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Synopsis from the article: [Ting GO, Kjellstrand C, Freitas T, Carrie BJ, Zarghamee S. Long-term study of high-comorbidity ESRD patients converted from conventional to short daily hemodialysis. *American Journal of Kidney Diseases* 2003;42:1020-35.](#)

Many patients on conventional hemodialysis (three or four times per week) experience symptoms related to their kidney failure, such as weakness, poor appetite, or shortness of breath between treatments. Some researchers found that more frequent hemodialysis (five or more treatments per week) improved symptoms in relatively healthy dialysis patients. In 2003, we reported our study of daily hemodialysis performed at El Camino Hospital in Mountain View, California.

Starting in 1996, we initiated therapy in 42 patients, most with very serious multiple medical problems in addition to kidney failure, and faring poorly on conventional hemodialysis. We reduced treatment time, but increased the frequency to six times per week. We kept the weekly treatment time the same; so, for example, instead of dialyzing 4 hours three times a week, the patients ran 2 hours six times a week.

Almost immediately after converting to daily dialysis, blood pressure improved, and most blood pressure medications were either reduced or discontinued. Patients felt much better, especially noting increased energy, better physical functioning, clearer thinking, and reduced symptoms related to their kidney disease and the dialysis treatments. Even though the treatments were more frequent, the patients were less bothered by them. They could (and did) drink more fluids, and had fewer symptoms during fluid removal by dialysis. Their anemia was better controlled and required less erythropoietin dosage. The patients spent less time in the hospital (hospitalization time reduced by 34%) and did not have more problems with their vascular access. All these results were statistically significant. None of the patients chose to return to conventional three times a week sessions.

We believe that patients do better on daily hemodialysis because their blood is cleaned more thoroughly when treatments are done every day, and because they have fewer “ups and downs” in blood pressure level, quantity of excess fluid, and amount of wastes in the body. We conclude that daily hemodialysis improves how patients feel and many of their clinical outcomes, even when they have many other medical problems to begin with.

Commentary by Todd S. Ing, MD

Dr. Ting's group demonstrated the superiority of 6 times a week dialysis treatments (each time 2 hours) over 3 times a week dialysis treatments (each time 4 hours), even in patients with a high degree of co-morbidity. Many other investigators have encountered similar results in various patient populations.