Oral Communications 9
Peritoneal Dialysis (PD) and Nutrition

December 6, 2025 (Saturday) 15:25~16:55 **Venue：Room 8 (602)**

Chair(s)	Vuddhidej Ophascharoensuk, Chwei-Shiun Yang	
15:25-15:34	Baseline Characteristics and Representativeness of Participants in The TEACH-PD Trial: A Multi-centre, Pragmatic, Cluster-Randomised Controlled Trial of Standardised Peritoneal Dialysis (PD) Training Versus Usual Care On PD-related Infections APCN20250466	**Neil Boudville** Australasian Kidney Trials Network, University of Queensland
15:34-15:43	Artificial intelligence cloud platform–assisted detection and remote monitoring of exit site infection in peritoneal dialysis patients APCN20250080	**I-Kuan Wang** Divisions of Nephrology, China Medical University Hospital
15:43-15:52	Association of Plasma PCSK9 with Hypercholesterolemia in Patients on Peritoneal Dialysis APCN20250727	**Md. Masudul Karim** Department of Nephrology, Bangabandhu Sheikh Mujib Medical University
15:52-16:01	The Effects of Canagliflozin in Peritoneal Dialysis Patients With Type 2 Diabetes APCN20250306	**Naoko Matsuoka** Department of Rheumatology and Nephrology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University
16:01-16:10	The Effect of Low-GDP, Neutral pH Solutions on Peritoneal Dialysis-associated Peritonitis and Mortality: A Territory-wide, Propensity Score-matched Cohort in Hong Kong APCN20250911	**Jack Ng** Department of Medicine and Therapeutics, Prince of Wales Hospital, The Chinese University of Hong Kong

16:10-16:19	A Comparative Study of Depression and Insomnia Among Patients on Continuous Ambulatory Peritoneal Dialysis versus Hemodialysis APCN20250518	**Jai Inder Singh** Department of Nephrology, Military Hospital Jalandhar
16:19-16:28	Staphylococcal Virulence and Host Risk Factors Associated With Refractory and Non-Resolution Peritonitis in Peritoneal Dialysis Patients APCN20250568	**Huang Kuan Chiao** Division of Nephrology, Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University
16:28-16:37	Impact of Diabetes on Clinical Features and Outcomes of Peritoneal Dialysis-Associated Peritonitis APCN20251163	**Khin Zar Li Lwin** Department of Renal Medicine, Singapore General Hospital
16:37-16:46	A 10-Year Journey of Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis: Lessons from Dr. Saiful Anwar Hospital, Malang, Indonesia APCN20250643	**Tohari** Department of Internal Medicine, Saiful Anwar General Hospital, Universitas Brawijaya
16:46-16:55	The Impact of Malnutrition on the Obesity Paradox among Patients With End-Stage Kidney Disease Requiring Maintenance Dialysis APCN20250055	**Wannasit Wathanavasin** Nephrology Unit, Department of Medicine, Charoenkrung Pracharak Hospital

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250466

Baseline Characteristics And Representativeness Of Participants In The TEACH-PD Trial: A Multi-centre, Pragmatic, Cluster-Randomised Controlled Trial Of Standardised Peritoneal Dialysis (PD) Training Versus Usual Care On PD-related Infections

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Abstract
Introduction
Peritoneal dialysis-related infections negatively impact patient survival and wellbeing. Peritoneal dialysis (PD) infection rates vary considerably across treating centres. There is a lack of high certainty evidence that specific interventions lower rates of PD infection and improve patient outcomes. Targeted Education ApproaCH to Improve Peritoneal Dialysis Outcomes (TEACH-PD; ClinicalTrials.gov NCT03816111) is a registry-based, multi-centre, cluster-randomised controlled trial evaluating whether a standardised PD training curriculum for nurses and patients reduces the risk of PD-related infections. We sought to evaluate the generalisability of the enrolled trial cohort relative to the general PD population in Australia and New Zealand (ANZ).
Methods
The demographic and clinical characteristics of the TEACH-PD participants were compared with patients who commenced PD during the recruitment period in ANZ recorded in the Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry and who were not enrolled in TEACH-PD. The centre and individual characteristics were compared between the trial and the registry population using descriptive statistics and standardised differences. The characteristics of treating centres and participants were also compared between the two contributing countries.
Results
Overall, 5,987 patients commenced PD in ANZ during the 50 months of recruitment. Of 2,644 potential participants screened from 42 TEACH-PD clusters, 1,462 were enrolled (from 2,199 eligible [66%]). Overall, the demographic and clinical characteristics of TEACH-PD participants and ANZ patients not included in TEACH-PD were similar (standardised differences <0.15 for all comparisons, Table 1). The characteristics differed for TEACH-PD trial participants between ANZ for ethnicity (i.e., European 62 vs. 41%; Pacific Peoples 4 vs. 15%), body mass index (26.6 [23.6-30.6] vs. 29.4 kg/m2 [25.2-34.1]), serum creatinine at dialysis commencement (588 [475-749] vs. 690 μmol/L [547-890]), and cause of kidney failure (i.e., diabetes 40% vs. 57%).
Conclusion
TEACH-PD participants had similar demographic and clinical characteristics as non-trial patients commencing PD in ANZ. These results indicate that the findings from the TEACH-PD trial on completion may be broadly generalisable to dialysis care.

