

Night home hemodialysis shown to be as good as transplant in treating kidney failure

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For the first time, it has been shown that patients who receive night home hemodialysis live just as long as those who receive kidney transplants from deceased donors.

In a study entitled, "Survival among nocturnal home hemodialysis patients compared to [kidney transplant recipients](#)," published in the international September issue of *Nephrology Dialysis Transplantation*, a total of 1,239 patients were followed for up to 12 years. Night home hemodialysis patients were compared to patients who received either a deceased [donor kidney transplant](#) or a living donor kidney transplant. The study found that the survival between night home dialysis patients and those who received kidney transplants from deceased donors was comparable, while the survival of the patients who received a transplant from a living kidney donor was better than both the other groups.

These results suggest that night home hemodialysis, an intensive dialysis of six to eight hour sessions for up to seven times a week, may be a "bridge to transplant" or a "suitable alternative" to transplant should a patient be too high risk for a transplant or not be able to get a living or deceased donor as the organ shortage continues. Night home hemodialysis patients were from the Toronto General and Humber River Regional Hospitals, both hospitals together representing the largest and longest established group of such patients world-wide.

"This study allows me to actually answer what my patients have been asking me for over a decade: 'What does night home hemodialysis mean for my life span?' I can now tell them that this specific dialysis option is as good as getting a transplant from a deceased donor," says Dr. Christopher Chan, Medical Director of Home Hemodialysis at Toronto General Hospital, University Health Network, the R. Fraser Elliott Chair in Home Dialysis and Associate Professor, University of

Toronto.

Until this study, there has been no long-term data on night home hemodialysis patient survival, or on how this type of treatment compares to transplantation. In the study, night home hemodialysis patients' data was carefully matched with deceased and living donor kidney transplantation mortality data from the U.S. Renal Data System on characteristics such as age, race, diabetic status and duration of treatment with conventional in-centre dialysis prior to treatment.

The proportion of deaths in each group was then measured, with final figures of 14.7% for night home hemodialysis patients; 14.3% for patients with transplants from deceased donors; and 8.5% for patients with transplants from living donors.

These results diverge from the evidence to date that dialysis is inferior to transplantation, pointed out Dr. Chan, adding that there is much benefit to be gained by long, frequent dialysis.

Night home hemodialysis as good as transplant

Florence Tewogbade, 27, has been on home hemodialysis since April 2008, after trying conventional dialysis. "It has changed my life," she said. "I can now work, go to school, look forward to a future and be self-reliant." Florence was on the transplant waiting list in 2004, but her living donor was found to be ineligible.

Florence says that she would have had to wait about 10 years for a kidney from a deceased donor because of her specific risk factors for receiving a transplant. "I always thought that transplant was the only option, so I didn't consider home hemodialysis," she said. "I thought I couldn't do it. But here I am, doing it, and living a normal life."

Kidney Facts:

- Shortage of organs and tissues remains a concern for Canada, and our national donation rates lag far behind many countries; in fact, we have one of the lowest donation rates among developed countries at 14 donors per million people, while Spain, for e.g., has a rate of 35 donors per million
- Of the 4,195 Canadians on the waiting list for a transplant as of December 31, 2007, 2,963 (71%) were waiting for a kidney
- At any point in time, there are more than 1,000 patients waiting for a [kidney transplant](#) in Ontario (more than any other organ)
- In the GTA, adults usually wait 4 - 10 years, depending on the blood group, for a kidney to become available, and about 2% of people on the waiting list die waiting for a kidney each year
- The number of patients being treated for end-stage kidney failure in Ontario climbed by nearly 20% in five years from 15.4 people per 100,000 in 1995 to 19.3 per 100,000 in 2000
- Each day, an average of three Ontarians learn that their kidneys have failed and their survival depends on dialysis treatments or a kidney [transplant](#)
- Currently, there are more than 10,000 Ontarians being treated for chronic kidney disease
The number of new patients increases by 10-15%
- Reasons for this growth include an aging population and an increasing number of people with diabetes and diabetes complications

Source: University Health Network

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