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Use and Efficacy of Complementary Therapies in the ESRD Patient on Dialysis

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Background: End-stage renal disease (ESRD) is a common disease with more than 470,000 patients in 2014 undergoing dialysis in the United States (USRDS 2016). Patients with ESRD experience re-hospitalization rates at almost twice the level of older Medicare beneficiaries who do not have a diagnosis of kidney disease.

Although advances in dialysis treatment have contributed to improved survival of ESRD patients treated with hemodialysis, health-related quality of life (HRQoL) is much lower for those patients compared to the general population. (Suzuki, 2013). A negative correlation exists between depression and anxiety and HRQoL of patients on dialysis, and mean scores on the Kidney Dialysis Quality of Life Short Form (KDQOL-SF) domains is significantly lower in patients with the presence of anxious and/or depressive symptoms when compared to patients without these symptoms (Ottoviani, 2016).

Patients with ESRD are exposed to side effects from ESRD itself as well as the treatment (hemodialysis) which can be associated with intradialytic and post dialytic hypotension, dizziness, cramps, headache, thirst, time required for treatment and travel, access procedures, among many others. Depression, anxiety, pain, sexual dysfunction and sleep disorders like insomnia, sleep apnea and restless leg syndrome are common (Vecchio, 2012).

There is an abundance of evidence suggesting that depression, anxiety, and perceived low quality of life are associated with increased risk of hospitalization and mortality.

Studies suggest complementary therapies can lower blood pressure, decrease respiratory rates, alleviate pain, relax muscles, reduce stress and depression, treat insomnia, and reduce adverse reactions during hemodialysis (HD). Modalities such as relaxation, music, therapeutic touch, deep breathing exercises, acupressure, acupuncture, art, yoga laughter, and hypnosis have been used as an independent nursing practice to minimize physical and psychological complications of renal failure (Koca Kutlu & Eren, 2014).

Purpose of the Study: To evaluate the attitudes and outcomes of complementary therapies on health-related quality of life including anxiety, pain and depression among ESRD patients.

Methods: We started by assessing feasibility of the study by distributing a short survey to assess interest of our dialysis patients in various complimentary therapies including massage, acupuncture, music and art therapy. We received an overwhelmingly positive response from our patients indicating that they would like to have this available. Patients were educated regarding the potential benefits of these therapies with the use of printed materials and a letter to all the patients from the hemodialysis unit Medical Director outlining the program concept. Participants were given the option to choose between 20-minute sessions of massage or acupuncture therapy once a week for 8 weeks by licensed acupuncturists and massage therapists while undergoing their usual HD session in the Chronic HD unit. Participants were asked to complete pre- and post- intervention surveys which consisted of the PROMIS Global Health Short Form, a validated tool that measures HR-QOL for chronic diseases and

conditions, and a Generalized Anxiety 7 Item Scale (GAD-7), to evaluate anxiety. Survey data was anonymous to minimize potential negative emotional impact associated with survey completion.

Results: A total of 101 patients were included in this study. The average age was 57.6 with dialysis vintage 7.5 years, 58% patients were male and the most common etiology of ESRD was diabetic nephropathy (45%). Patients had multiple comorbidities as can be expected for this population with the most common being hypertension (94%), diabetes mellitus (53%) and cardiovascular disease (53%). In this brief intervention study, we were able to find a trend toward improvement in overall HR-QOL as determined by the PROMIS score ($p=0.08$). Promise Mental Raw score has improved with intervention, which was statistically significant ($p=0.034$). Although not significant, GAD-7 scores decreased suggesting a decrease in anxiety level (see Table 1)

Summary Scores from PROMIS Global Health Short Form and Generalized Anxiety Disorder 7-Item Scale

Summary Score	Pre-Intervention Score	Mean (SD)	Post-Intervention Score	Mean (SD)	P value
PROMIS Physical Raw Score	12.75	(2.874)	12.84	(2.856)	0.827
PROMIS Mental Raw Score	12.89	(3.038)	13.88	(3.504)	0.034
GAD-7 Total Score	4.642	(5.06)	3.691	(4.298)	0.1493

Our hospitalization rates dropped over the two months the project was in place. While this is not statistically significant, it may suggest a trend that could impact hospitalization rates for ESRD patients on hemodialysis.

Conclusion: Our short interventional study revealed that the use of complementary therapies such as massage and acupuncture during HD may contribute toward improvement of HR-QOL in hemodialysis population and thus should be considered when addressing overall health status of these patients. We recognize that the quality of life and not just the quantity of life that we can offer to chronic dialysis patients matters.

References

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