Why peritoneal dialysis is underutilized as one of choices in treatment of chronic renal failure?

Essay
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By
Amal Ali Fathy
M.B.B.CH

Supervised by

Prof. Dr. Khaled Hussein Abou Seif
Professor of internal medicine and nephrology
Faculty of Medicine Ain Shams University

Prof. Dr. Magdy Mohamed El-Sharkawy
Professor of internal medicine and nephrology
Faculty of Medicine Ain Shams University

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Faculty of Medicine
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فى
علاج مرضى الفشل الكلوى المزمن؟

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توطئة للحصول على
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تحت اشراف
الأستاذ الدكتور/ خالد حسين ابو سيف
أستاذ أمراض الباطنة والكلى
كلية طب - جامعة عين شمس

الأستاذ الدكتور/ مجدى محمد الشرقاوى
أستاذ أمراض الباطنة والكلى
كلية طب - جامعة عين شمس

كلية الطب
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
(وَعَلَّمَكَ مَا لَمْ تَكُنْ
تَعْلَمُ وَكَانَ فَضْلُ اللهِ
عَلَيْكَ عَظِيمًا)
صدق الله العظيم

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List of Contents

Contents

List of abbreviations

PD : Peritoneal dialysis.

CAPD : Continuous ambulatory peritoneal dialysis.

CPD : Chronic Peritoneal dialysis.

APD : Automated Peritoneal dialysis.

HD : Hemodialysis.

ESRD : End stage renal disease.

RRT : Renal replacement therapy.

CVD : Cardiovascular disease.

CAD : Coronary artery disease.

CHF : Congestive heart failure.

LV : Left ventricle.

QOL : Quality of life.

RRF : Residual renal function.

HCV : Hepatitis C virus.

Kt/Vurea : Total small-solute clearance (residual renal function and peritoneal).

Kt = Total **Kt** = peritoneal **Kt** + renal **Kt**

Peritoneal **Kt** = 24-hour dialysate urea nitrogen content/serum urea nitrogen

Renal **Kt** =24-hour urine urea nitrogen content/serum urea nitrogen

V =Total body water **(**by Watson formula):

V= 2.447- 0.09516 A+ 0.1704 H+0.3362 W (in males)

V= -2.097+ 0.1069 H + 0.2466 W(in females)

Where A = age (years), H = height (cm), and W = weight (kg).

List of tables

List of figures

Introduction

The prevalence of end-stage renal disease (ESRD) is showing an increasing trend worldwide. The number of patients on maintenance dialysis is predicted to reach 2.5 million globally by 2010 ***(Yu et al., 2007).***

Patients with kidney failure require renal replacement therapy (RRT), either a kidney transplant or dialysis. For patients treated with dialysis, alternative modalities are hemodialysis (HD) and peritoneal dialysis (PD) ***(Just et al., 2008).***

Although peritoneal dialysis is an effective alternative to hemodialysis and indeed, in terms of survival, superior to HD in first year of dialysis, the utilization rate for PD remains low. Although the utilization rate of PD varies considerably, the worldwide penetration rate appears to be falling. Still, in rapidly developing countries such as China, the PD penetration rate is rising—an encouraging sign. Clearly, considerable room for improvement remains, particularly with the take-on rate of PD, and one of the potentially influential factors is the role of research activities in improving both the quantity and quality of life of patients on PD ***(Tan et al., 2008).***

Despite the well-known advantages of continuous ambulatory Peritoneal dialysis (CAPD), it continues to be grossly underutilized in many developing countries. However,

some developing countries, such as Mexico, use the modality very effectively ***(Mahmoud et al., 2010).***

The aim of the Work:

To discuss underutilization of peritoneal dialysis in treatment of chronic renal failure in different countries including Egypt.