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Integrating peritoneal and home haemodialysis: a nurse's perspective from a single centre

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Abstract
Home based dialytic therapy is underutilized in most renal centres. This article describes a nurse led and delivered approach to problem solving from a patient perspective, resulting in an increase in prevalent and incident patient numbers on home HD and peritoneal dialysis. Overall, between 2004 and 2010 home-based therapies have risen from 61 to 119 prevalent patients, with a fall in in-centre patient numbers.

Keywords: Peritoneal dialysis; home haemodialysis; community care; multidisciplinary team

Introduction

Decisions regarding renal replacement therapy (RRT) require complex interactions between patients, carers and the renal multidisciplinary team. Often, the decision is focussed upon patient wishes and modality rather than location. Understanding patient values, their lifestyle, their wish for autonomy and a convenient, uncomplicated mode of RRT is essential in the pursuit of delivering treatments aimed at improving quality of life. Home therapies are not a new phenomenon, yet there are often perceived barriers to providing such a service.

We would like to present the local approach in Derby, based upon the potential benefits of home therapies, to cover some of the pitfalls and explore some of the changes that may be required in order to deliver an integrated approach to home therapies.

Background

It is clear that home-based dialysis therapies offer advantages over in-centre therapies, yet in common with many centres in the UK, usage in Derby was falling [1].

A simple analysis determined that patients were not being offered home-based therapy on a consistent basis, with possibly conflicting messages from different staff, and home haemodialysis (HHD) was infrequently discussed. There were also concerns about technique failure, with patients then moving from peritoneal dialysis (PD) to in-centre haemodialysis (HD).

Improvement package

Initial diagnostic work highlighted that PD technique failure was most commonly associated with peritonitis. Based on this information, we redeveloped the care pathways for PD patients, to target a reduction in peritonitis rates. There were three principle elements that had additional focus. Firstly, there was a renewed focus on routine retraining of individuals to reinforce good technique and eliminate poor practice that had evolved, and an enhanced pathway around catheter exit-site care was introduced. Secondly, mandatory reassessment of technique was introduced if an episode of peritonitis had occurred. Thirdly, closer adherence to antibiotic policy was emphasized. As a result, within 1 year, the peritonitis rates subsequently improved from 1:22 to 1:35 patient/months.

The uptake of home therapies at the outset of established renal failure was also audited. Approximately, 25% of patients arrived in our centre as unheralded end-stage renal failure (defined as presenting within 90 days of dialysis start). In 2009, 90% of those patients commenced dialysis via a tunnelled venous catheter and very few subsequently switched to a home-based therapy. Bringing in a policy shift to offer choice and highlighting the benefit of a PD catheter versus a venous catheter resulted in 50% of unheralded patients commencing PD. This was supplemented by the use of assisted automated PD (aAPD), allowing the use of aAPD to bridge to a patient-centred decision to continue on PD or to move to HD with a fistula.

We also identified a need to reinvigorate the concept and benefits of HHD. Traditionally, HHD may have been viewed as the poor relation to unit HD, with attendant difficulties regarding access monitoring, access to advances in technologies, limited training opportunities and limited links with the unit team once established at home. Therefore, to address these issues, the training package was reconfigured, a multidisciplinary team dedicated to HHD was developed and a minimal care/self-care area of the HD unit was set-up to promote awareness of HHD as a modality choice for all to consider. In addition, quotidian HD became the default

Location	Autonomy		
		Dependent	Independent
	Home	Assisted APD Assisted home HD	PD Home HD
	In centre	HD	Self care HD

Fig. 1. Care model based on dimensions of location and autonomy.

offering to those willing to undertake HHD. Both incident patients, current in-centre patients and those with failing transplants or PD moved to HHD.

Potential hurdles were identified and solutions generated. Policies for self-administration of iron, solo HD and buttonhole cannulation techniques were introduced to reduce barriers to patient acceptance of HHD. The PD team was reconfigured to take on the role of a community dialysis team, supporting HHD in addition to PD.

Finally, there was a shift in pre-dialysis counselling that moved away from counselling around specific modality choices but attempted to understand the holistic needs of patients, including an assessment of autonomy of therapy and location for therapy, creating a decision matrix that then guided modality selection (Figure 1).

Outcomes

Figure 2 summarizes the change in distribution of dialysis therapy in the Derby dialysis population. In 2004, 61 (25%) patients had a home-based therapy, of which only a handful had HHD. At the end of October 2010, this proportion had risen to 36% (119 patients) with significant growth in HHD. This approach had several other unforeseen benefits. Buttonhole cannulation has become the usual cannulation method in-centre, and >60% of patients have been converted. A significant number of in-centre HD patients, while not at home, now manage their therapy in-centre. As contacts with the community team grew, a number of long-standing in-centre patients switched to PD. For the first time in two decades, the number of in-centre patients has fallen.

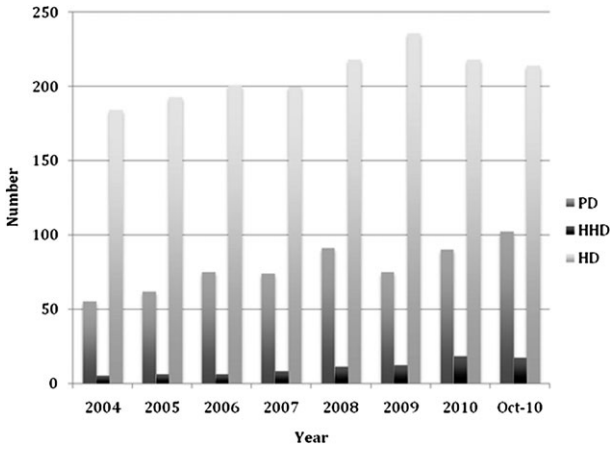

Fig. 2. Prevalent patients numbers at Royal Derby Hospital (2004–10). PD (includes APD and aAPD). aAPD programme commenced July 2009. Figures for each year taken 1 April.

Conclusions

Many patients prefer RRTs that enhance their freedom and autonomy and are convenient, effective and simple [2]. The challenge is to understand the patient and carer perspective, while providing unbiased guidance for the future. This requires an understanding of the relative merits of all modalities for replacing kidney function and integrating the care that an individual receives. For patients, that may be about 'where' they receive that care; for others, it may be 'how' they receive their care. Understanding those ideals has allowed this centre to redesign its overall care and offer home-based treatment to those that desire it.

Conflict of interest statement. None declared.

References

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