

The rise and fall of peritoneal dialysis: a service development initiative to enhance peritoneal dialysis provision

Doctor Gwenno Edwards¹, Mrs Sarah Hirst-Williams¹, Doctor Mahdi Jibani¹

¹*Ysbyty Gwynedd, Bangor, United Kingdom*

Peritoneal dialysis (PD) has been an established dialysis therapy for patients with kidney failure since 1978. PD is the most cost-effective therapy for patients with kidney failure and it has better clinical outcomes and quality of life compared to unit haemodialysis.

The use of PD in the UK has declined from 1993 onwards. The reasons for this include lack of availability of clinicians with interest in PD, inadequate service provision for PD catheter insertion, and lack of positive promotion of PD in chronic kidney disease (CKD) clinics. We set to address this downward trend with the aim being to improve patient choice and create a more cost-effective service.

Patients were selected based on their personal preference and on their renal function (eGFR <15). Measures taken to improve PD take-on included:

1. Improved education in CKD clinics
2. Addressing nephrologist bias
3. Planned PD catheter insertion: Moncrief's technique which can be done months prior to the patient needing dialysis (see figures) and catheter retrieval at a later date through a nurse-led service

Advantages of the Moncrief technique

1. Patient choice
2. Elective procedure with flexibility of PD start date
3. Reduced need for temporary haemodialysis lines
4. Cost-effectiveness

Over the 5 years of adopting this approach, the prevalence of PD population in our hospital increased from 14% to 21%, compared to an unchanged national average over the same period (see chart).

Complications with the Moncrief technique:

- 1 severe post-op haemorrhage
- 3 cases of delayed function requiring laparotomy.

A top down costing study of the provision of dialysis modalities in a number of UK hospitals showed the cost of unit haemodialysis per year per patient to be £35,023 with the cost of Peritoneal Dialysis per year per patient being £15,570.

On comparison with UK statistics and based on the population at our hospital, this equates to a saving of £97,265 per year.

Planned PD catheter insertion using the Moncrief technique is achievable, and is effective in enhancing the prevalence of PD. No additional resources were needed to achieve the increase in PD proportion from 14% to 21%. Increasing PD take-on in our hospital has proven cost-effective whilst also ensuring patient autonomy.