



Does Ultrapure Dialysis Fluid Improve Quality of Life in Hemodialysis Patients?

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Abstract:

Introduction: Use of ultrapure dialysis fluid (UPDF) may offer hemodialysis patients advantages over conventional dialysate, including reduced infection risk, preserved residual kidney function, improved nutrition, reduced inflammation and improved anemia. In 2011, a new standard was published which defined differences between standard dialysis fluid and ultrapure dialysis fluid. It's unclear if these advantages will be seen if UPDF is widely adopted.

Methods: In 2013, our dialysis facility at Berkshire Medical Center, Pittsfield, Massachusetts installed a new water treatment system capable of producing ultrapure water for dialysis fluid. We hypothesized that use of UPDF might lead to improved quality of life, as measured by Kidney Disease and Quality of Life (KDQOL-36) scores. We examined the available KDQOL-36 scores of patients up to 18 months prior to and after installation of the new water System. We analyzed KDQOL-36 scores for these patients in 5 subscales, and calculated the mean change of each score, and analyzed the data for differences in the groups prior to and after installation of ultrapure water system.

Results: We were unable to demonstrate a difference in KDQO-36 scores in any of the 5 subscales from prior to and after installation of the water system. Values for comparison of KDQOL-36 scores pre-installation of new water system vs post installation for each subscale were as follows: Effects of Kidney Disease on Daily Life



p value 0.682, Physical Component Summary (PCS) p value 0.775; Mental Component Summary (MCS) p value 0.464; Burden of Kidney Disease p value 0.791, and Symptoms p value 0.862

Conclusion: According to our study, it is unclear whether the use of ultrapure dialysate will improve the quality of life in dialysis patients. However, given all the potential benefits of ultrapure dialysis fluid, use of ultrapure dialysis fluid compared to the standard dialysate fluid still deserves further study and should still be considered for use in the dialysis facilities

Biography:

Dr. Bindu B N S S Gandrapu completed her medical training at Zaporozhye State Medical University, Ukraine.

Recent Publications:

1. J Ped. Nephrology 2017;5(3)