on solute removal and to relate some additional observations which were presented at the annual meeting of the Italian Nephrology Society in June, 1998.

We studied eight haemodynamically stable patients [six males, mean age 60 years (range 47–68 years), mean dialytic age 40 months] who performed low resistance stationary cycling the last 20 min of each hour during conventional thrice-weekly bicarbonate haemodialysis. Cuprammonium, hemophan or PMMA filters (1.3 m²) were used during the 240 min sessions, in contrast to the patients described by Dr Kong who underwent haemodiafiltration or high-flux haemodialysis with higher blood (median 450 ml/min vs 300 ml/min) and dialysate flows (800 vs 500 ml/min). To determine solute removal in our study, spent dialysate was sampled continuously and analysed for urea, creatinine and phosphate after 120 and 240 min, in contrast to the published study which utilized reduction ratios. Haemodynamic monitoring and statistical analysis were similar between the two studies.

In agreement with Dr Kong’s results, we found that urea rebound was reduced following dialysis with exercise (11% ± 13.9%). However, total urea removal did not vary significantly with exercise (35.0 ± 10.5 g) compared to control (34.1 ± 12.1 g). Creatinine removal was significantly increased during exercise (1852 ± 336 mg vs 1716 ± 288 mg; P = 0.005). An important finding of our study was that phosphate removal was also significantly increased during exercise (855 ± 363 vs 743 ± 227 mg; P = 0.037).

Other investigators have also found that urea removal is enhanced during intradialytic exercise [2,3]. In the light of our findings we would conclude that increased urea removal is dependent upon rapid blood flow. In any event exercise during conventional dialysis reduces urea rebound, increases creatinine removal and, importantly, increases phosphate removal, and also contributes to the general well-being of the dialysis patient.

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The effect of intradialytic exercise on solute removal

Sir,

We would like to confirm, for the most part, the findings of Kong et al. [1] regarding the effect of intradialytic exercise