

The preliminary effects on quality of life of intra-dialysis yoga as compared to an educational group for patients with end-stage renal disease

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Objective: The purpose of this study is to estimate the preliminary effects of intra-dialysis yoga as compared to an educational control on disease-related quality of life among patients with end-stage renal disease (ESRD) on maintenance hemodialysis.

Methods: Randomized clinical pilot study among patients with ESRD on hemodialysis. Patients were recruited who were 18 years or older, on hemodialysis for 3 or more months, and adequately dialyzed ($Kt/V \geq 1.2$). Patients who had acute or chronic medical conditions that would make participation in exercise hazardous were excluded. The intra-dialysis yoga intervention consisted of up to 36 intra-dialysis yoga sessions over 12 weeks taught by a certified yoga teacher during dialysis. The comparison group consisted of an established educational curriculum, Kidney School, which was divided to match the yoga intervention. Randomization was performed by dialysis shift schedule. The primary outcome for the study was quality of life as measured by the Kidney Disease Quality of Life 36 questionnaire, with a priori focus on the SF-12 Physical Component. This pilot study was designed to estimate preliminary effects to inform future larger clinical trials, and not powered to measure differences among groups. Continuous data are reported as medians with interquartile ranges and categorical data as percentages.

Results: 18 patients were assigned to intra-dialysis yoga and 13 patients to the educational arm. Among patients in the yoga arm, 13 patients completed the 12-week yoga protocol, while all 13 patients in the educational arm completed the 12-week Kidney School protocol. For the primary outcome, the intra-dialysis yoga arm reported a median positive change of 6.38 (interquartile range (IQR) -2.28 to 12.81), as compared to the educational group which reported a change of -1.51 (IQR -5.64 to 2.17). Other positive changes in the KDQOL were observed among the yoga group including effects of kidney disease (yoga 9.37 (IQR -3.53 to 17.98) versus education -6.25 (-21.88 to 21.88); burden of kidney disease (yoga 6.00 (IQR 0.00-29.69) versus education 0.0 (IQR -21.88 to 12.50); and disease symptoms (yoga 2.09 (IQR -2.08 to 10.42) versus education 4.16 (-3.13 to 35.00). A slightly negative change was observed in the SF-12 mental health component of yoga (-0.06 (IQR -5.15 to 10.45) versus education (3.26 (IQR -4.39 to 14.89).

Conclusion: Yoga positively affected kidney disease-related measure for quality of life.