

Lynne Lanning

Optimal versus Adequate Hemodialysis: Experience of a Pre-pubescent Female Teenager

(Reprinted and modified with permission from
Lanning L. *Nephrology News & Issues* 2007;21:10)

To the Editor,

I want to thank you for the articles by Shad Ireland¹ and Paulette Boardman² in your February 2007 issue (*Going the distance with renal disease* and *HHD: A better way to do dialysis*). They addressed two important issues that are intrinsically linked: optimal physical and emotional health and that of adequate dialysis.

In 1993, our daughter Jenna went into kidney failure from type II membranoproliferative glomerulonephritis (MPGN 2; also known as Dense Deposit Disease). She was 7 years old. While peritoneal dialysis was adequate, she was often tired, did not grow well, and spent 12 hours each day dialyzing. Ultimately our frustration over the lack of basic science research on this disease, and the thought that Jenna would be dependent on dialysis the rest of her life, led us to start Kidneeds, an MPGN 2 research foundation. In 2000, she received a transplant that was short lived. However, she said she was grateful for the transplant, which gave her a glimpse of how good life could be without dialysis. When her kidney failed from recurrent disease, she began in-center hemodialysis. Three times a week, Jenna left home at 7:30 a.m. for high school and then went to the dialysis clinic, returning home no earlier than 9:00 p.m. Despite her determination to participate in life as fully as possible, she had hypertension, fluid overload, fatigue and inadequate dialysis. The worst was her memory impairment and delayed physical maturity; Jenna's identical twin, Jessica, mirrored what might have been. By the time Jenna and Jessica graduated from high school, they had stopped saying they were twins. Not only was there a 6-inch height difference, they looked years apart in physical maturity.

In 2004, Jenna began home hemodialysis six times a week using her fistula and that fall entered college. Within a few months of nearly daily dialysis, she went through puberty, normalized her blood pressure, and stopped using erythropoietin (Epogen). And her memory and cognitive function improved to the point that she now handles her double degree coursework in art and civil engineering as easily as her sister Jessica.

We need advocates like Shad Ireland to set the bar high for what dialysis patients can achieve. Dialysis is not just about keeping our bodies alive, but allowing patients to live fully as the productive members of society they want to be.

Lynne Lanning,
Kidneeds
Cedar Rapids, IA

www.medicine.uiowa.edu/kidneeds
<http://ceu.nursing.uiowa.edu/mpgn/signin.asp>

References

1. Ireland S. HHD: A better way to do dialysis. *Nephrol News Issues* 2007;21:48-50.
2. Boardman P. Going the distance...with renal disease. *Nephrol News Issues* 2007;21:57-9.

Commentary by Todd S. Ing, MD

Ms. Lanning describes the experience of her young daughter who, suffering from end-stage renal disease, has fared much better with high-intensity hemodialysis therapy than with a conventional, thrice-weekly hemodialysis regimen. Apart from the normalization of her hypertension and the absence of the need for erythropoietin therapy, the high-intensity therapy has also improved immensely her memory and cognitive function. In addition, the therapy successfully ushered in a puberty that had long been denied. The present report lends credence to the notion that, with regard to hemodialysis treatment, a high-intensity approach is superior to a conventional one (1).

Reference

1. Twardowski ZJ. Short, thrice-weekly hemodialysis is inadequate regardless of small molecule clearance. *Int J Artif Organs* 2004;27:452-66.