

Comparative study on the burden of caregivers of patients with chronic renal failure on continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD)

Estudio comparativo en la sobrecarga de los cuidadores de los pacientes con insuficiencia renal crónica en diálisis peritoneal continua ambulatoria (DPCA) y diálisis peritoneal automatizada (DPA)

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Abstract

Objective: To determine the differences in caregiver burden in patients with chronic renal failure undergoing renal replacement therapy in CAPD and APD. Material and methods: It is an analytical, non-experimental, comparative, cross-sectional, prospective study; with random selection and systematically assigned controls. People who perform the role of caregivers in patients with chronic renal failure on peritoneal dialysis, with renal replacement therapy in the modalities of CAPD and APD integrated into the peritoneal dialysis program in Campeche from January to July 2022, with a total of 60 primary caregivers. The Zarit test questionnaire and the caregiver effort index questionnaire were applied. Contribution: The following overload results were found for the CAPD caregiver of 12.9% and for APD 13.8%, in mild overload for CAPD 22.6% and for APD 10.3% and without overload CAPD 75.9% and APD 65.4%. The predominant gender of the caregiver was female for both modalities of peritoneal dialysis that correspond as follows CAPD 77.4% are women for APD women 75%. The average age found for CAPD was 46.87 and for DPA 45.55, with an average for CAPD and DPA respectively of 31 and 29 years.

Chronic renal failure, Continuous ambulatory peritoneal dialysis, Automated peritoneal dialysis

Resumen

Objetivo: Determinar las diferencias en la sobrecarga del cuidador en pacientes con insuficiencia renal crónica en tratamiento sustitutivo renal en DPCA y DPA. Material y métodos: Es un estudio analítico, no experimental, comparativo, transversal, prospectivo; con selección aleatoria y con controles asignados de forma sistemática. Se incluyó a personas que realizaran el rol de cuidador en pacientes con insuficiencia renal crónica en diálisis peritoneal, que se encontraron en tratamiento sustitutivo renal en las modalidades de DPCA y DPA integrados al programa de diálisis peritoneal en Campeche comprendido en el período de enero a julio de 2022, con un total de 60 cuidadores primarios. Se aplicó el cuestionario de test de Zarit y el cuestionario de índice de esfuerzo del cuidador. Contribución: Los siguientes resultados de sobrecarga se encontraron para el cuidador de DPCA de 12.9% y para DPA 13.8%, en sobrecarga leve para DPCA 22.6% y para DPA 10.3% y sin sobrecarga DPCA 75.9% y DPA 65.4%. El género predominante del cuidador fue femenino para ambas modalidades de diálisis peritoneal que corresponden de la siguiente manera DPCA 77.4% son mujeres para DPA mujeres 75%. La edad media encontrada para DPCA de 46.87 y para DPA 45.55, con un promedio para DPCA y DPA respectivamente de 31 y 29 años.

Insuficiencia renal crónica, Diálisis peritoneal continua ambulatoria, Diálisis peritoneal automatizada

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Introduction

Chronic kidney disease (CKD) is defined as a decline in kidney function, expressed by an estimated glomerular filtration rate (GFR) or creatinine clearance < 60 ml/min/1.73m², or as the presence of persistent kidney damage for at least 3 months. Caregiver burden is defined as the caregiver's subjective experience of care demands. Objective burden is related to the dedication to the caregiving role and is primarily related to patient variables and the characteristics that determine the demand for care. In turn, subjective burden has been defined as the attitudes and emotional reactions to the caregiving experience and is related to the way in which the situation is perceived, both in terms of difficulties and rewards.

CKD is the result of various chronic degenerative diseases, including diabetes mellitus and hypertension, a phenomenon that occurs in a similar way throughout the world and unfortunately leads to a fatal outcome if untreated.

The causes of CKD in Mexico are as follows: diabetes mellitus (43%), hypertension (17%), chronic glomerulopathies (14.4%), undetermined (9.2%), polycystic kidneys (4.7%), congenital malformations of the urinary tract (4%), lupus nephropathy (3.3%) and others (4.4%).

Patients on peritoneal dialysis rely on informal caregivers to carry out daily dialysis exchanges, to solve problems. It is easy to imagine that, in many cases, family members, friends or neighbours become the main caregivers, taking on many tasks related to peritoneal dialysis.

With the progressive ageing of the population and the increased survival of people with chronic diseases and physical or mental disabilities, the number of people caring for sick family members or people who require care due to their condition has been increasing (National Population Council, 2006). This is why interest in the provision of informal care has grown over the last few decades.

