Evaluation of Peritoneal Dialysis Dropouts: A Single Centre Observational Study over 3-year follow-up

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INTRODUCTION

- Peritoneal dialysis (PD) has several advantages compared to in-centre haemodialysis, such as greater flexibility, better quality of life, preservation of residual renal function, decreased risk of infections, and lower healthcare costs.
- Yet, 35% of PD patients in the UK transition to HD annually.
- The most common causes of PD dropouts are mechanical failure, infection, patient choice, kidney transplantation and death.

AIM

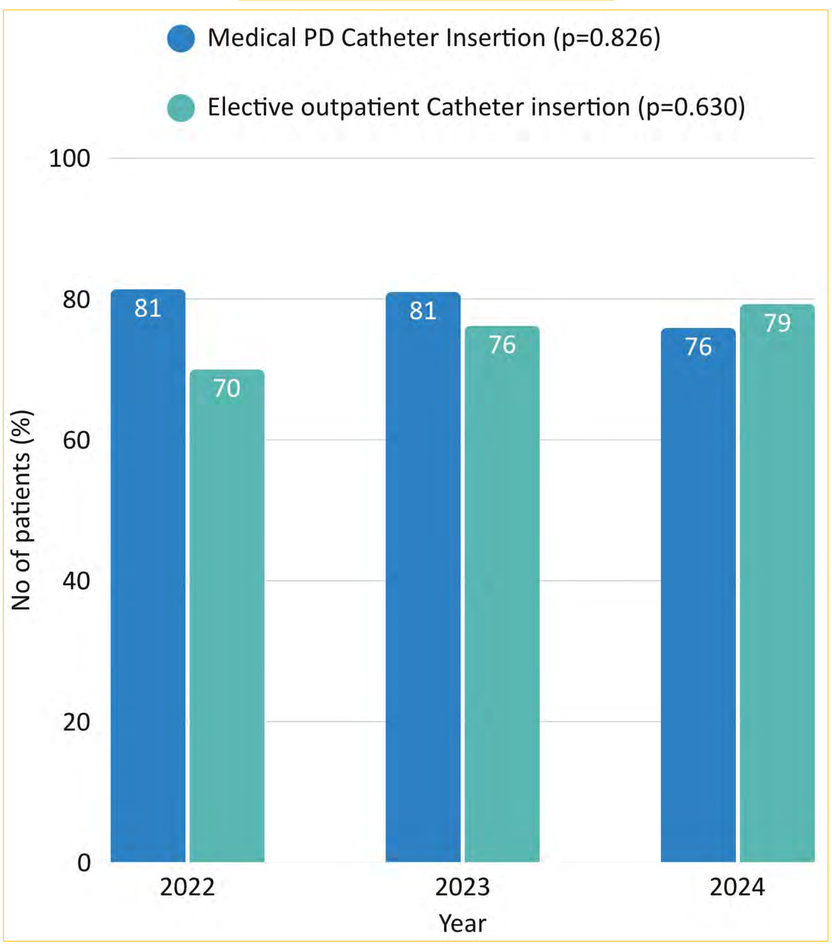
- This retrospective observational study was conducted at our centre to investigate the characteristics of patients who discontinued PD and the reasons for PD dropout over a 3-year follow-up period.

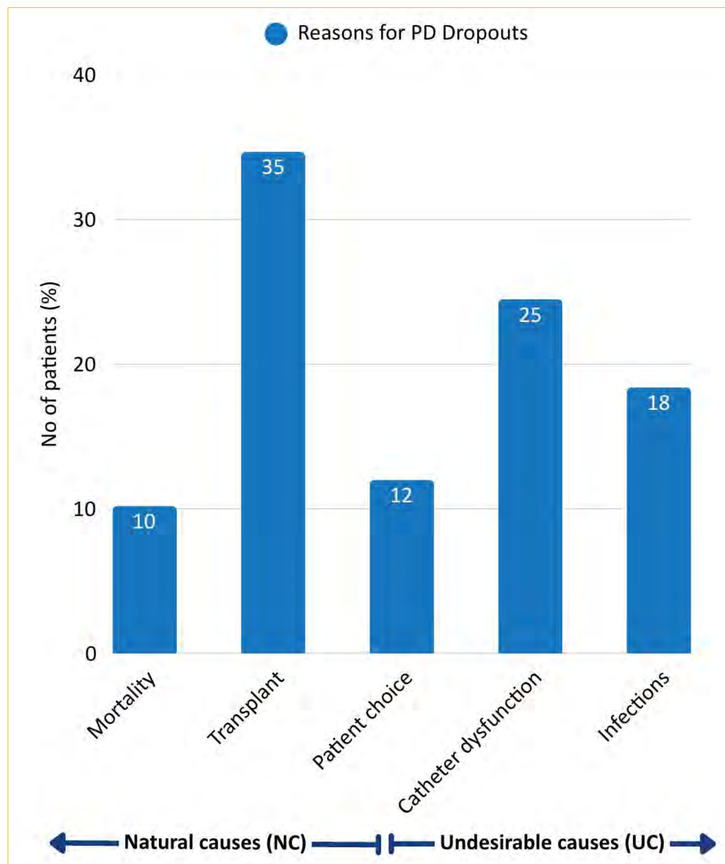
Methods

- Data from 114 patients who dropped out of PD between January 2022 and September 2024 were analysed for their characteristics, pre-PD assessments, catheter insertion details, and reasons for dropout.
- A comparative analysis was conducted between patients who dropped out due to **undesirable causes (UC)** (e.g., infection or catheter dysfunction) and those who dropped out due to **natural causes (NC)** (e.g., death, transplant, or patient choice).

