INCREMENTAL HAEMODIALYSIS – WHY NOT?

Most UK haemodialysis units do not practice incremental starts, although titrating the dialysis regime down when a patient's kidneys are thought to have recovered function is considered logical and safe.

The IDEAL randomised trial confirmed the results of numerous observational studies that showed that starting dialysis early, based on eGFR, does not improve survival. The results suggest that the benefit of improved removal of toxins during the additional months on dialysis in the early start group may be offset by the harms related to the treatment.

Haemodialysis has many harmful effects. The short-term side effects, such as hypotension and fatigue, and the increased risk of potentially fatal blood stream infections are well known. Dialysis patients frequently suffer from headaches, itching and restless legs. There are concerns about unintended consequences of removal of vitamins, minerals, amino acids and medications. And recent research into myocardial stunning and cognitive impairment has shown a new 'dark side' of dialysis.

IDEAL has led to a move from using eGFR to trigger initiation of dialysis to using it to guide preparation for RRT while waiting for a clinical need. The UK Renal Association currently recommends that initiation 'should be based on a careful discussion with the patient of the risks and benefits of RRT taking into account the patient's symptoms and signs of renal failure, nutritional status, comorbidity, functional status, and the physical, psychological and social consequences of starting dialysis in that individual'.

Haemodialysis is a huge commitment for patients. It restricts their ability to work, study, care, socialise and travel. If the physical consequences of HD are explained during the careful discussion recommended by the RA, it would be very reasonable for a patient to ask if they really needed to have the treatment 156 times a year. Could they not start with a bit of dialysis and see how they felt?

We can explain why we believe that patients with little or no residual kidney function need a minimum of 4 hours HD three times a week, but what is the justification for starting all new HD patients on this regime?

In an era of patient-centred care and individualised treatment, we can't really use the argument that our service is organised around thrice weekly slots. Or that it would mean checking for changes in residual kidney function and we don't do that in HD. Or that we worry that after an incremental start, patients will not want to have more sessions per week.

There are no randomised trials comparing incremental and 3xweek starts. Observational data indicates that patients who start on 2xweek live longer as well as (or because of) having better preserved kidney function. The rate of loss of residual function will depend on the underlying disease but it can be very slow, especially in the elderly, so that patients may receive a transplant or pass away – or at least get a place in a satellite unit close to home – before they need three sessions per week.

Since Kalantar-Zadeh and Casino called for the taboo on twice-weekly dialysis to be revisited in 2014, numerous publications on incremental HD have appeared. Most review the potential benefits and/or the criteria for starting and maintaining patients on less than thrice weekly regimes.

Renal units that decide to introduce incremental starts will need to implement flexible schedules and regular monitoring for deterioration of residual kidney function. The tariff system may need to be reviewed as the reduced income per patient could be a barrier to individualised treatment.