the discussion to stop haemodialysis. In Kjellestrand's report [15], 58 out of the 66 patients of sound mind who had chosen to discontinue haemodialysis had made the decision without medical or family intervention. In the case of 17 out of 64 incapacitated patients it was the family, and in 47 cases the doctor that had initiated the discussion. In a retrospective analysis in the UK of outcome in very elderly patients, the cause of 38% of deaths was withdrawal of dialysis [16]. The decision to withdraw renal haemodialysis is often made after weeks or months of patient decline, or follows a serious intercurrent event. But as the authors remarked, in the UK, there are a number of barriers that may prevent elderly patients from receiving renal haemodialysis or from being referred to nephrologists by general practitioners or other physicians, obviating consideration of haemodialysis treatment by nephrologists or its refusal by patients. Some nephrologists consider age to be a barrier to dialysis. Some say that an increase in haemodialysis withdrawal has coincided with the application of far more liberal criteria for the acceptance of patients for renal dialysis. Age and co-morbidity per se are contraindications for treatment. Procedural and clinical practice guidelines and general principles for withdrawing dialysis are published in UK [17], USA [18] and Canada [10]. Patients' wishes may not be overlooked in these countries. All aspects of the situation (diagnosis, prognosis and social circumstances) must be discussed,

including especially supportive terminal care if renal dialysis is withdrawn. In the USA, advanced directives are generally honoured, and play a role in decision-making [19]. The prevalence of advanced directives among American haemodialysis patients is high, higher than in Germany or Japan [20]. A study was performed in Japan to elicit the preferences of patients on haemodialysis with regard to the continuation of the dialysis if they were severely demented or had terminal cancer [21]. Of that cohort, 80% would want to continue dialysis if they were demented and 45% if they had terminal cancer. The changes that have taken place in the US and Canada may also occur in France, with the emergence of legally recognized surrogates close to the patients, who may be permitted to express an opinion on the nature of the patient's treatment once the patient becomes incapable of receiving medical information or of providing consent. However, no more than an opinion can be solicited from this individual. The doctor alone decides on and provides the treatment appropriate for the medical condition of the patient. In France, advanced directives exist legally but have not yet been used in medical practice. Consequently, such issues are not dealt with at the beginning of treatment.

Moreover, some think that the decision to discontinue haemodialysis should be made only by the doctor following substantial discussion with the caregiving team and the family, since it is a medical decision. The decision must not give rise at a later stage to a sense of regret or guilt felt by those close to the patient or by the caregiving team: this was a finding of the study conducted on haemodialysis discontinuation in France [4]. In 77.5% of cases, the decision was based on medical considerations. The majority of nephrologists are conscious of the fact that a suicidal inclination underlies the request to discontinue haemodialysis [22]. French nephrologists entertain doubt about the sincerity of a patient's refusal of treatment. It must indicate psychological problems, they believe. Doctors in the US, on the other hand, feel that the desire to discontinue haemodialysis does not constitute a suicidal act when expressed by the patient. Lawsuits have been filed against nephrologists in the US in this respect. But with regard to the principle of autonomy and freedom, US doctors are more relaxed, since death 'is a result of the initial illness'. The interviewed nephrologists therefore endeavoured to understand the reasons for the request: 'What are the underlying motivations for the request?', 'Is there a depressive element?' or 'Is there a family, social or other type of conflict involved, or more importantly, is there a physical problem?'. Many practitioners believe that geriatric depression underlies the decision to forgo haemodialysis, and that it can be cured. The younger, less experienced nephrologists would comply with the request if the patient were to repeatedly and unwaveringly express a desire to forego treatment.

Another issue that bears on decision-making in this context is the caregiving team itself manifesting despondency or losing heart. Caregivers must be

able to combat the feelings of fatigue or weariness that can arise once a patient's request to discontinue haemodialysis has been accepted. The patient must always remain the central focus, and caution must be exercised when deciding to discontinue haemodialysis.

Consent of haemodialysis

None of the nephrologists interviewed requested the patient's consent before each haemodialysis session. If a patient attended the session, then consent was implicit. Patients are free to choose whether or not to come. This freedom is respected by young nephrologists, but the most senior nephrologists express greater resistance to and resentment of such freedom of choice. Indeed, some nephrologists have a very hard time accepting a patient missing a haemodialysis session, and they are prepared to report the absence to ensure that the public authorities go and seek out 'recalcitrant' patients and bring them to the session.

Some nephrologists solemnly solicit the patient's consent to undergo dialysis during the first session, but all nephrologists felt that to request consent before each dialysis session would be impossible and impractical.

Conclusions

The aim of this study was to provide an ethical perspective for nephrologists [23], in line with the definition provided by Jean Bernard: 'Ethics are the reflection upon and the discussion of principles'.

This study has shown that exercising the right to decide to refuse or discontinue haemodialysis is a practice accepted by the vast majority of nephrologists in one region of France. In the opinion of those nephrologists interviewed, the criteria for refusing haemodialysis were cognitive disorders with severe dementia and severe irreversible neurological diseases. Patient refusal is taken into account when a physician refuses initiating haemodialysis, but it is tempered by a second opinion, or by the desire of the doctor to oppose this 'reticence'. Physical and psychological deterioration and cognitive disorders are the main factors governing the decision to discontinue haemodialysis in elderly patients. Refusal of treatment by a patient of sound mind is taken into account, interpreted, analysed. Appropriate remedial action is taken where a physical, social or family factor underlies the patient's refusal.

Investigation has demonstrated consensus in the decisions of physicians to refuse or discontinue haemodialysis. However, younger, less experienced nephrologists would be more readily prepared to accept a patient's refusal to undergo extra-renal treatment or a patient's desire for its discontinuation.

Conflict of interest statement. None declared.

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