Results

55.3 Years | **White ethnicity 81.3 %** | **69 %**





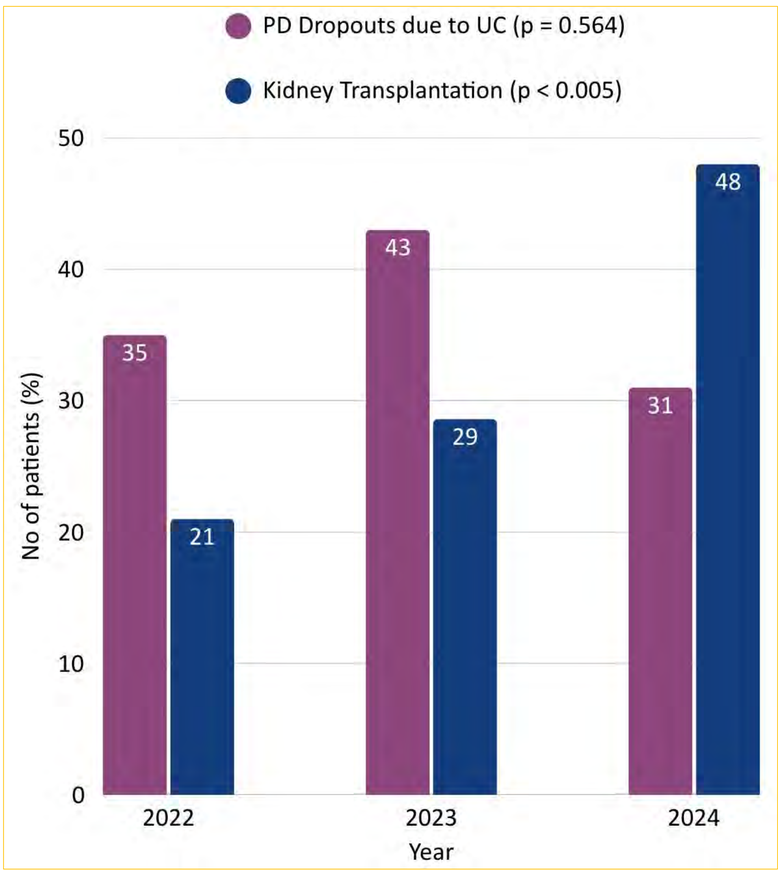


Table 1. Comparison of patient characteristics based on reason for PD dropouts

Characteristics	Undesirable cause (UC) - 42 (36.8%)	Natural cause (NC) - 72 (63.2%)	p-value
Age	55 (43-66)	56 (44-68)	0.411
Gender, Male	32 (76.2)	46 (63.9)	0.333
Ethnicity, White	33 (78.6)	59 (81.9)	0.66
Index of multiple deprivation (low)	23 (67.6)	41 (64.1)	0.723
Medical insertion	32 (76.2)	59 (81.9)	0.46
Emergency inpatient insertion	**17 (40.5)**	**12 (16.7)**	**0.005**
Immediate malposition in AXR	9 (21.4)	11 (15.3)	0.405
Constipation issues	13 (31)	14 (19.4)	0.163
Charlson Comorbidity Index	5 (3-7)	5 (3-7)	0.622
No of medications	11 (9-14)	11.5 (10-13)	0.45
Follow-up, Months - PD duration	10.1 (3.9-21)	14.9 (7.7-29.4)	0.055

Table 2. Risk factors for undesired catheter removal - Binary logistic regression analysis

Characteristics	OR (95% CI)	p-value
Age	0.99 (0.97-1.01)	0.466
Gender, Male	1.53 (0.67-3.49)	0.305
Ethnicity, White	0.81 (0.31-2.09)	0.660
Index of multiple deprivation (low)	1.17 (0.48-2.83)	0.723
Medical insertion	0.71 (0.27-1.78)	0.461
Emergency inpatient insertion	**3.4 (1.41-8.14)**	**0.006**
Immediate malposition in AXR	0.66 (0.25-1.75)	0.407
Constipation issues	1.85 (0.77-4.46)	0.166
Charlson Comorbidity Index	0.94 (0.80-1.11)	0.498
No of medications	1.02 (0.92-1.13)	0.634

Conclusion:

- Our study highlights that emergency inpatient PD catheter insertion is a risk factor for future 'undesirable' PD dropout.
- This study's findings strengthen the stance that meticulous pre-procedure assessments in advanced kidney care services and dialysis preparation clinics are essential to prevent 'undesirable' PD dropouts.

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