A dependent person is a person who, for reasons of age, illness or disability, and linked to the loss of physical, sensory, mental or intellectual autonomy, requires the permanent care of another person or help to carry out the basic activities of daily living. For this reason, the aim of this study is to determine the differences in caregiver overload in patients with chronic renal failure undergoing renal replacement therapy in CAPD and APD.

Methodology to be developed

The design is observational, comparative, cross-sectional, prospective and analytical and was carried out in people who performed the role of caregivers of patients with chronic renal failure on peritoneal dialysis in CAPD (30 patients) and APD (30 patients) integrated into a peritoneal dialysis programme in Campeche in the period from January to July 2022.

Zarit scale, caregiver overload

The instrument used to assess the following aspects: physical and psychological health, economic and labour area, social relationships and relationship with the elderly person and care recipient was that of Zarit et al (1980) consisting of a 29-item questionnaire.

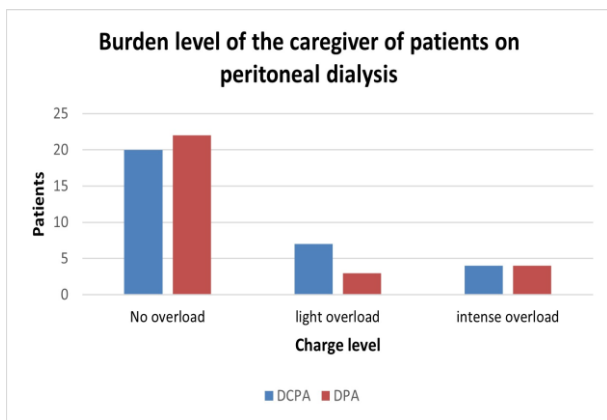
The instrument was administered to 29 primary caregivers of adults with senile dementia. The responses to the items were summed to obtain a single index of burden. Several papers that have used this instrument report good internal consistency, ranging from .83 to .91 Cronbach's alpha.

Caregiver strain index

The caregiver strain index. It is a semi-structured interview consisting of 13 items with dichotomous True - False response. A total score of 7 or more suggests a high level of effort.

Results

A study was carried out on 60 caregivers, 31 corresponded to caregivers of patients in DPCA and 29 to caregivers of patients in DPA, according to the application of the Zarit questionnaire; the highest percentage without overload was with DPA, however when comparing mild and intense overload it was observed that the highest level of mild overload was presented by 22.6 % of the caregivers with DCPA in contrast to 12.9 % of the caregivers who presented an intense overload. With the DPA, 10.3 % of caregivers had a mild caregiver burden in contrast to 13.8 % of caregivers with an intense caregiver burden (Graphic 1).



Graphic 1 Weight classification based on BMI

With respect to gender, women predominated in both modalities (77.4 % of patients in CAPD and 75.9 % of patients in APD).

With respect to the difference between the hours invested in patient care and the presence of overload, it is observed that there is no difference in the groups studied (CAPD and APD), which is demonstrated by the presence of statistical significance (.000) in both groups.

DIALYSIS MODALITY	t	gl	Sig. bilateral	Test value = 0			
				Difference in averages	95% Confidence interval for the difference		
DPCA	Hours spent on patient care	12,710	29	.000	13,267	Inferior: 11,113	Superior: 15,40
	Zarit questionnaire	11,405	30	.000	1,484	1,22	1,75
DPA	Hours spent on patient care	7,816	28	.000	9,034	6,67	11,40
	Zarit questionnaire	10,207	28	.000	1,379	1,1	1,66

Table 1 Statistical analysis of the difference between hours spent on patient care and the presence of overload in CAPD and APD

Conclusions

This study concludes that caregiver overload in peritoneal dialysis patients is greater in CAPD patients 35.5% compared to APD patients 24.1%, in direct relation to the number of hours invested in both modalities, showing that it is the female gender who acts more frequently as caregiver, predominantly in the third decade of life and in kinship, with 48% of wives being the ones who carry out the care of these patients.

Our work is still pending a more in-depth study of the possible existence of associated variables which, based on the contributions of others and of this study, may provide greater certainty and clarity to the subject, above all taking into account the dynamic roles of the family in Mexico, specifically the role of the female sex in the care of the sick family member.

The chronic renal patient included in a dialysis programme is an extremely useful reference to assess the importance and transcendence of both the informal care system and the formal health care system represented by health institutions. For both reasons, i.e. the need for formal and informal care of the chronic kidney patient, we consider the need to increase the relationship and contact between both health care systems.

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