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Home dialysis, garbage, and privacy: Nothing is trivial in home hemodialysis

To the Editor: The clinical and economic advantages of home hemodialysis are increasingly recognized [1–3]. Its rediscovery confronted us with new problems, one of which has never extensively reported: waste material [4]. In 2000, we added waste disposal to our all-inclusive-dialysis service to avoid environmental contaminations, and with the intention of reducing the psychologic burden of dealing with blood-stained waste.

In a periodic reorganization, we realized that 5 patients out of 32 had "kindly refused" to use this system, and that many regretted the time when "everything was just simply thrown away in the closest garbage can."

It was our mistake. We were happy when we supplied our patients with hermetic boxes to safely store disposables of 3 to 4 sessions, and did not consider the psychologic burden of a small truck with something like "Ecological system, waste disposables" written on the flank parking in front of the house, and of an orange-dressed garbage man coming to pick up containers with marks on the side reading "Warning," and "Contains blood."

While patients' criticism is now leading to the development of an "anonymous" waste retrieval system, this episode suggests to all those who have not yet thought about it, choosing a more privacy-sensible system; it highlights how often we physicians forget something important when home care is concerned; it underlines that privacy may be an important deterrent for home dialysis. Lastly, the delay by which we realized this problem suggests that we should have more time to talk about simple, practical issues such as garbage cans, too often considered trivial by those who are healthy.

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A decline in residual glomerular filtration during the use of icodextrin may be due to underhydration

To the Editor: It has become increasingly clear that overhydration is common in peritoneal dialysis (PD) patients, which may play a pivotal role in the high prevalence of hypertension and left ventricular hypertrophy in this population. We recently reported that more than 30% of PD patients, treated with conventional glucose solutions, had a normalized extracellular water (ECW) above the 90th percentile of stable renal transplant patients [1].

In a recent randomized study, we reported a significant decline in ECW, assessed by the bromide dilution method, and left ventricular mass in PD patients after 4 months of treatment with icodextrin 7.5% for the long dwell. However, in the group treated with icodextrin, a significant decline in residual glomerular filtration (rGFR) was observed [2].

An improvement in fluid status after treatment with icodextrin was also reported in the randomized study performed by Davies et al [3]. However, in contrast to our findings, Davies et al did not observe a reduction in rGFR.

The main methodologic differences between the two papers are that Davies et al studied patients with a residual diuresis below 750 mL, high solute transport, and either treated hypertension or untreated BP >140/90 mm Hg, and compared icodextrin with glucose 2.27% glucose

solutions for the long dwell. In contrast, we compared icodextrin with glucose 1.36% in patients without clinical signs of overhydration, of whom the great majority had significant residual renal function (mean rGFR at start 4.8 ± 3.2 mL/min). At that time, 1.36% solutions were used in our clinics for the long dwell in patients in patients with significant residual diuresis without clinical signs of overhydration.

In search for an explanation for the discrepancies between the two studies, we hypothesized that icodextrin might have led to underhydration in some of our patients. Therefore, we compared the decline in rGFR between patients whom were underhydrated at the end of the study and those who were not. Underhydration was defined as a normalized ECW (ECW:height) below the 10th percentile of the stable renal transplant patients studied in [1] [<7.8 L/m in males and <7.0 L/m in females].

Four of the 19 patients in the icodextrin-treated group who completed the study fulfilled this criterion. Compared to the 13 patients treated with icodextrin who were not underhydrated after completion of the study, the fall in rGFR tended to be larger [−3.2 ± 2.4 mL/min vs −1.0 ± 1.6 mL/min; $P = 0.055$]. When the underhydrated patients were excluded from analysis, the decline in rGFR between patients treated with icodextrin and the control group was comparable [−1.0 ± 1.6 vs –0.6 ± 0.8 mL/min; $P = 0.6$].

In conclusion, the decline in rGFR observed in our previous study after treatment with icodextrin may have been due to underhydration in a minority of patients. Given the limited number of patients in whom underhydration was diagnosed, this assumption needs to be confirmed. However, when using icodextrin in patients with significant residual renal function without clinical signs of overhydration, objective assessment of fluid status may be helpful in defining treatment targets [4].

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Arterial stiffness in patients with kidney transplantation

To the Editor: We read the recent article by Bahous et al demonstrating tobacco consumption and acute rejection modulates both aortic stiffness and renal functional deterioration after kidney transplantation [1]. We wish to raise several points that can be considered.

Primary end points, including doubling serum creatinine (4 patients) and/or new cardiovascular events (9 patients), which are both independent situations resulting from different factors, seem to be confusing. In this study design, one cannot properly expect that the pulse wave velocity (PWV), mean 54.1 months after the transplantation, can be used as an indicator of the cardiovascular disease (CVD) after the transplantation. We do not know the level of PWV before the transplantation; the patients dying after the transplantation did not have the results (12 patients), which could affect the analysis. Also, 9 patients had new CVD, and 6 of them had previous CVD. It could have been important to see these patients' PWV results (9 patients). It is not logical to take serum creatinine into analysis of primary end points (according to the definition of primary end points). However, it could be interesting to see whether kidney function, as a risk factor for CVD, might be also a risk factor for CVD after the transplantation [2].

Tobacco consumption was given in Table 1. However, how many patients were using tobacco in both groups? How many of them were ex-smokers or recent smokers? The mean pack-year given in Table 1 demonstrated how many patients?

Also, in Table 2, transplant age (months) was given as mean 54.1 ± 29.2 for entire, mean 42.5 ± 18.2 for subjects with positive end points, mean 38 ± 13.5 for patients with negative end points. It should be corrected.

We have no conflict of interest to declare.

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