

Mini Review

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The Role of Nursing in Overcoming The Underutilization of Peritoneal Dialysis



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Abstract

The proportion of all dialysis patients treated with peritoneal dialysis (PD) has declined significantly in last 15 years. We review the role of nursing in overcoming its underutilization. The impact of timely referral and systematic and motivational predialysis education performed by nephrologists and nursing and the assisted PD to elderly, frail, and dependant patients, are the two key aspects of therapy evidenced to have a potential to increase PD utilization. Over the last 15 years the proportion of all dialysis patients treated with PD declined significantly in the world [1]. A general shift towards a higher age at start of dialysis treatment and increasing comorbidity cannot in whole explain the causality of this problem [2]. A special concern with reducing numbers of patients is a possible decrement in experience, expertise, and quality of PD programmes including the loss in quantity and quality of training for physicians and nurses staff. The impact of timely referral and systematic and motivational predialysis education performed by nephrologists and nursing and the assisted PD by nursing team to elderly, frail, and dependant patients, are the two key aspects of therapy evidenced to have a potential to increase PD utilization.

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Since predialysis education may be associated with improved survival [3,4], one of the most importante additional benefits of timely referral is the opportunity for execution of aproper predialysis education. Motivating patients to start with PD takes time and persuasive talent from the dialysis team, mainly nursing, and confidence and comprehension from the patient, which are all often absent in the late-referred patients [5]. The impact of intensive or at least timely education and information on modality choice has so far only been demonstrated in retrospective studies. However with all the information about the benefits of timely predialysis referral, counselling, and education, undertaking the prospective randomised trial would seem unnecessary and unethical. Table 1 shows the observational studies that showed that with predialysis education the proportion of patients choosing PD increased and reached relatively high levels [6-10]. The patient population reaching end-stage chronic kidney disease (CKD) is growing in age, frailty, comorbidity, and dependance. This is one of the major obstacles for institution of PD as it is a form of self-delivered home based therapy. The overwhelming association of having a strong social support network and being functionally able with choosing PD emphasizes the need for assisted PD [11].

Table 1: Summary of studies on the impact of predialysis education in modality choice.

Reference		Modality choke (PD versus HD)
Ahlmen et al. [6]	(N = 101)	38% chose PD versus 24% choosing HD
Prichard [11]	150)	Of 74 patknts with a free modality choke 50% chose PD
Little et al. [12]	(N = 254)	50.9% chose PD versus 34.8% of controls
Marron et al. [13]	= 626)	31% chose PD vases 8.3% of controls
Ribitsdi	(N = 227)	54.3% chose PD versus 28% of controls

The French experience published in 2006 has shown that patients on assisted PD were on average 74 years old, 22 years older than others, and had higher comorbidity and hospitalisation rate [12]. A Canadian survey has shown that the most prevalent conditions that act as barriers to self-care PD in elderly patients are exactly the ones that can be overcome by home assistance: decreased strength to lift PD bags, decreased dexterity or vision, anxiety, decreased cognition, and immobility [13]. In this study

the probability of being considered eligible for PD significantly increased in the regions with home care assistance programme available. The indications for assisted PD use may be broadened from patients with physical and cognitive disabilities to patients with exhausted vascular access and haemodynamic instability during HD, thus likely extending the lives of those patients [14]. The possibility of assisted PD and family support was shown to increase PD utilisation from 23 to 39% among patients with barriers to self-care in a Canadian centre [15]. Technique failure and peritonitis rates were in general within acceptable limits and independent of the method of assistance (done by either nurses or family members). The possibility of having periods without assistance (e.g., the family provides assistance on weekends or helps with disconnections) enables assisted PD to become more cost-effective although elevated costs of reimbursed nursing assistance are a serious concern [16-18]. Training of staff at nursing homes for PD delivery is an additional area of a possible increment in utilisation of PD. As conclusion PD should be regarded as a safe and efficient form of renal replacement modality; however the declining numbers of patients in PD programmes in world are a cause for concern. The proper predialysis education by nursing team is crucial factor with the largest potential to repopulate PD programmes. The possibility of offering assisted PD to elderly frail patients should be a part of a modern PD programme, since these are the patients who quality of life on replacement therapy may benefit most from assisted modality performed by nursing team at patient's home.

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