

Psychosocial Factors in Patients With Chronic Kidney Disease

There is a substantial body of literature documenting the psychological impact and social burden of living with chronic disease. Depression and depressive affect, impairment in quality of life (QOL), disruptions in social support and vocational capacity, and somatic symptoms represent different manifestations of psychosocial distress. It is now clear that many such psychosocial processes are present in patients with chronic kidney disease (CKD).¹⁻⁷ Studies in diverse patient populations have shown that psychosocial factors are associated with increased morbidity and mortality, specifically related to cardiovascular disease.⁸ Proposed pathogenic links between psychosocial distress and cardiovascular disease include activation of the hypothalamic-pituitary-adrenal axis and autonomic nervous system, increased secretion of proinflammatory cytokines including interleukin 1 and interleukin 6, platelet activation, and dysregulation of serotonin and other neurotransmitters.^{8,9} With widespread recognition of the large burden of cardiovascular morbidity and mortality in patients with CKD, there has been growing interest in exploring potential associations between psychosocial illness and cardiovascular as well as other outcomes in this population. Early studies have, in fact, documented higher levels of proinflammatory cytokines in dialysis patients with depressive affect and marital discord and established correlations between depression and mortality.¹⁰⁻¹³ These intriguing findings underscore the need for a greater understanding of the burden and impact of psychosocial illness in patients with CKD. This symposium reviews the work that has been performed to date on the psychoso-

cial effects of and adaptation to CKD. These issues are discussed from the perspective of the diverse manifestations of psychosocial distress as well as from the viewpoint of the different patient populations who suffer from and receive care for CKD.

This symposium begins with a description of the physical and emotional symptoms that can affect patients with CKD. Symptoms are a primary manifestation of chronic illness and play an important role in patients' adjustment to and experience with disease. Among patients on maintenance hemodialysis, symptoms have been shown to be prevalent and severe and associated with depression and impaired QOL.¹⁴⁻¹⁷ Although less well studied, symptoms also appear to be common and clinically consequential in patients treated with peritoneal dialysis (PD) and those with CKD not dependent on renal replacement therapy (RRT).^{6,18} Recent studies have elucidated effective treatment options for certain symptoms including pain and erectile dysfunction, yet suggest that such therapies are underutilized. These issues are addressed by Dr Weisbord.

There is now a robust literature showing that depression is common in the end-stage renal disease (ESRD) population.^{10,19} The factors predisposing such patients to develop depression may include loss of vocational capacity; physical and functional effects of kidney failure and RRT; large burden of somatic symptoms; and dependence on a chronic, life-sustaining treatment. Kimmel and colleagues consider the issue of depression in CKD and show the adverse effects of this psychological condition. Similarly, dependence on chronic dialysis can have important unfavorable effects on social support and patients' marital and familial roles. Close personal relationships can take on added importance in the face of ESRD, yet may suffer as a result of the rigors associated with a chronic treatment such as dialysis. Marital dissatisfaction and disruption in patients' social support structure may compound the burden of living with CKD and negatively affect patients' adapta-

Dr. Weisbord was supported by a VA Health Services Research and Development Career Development Award (RCD 03-176).

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1548-5595/07/1404-0002\$32.00/0

doi:10.1053/j.ackd.2007.07.012

tion to disease and compliance with therapy. Interesting findings have also emerged on associations between social support and immune system functions, providing biologic plausibility to observations linking greater levels of social support with survival. These issues are described by Cohen and colleagues.

Health-related quality of life (HRQOL) has been shown to be a highly significant and often underappreciated component of the disease experience of patients with CKD.^{2-4,20} HRQOL has been increasingly recognized as an important health outcome by clinical investigators, clinical providers, and health care agencies, particularly for patients who are confined to maintenance dialysis therapy on an indefinite basis. Unruh and Hess address the conceptual model of HRQOL including issues surrounding the measurement of this construct in the setting of ESRD. The importance of implementing standard HRQOL assessment in the clinical arena is discussed, and the impact this may have on patients' symptoms, psychological illness, and functional status is explored. Similarly, it is increasingly recognized that along with prolonged life expectancy, renal transplantation also mediates improvements in patients' HRQOL.³ Dobbels and colleagues discuss determinants of and potential interventions to favorably affect HRQOL in this population of patients.

The mediators and manifestations of psychosocial distress and impaired HRQOL in CKD may vary widely based on patient demographics and modality of RRT. Although less well studied than in hemodialysis, psychosocial and HRQOL issues are well recognized in patients who receive PD.¹⁸ Wuertth and colleagues discuss the manifestations of psychological illness and correlates of impaired HRQOL in patients receiving this quotidian therapy and address how to organize and coordinate psychosocial care for chronic ambulatory PD patients, emphasizing strategies to deal with problem domains.

Advancements in our understanding of childhood kidney diseases and their management have resulted in improved survival of pediatric patients with CKD.^{21,22} With this has come increasing recognition of the psychosocial factors that can affect this population. In particular, children with excellent survival

face the challenge of transitioning to adulthood and dealing with their ongoing status as patients with CKD. Goldstein and colleagues review different facets of psychosocial illness in children with CKD, discuss a variety of instruments to assess HRQOL in this population, and delineate areas in need of future study to advance the field of psychosocial assessment in pediatric patients with CKD. Additionally, a unique set of factors can influence HRQOL in women with CKD. These issues are addressed in detail by Lew and Patel.

Finally, issues of palliative and end-of-life care among dialysis patients have garnered increasing attention with the realization that mortality rates remain high in this patient population.^{23,24} The decision to discontinue dialysis therapy is made by as many as 25% of patients, and this phenomenon is likely to become more frequently encountered by providers with the aging and growing burden of chronic illness in this patient group. Issues pertaining to end-of-life care and elective termination of RRT are addressed by Murtagh and colleagues, whereas Holley discusses the role and value of palliative care.

In summary, this symposium brings together unique insights into the role of psychosocial illness in CKD and highlights areas in particular need of future investigation. It is our hope that these articles will stimulate the nephrology community to increase their recognition of psychosocial factors in their patients with CKD and assist in developing innovative ways to manage and reduce the burden of psychosocial illness in the patient population.

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