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Chapter 1

Introductory Chapter: The Role of Peritoneal Dialysis Today

Robert Ekart

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The purpose of this book is to bring the knowledge of many international experts in the field of peritoneal dialysis to readers who have an interest in this type of renal replacement therapy. Unfortunately, in last period the number of patients on peritoneal dialysis in many countries is too small; what has to be taken in mind is the educational process during the period of chronic kidney disease before the start of renal replacement therapy [1]. This process is paramount; as in this period, medical health professionals and patients have enough time for resolving all unclear and unresolved questions.

To make an informed decision on the type of renal replacement therapy, patients should receive timely appropriate education about dialysis options in an educational program covering all modalities. Many patients do not receive such education, and there is a disparity in the information they receive. In the University Clinical Centre Maribor, Clinic for Internal Medicine, Department of Dialysis, Slovenia, we are currently treating 152 patients with the end-stage renal disease. Seventeen of them (11.2%) are on the peritoneal dialysis. One of our patients is being treated with peritoneal dialysis for 13 years; the first method of renal replacement therapy at the beginning has been a few months in-center-hemodialysis.

In February 2015, we began with a systematic, individual predialysis education program of patients with chronic kidney disease who regularly visit nephrology outpatient clinic. Each patient with chronic kidney disease and first seen reduced glomerular filtration rate below 20 ml/min (Stage 4 chronic kidney disease) is redirected to predialysis education. This education is currently implemented only by nurses with specialized knowledge of peritoneal dialysis, who also mastered the hemodialysis treatment. Education is in most patients individual; at the same time, we can educate maximum of up to three patients. My personal belief is that such training must be carried out by nurses who have experience with both peritoneal dialysis and hemodialysis, as well as additional knowledge about kidney transplantation.

Each renal replacement therapy has different advantages and disadvantages, which may make them more or less appropriate for the patient. This depends on his or her clinical and personal situation. Peritoneal dialysis, which requires learning of technical skills by the patient, also requires a degree of responsibility and capability for self-care. Peritoneal dialysis can be performed using several different techniques. The patient could choose between manual exchanges—continuous ambulatory peritoneal dialysis and automated peritoneal dialysis, which use an automated device to do multiple exchanges overnight. The main advantage of peritoneal dialysis is home treatment, and comparing to hemodialysis, peritoneal dialysis gives a much more flexible schedule for different life activities. It is suitable also for older patients with many comorbidities who live at home or in nursing homes. In these patients, it is very important to assist in peritoneal dialysis, which is an evolving dialysis modality. In French and Danish nations, assisted peritoneal dialysis is entirely publicly funded, and the cost of assisted peritoneal dialysis is comparable to the cost of in-center hemodialysis. Assisted continuous ambulatory peritoneal dialysis is the preferred modality in France, whereas assisted automated peritoneal dialysis is the preferred modality in Denmark [2]. Assistants are professional nurses or healthcare technicians briefly educated by expert peritoneal dialysis nurses from the dialysis unit.

There is currently no consensus as to which dialysis modality is the best for elderly patients with end-stage renal disease [3]. In-center hemodialysis is predominant in most countries, although it is widely recognized that peritoneal dialysis has several advantages over hemodialysis, including the lack of need for vascular access, slow continuous ultrafiltration, less interference with patients' lifestyle, and lower costs [3]. In many countries, older end-stage renal disease patients are more rarely initiated on peritoneal dialysis than younger patients. However, greater emphasis should be placed on the promotion of home dialysis therapies such as peritoneal dialysis. Patients should receive balanced and unbiased information about peritoneal dialysis and hemodialysis, including their relative benefits [3]. Dialysis modality choice should be an individual decision, and this choice should be based on the preference of a well-informed and well-prepared patient [3]. Planning of dialysis should be made in advance, whenever possible. A multidisciplinary team should review every patient, aiming to identify potential barriers to peritoneal dialysis and home hemodialysis [3].

This book has been written by widely acknowledged experts, with each chapter providing unique information on some particular problems in the area of peritoneal dialysis. Chapters detail peritoneal dialysis in the acute renal failure, peritoneal dialysis in pregnancy, pharmacological preservation of peritoneal membrane, volume status assessment in peritoneal dialysis patient, microbiologic problems in peritoneal dialysis, surgeon point of view on peritoneal dialysis catheter insertion, and an up-to-date, comprehensive review of all types of peritoneal dialysis solutions that are currently available.

I hope that this book can serve as a resource for expanding the peritoneal dialysis modality in clinical practice.

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