Depression in chronic dialysis patients: assessment and treatment

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Introduction

The impact of psychosocial factors on the outcome of patients with end-stage renal disease (ESRD) has been receiving more attention recently [1–4]. The progressive increase in both the incidence and prevalence of patients with ESRD throughout the world, the high mortality rate and rising costs of providing care for patients with ESRD [1] have focused research interest on those aspects of ESRD care which affect patient outcomes and are potentially amenable to modification to improve these outcomes.

Psychological factors—important predictions of patient outcome

Although the psychological and social difficulties experienced by patients maintained on dialysis have been noted and commented on for some time, it has been only recently that researchers have begun to demonstrate that psychosocial factors are important predictors of patient outcome [2–5]. For example, as the SF-36 Quality of Life and the Kidney Disease Quality of Life (KQoL) questionnaires have become widely used, it is apparent that dialysis patients have higher scores on the emotional components of these assessments than controls, indicating, perhaps not surprisingly, that emotional difficulties are present in dialysis patients. However, what is particularly noteworthy is that scores on the emotional components of these questionnaires are in fact strong predictors of patient outcome [6]. Thus, in the data base of Fresenius Medical Care in the United States, Lowrie et al. have demonstrated that dialysis patients with scores lower than 51 on the Mental Component Scale of the SF-36 have progressively increasing risks of death. In fact, the patients with scores of 0–37 have twice the relative risk of death than those patients with scores of 51 or higher [6].

Characteristics of depression and its prevalence in dialysis patients

Depression is generally accepted to be the most common psychological problem encountered in patients with ESRD [2–5]. Although the reported incidence of depression in patients maintained on dialysis varies widely, these differences have been attributed to the differing criteria and methodology used to diagnose depression [2,5]. It is important to be clear what exactly is meant by depression. Although depressive symptomatology is commonly encountered in dialysis patients, the syndrome of clinical depression consists of the presence of a constellation of symptoms including anhedonia and feelings of sadness, helplessness, guilt, hopelessness, etc. and is accompanied by changes in sleep, appetite, and libido. Recent studies that have employed the Beck’s Depression Inventory (BDI)—a standard self-administered questionnaire commonly used in psychiatric practice to screen patients for depression—have reported remarkably similar findings [4,5,7]. These studies note that between one-third and one-half of dialysis patients have scores suggesting the presence of at least a moderate degree of depression (BDI scores of 11 or greater). Furthermore, Wuerth et al. observed that when these patients were then evaluated by a trained psychiatric interviewer for the presence of clinical depression, 85% of dialysis patients with BDI scores of 11 or greater met the DSM IV criteria for the diagnosis of major depression and had scores of 17 or more on the 21-item Hamilton Depression Scale (unpublished observation). These patients were, therefore, candidates for antidepressant medication by standard psychiatric practice guidelines.

Depression scores (BDI) predict survival in dialysed patients

Does depression in fact impact on long term patient morbidity and/or mortality in patients maintained on dialysis? Depression has clearly been demonstrated to predict mortality in a variety of medical conditions [8,9]. However, demonstrating the impact of depression on morbidity and mortality in patients with ESRD has proved to be more difficult [10]. Of particular note, however, are three recent studies [4,7,11,12]. Kimmel et al. have recently performed a detailed
chronic peritoneal dialysis (CPD) and demonstrated a relationship between a variety of psychosocial parameters and the incidence of peritonitis [11,12]. In these studies, patients who had more than one episode of peritonitis had higher levels of anxiety and depression and a poorer overall quality of life assessment than patients with lower rates of peritonitis [11]. Furthermore, patients who had scores on the BDI of 11 or greater had peritonitis rates that were twice the rate of patients with low BDI scores [12]. Since peritonitis is the major reason for technique failure and hospitalization for patients maintained on CPD [13], these data may well suggest an association between these psychosocial factors and hospitalization and technique failure rates in patients maintained on CPD. Finally, Steele et al. examined the relationships between patient assessed quality of life and a variety of medical and psychological variables and observed that depressive symptoms (as assessed by the BDI) proved to be a much stronger correlate of overall quality of life than dialysis adequacy [7].

Treatment of depression

But is the clinical depression of the patient maintained on dialysis amenable to therapy or does it just represent an untreatable manifestation of the patient’s chronic illness? Does the higher mortality and morbidity in ESRD patients with depression simply reflect a psychological response to a poorer overall medical condition? The treatment of depression in patients with ESRD with anti-depressant medication presents challenging problems and has been addressed in few studies systematically. Kennedy et al. described the successful treatment of major clinical depression in a small group of dialysis patients using desipramine in five patients and maprotiline in one patient, with a significant reduction in BDI scores observed after seven weeks of therapy [14]. The more recent study by Wuerth et al. describes the successful treatment of depression in a cohort of patients maintained on CPD while underscoreing the difficulty in successfully using antidepressant medication in dialysis patients (unpublished observations). In this study, about 130 patients completed BDI questionnaires and about half had scores of 11 or greater, suggesting at least a moderate degree of depression. Of those patients who were felt to be candidates for further investigation, only half agreed to further evaluation by a trained psychiatric team. Of those patients, half successfully completed a 12 week course of antidepressant medication with a 50% reduction in their scores on the BDI from a mean ± SD score of 17.1 ± 6.9 to 8.6 ± 3.2 (P = 0.003). Thus, although 50% of the patients had BDI scores suggesting at least a moderate degree of depressive symptomatology, only 11 of these 60 patients (18%) completed a 12 week course of therapy. Many patients refused either further psychological evaluation or were unwilling to take anti-depressant drugs in addition to their standard medications. The anti-depressants used in this study [sertraline, nefazodone, and bupropion] were well tolerated with few side effects, although the doses used were relatively low. In this study, the investigators did not comment on the correlation between the treatment of depression and patient outcomes. It must be kept in mind that careful follow-up and outcome studies of patients with ESRD treated for depression are essential, particularly in view of the recent reports describing an association between the use of antidepressant medication and various adverse medical outcomes. For example, Cohen et al and Roose et al. observed an increased risk of myocardial infarction or adverse cardiac events in patients receiving tricyclic antidepressants, but not selective serotonin reuptake inhibitors (SSRI) [15,16]. Thapa et al. noted an increased risk of falls in nursing home residents receiving both tricyclic and SSRI anti-depressants compared to residents not receiving anti-depressant medication [17].

Conclusions

In summary, the available information would suggest that: i) clinical depression is commonly encountered in patients with ESRD, ii) the BDI is an easily administered questionnaire that is a useful screen for potentially treatable clinical depression in this patient population, iii) it is challenging to organize an effective medication treatment program of depression for patients with ESRD, iv) anti-depressant medication can result in a significant improvement in depressive symptomatology, v) anti-depressant medication is often well tolerated by patients with ESRD, vi) whether this improvement in depressive symptomatology eventually results in improved patient outcomes requires further investigation.

Based on these observations, we have instituted a program in our dialysis units of screening patients every 6 months with the BDI. Patients with scores of 11 or greater are referred to a trained psychiatric interviewer. If the patient has a score on the 21-item Hamilton Depression Scale of 17 or greater and meets the DSM-IV criteria for depression, anti-depressant medication is prescribed and the patient is carefully monitored.

It is hoped that if the personnel (nurses, physicians, social workers, nephrology trainees) caring for patients with ESRD in the dialysis centers are made increasingly aware of the possible treatment options available for patients with clinical depression, effective treatment strategies can be devised and at least some of the
suffering, morbidity and mortality of the patients diminished.

References

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