Keywords：Peritoneal Dialysis, Training, Outcomes, Infection, Trial

Table 1. Baseline characteristics of TEACH-PD trial participants compared with other Australian and New Zealand patients commencing PD

Characteristic	TEACH-PD		ANZDATA		Standardised difference[a]
	N	Statistic	*N*	Statistic	
Country	1,462		4,522		0.068
Australia		1,106 (76%)		3,552 (79%)	
New Zealand		356 (24%)		970 (21%)	
Age (years)	1,462	61.7 (48.3–71.4)	4,522	61.0 (49.0–71.0)	0.098
Sex	1,462		4,522		0.001
Male		931 (64%)		2,881 (64%)	
Female		531 (36%)		1,641 (36%)	
Ethnicity	1,450		4,445		0.100
European		826 (57%)		2,467 (56%)	
Asian		213 (15%)		694 (16%)	
New Zealand Māori		124 (8.6%)		340 (7.6%)	
Pacific Peoples		96 (6.6%)		321 (7.2%)	
Indian		64 (4.4%)		175 (3.9%)	
Aboriginal or Torres Strait Islander		48 (3.4%)		218 (4.9%)	
African and Middle Eastern		38 (2.6%)		115 (2.6%)	
Arab		30 (2.1%)		74 (1.7%)	
Other		11 (0.8%)		41 (0.9%)	
Current smoker	1,462	159 (11%)	4,473	517 (12%)	0.022
Body mass index (kg/m^2)	1,462	27.2 (23.8–31.6)	4,458	27.4 (23.8–31.5)	0.015
Serum creatinine level (μmol/L)	1,462	610 (492–780)	4,458	612 (485–799)	0.011
Primary kidney disease	1,462		4,500		0.144
Diabetes-related kidney disease		493 (34%)		1,731 (38%)	
Glomerular disease		397 (27%)		1,106 (25%)	
Hypertension and/or vascular disease		166 (11%)		557 (12%)	
Familial/hereditary		140 (9.6%)		314 (7.0%)	
Tubulointerstitial		122 (8.3%)		314 (7.0%)	
Miscellaneous		118 (8.1%)		382 (8.5%)	
Other		26 (1.8%)		96 (2.1%)	
Co-existing medical conditions[b]	1,462				
Diabetes		640 (44%)	4,490	2,247 (50%)	0.125
Chronic lung disease		140 (9.6%)	4,494	541 (12%)	0.080
Coronary artery disease		353 (24%)	4,493	1,273 (28%)	0.093
Peripheral vascular disease		209 (14%)	4,496	803 (18%)	0.096
Cerebrovascular disease		124 (8.5%)	4,495	383 (8.5%)	0.002
History of cancer		174 (12%)	4,473	534 (12%)	<0.001
Health utility and quality of life					
EQ-5D-5L index value	1,418	0.924 (0.835–0.970)			
EQ-5D-5L visual analogue scale	1,413	70.0 (50.0–80.0)			
PROMIS score	1,048	20.0 (16.0–25.0)			

Data are shown as frequency (%) or median (IQR) results. 'European' ethnicity includes Australian, Caucasian, and New Zealand European. 'Asian' ethnicity includes Filipino, Indonesian, Malay, Southern Asian, and Vietnamese. 'Pacific Peoples' includes Australian South Sea Islander, Cook Islander, Cook Island Māori, Fijian, Melanesian, Micronesian, Niuean, Papuan, Polynesian, Sāmoan, Tokelauan, and Tongan. 'Other' ethnicity includes Hispanic North American, North American, and South American. CKD = chronic kidney disease; IQR = inter-quartile range presented as 25th and 75th percentiles; PD = peritoneal dialysis; PROMIS = Patient-Reported Outcomes Measurement Information System; SD = standard deviation. The EQ-5D-5L records the participant's self-rated health on a vertical visual analogue scale where the endpoints are 100='The best health you can imagine' and 0='The worst health you can imagine'; [a] absolute values of Cohen's d presented except Mahalanobis distances shown at 'Ethnicity' and 'Primary kidney disease'; [b] multiple selections per participant allowed

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250080

Artificial intelligence cloud platform–assisted detection and remote monitoring of exit site infection in peritoneal dialysis patients

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Abstract

Background: The incidence of catheter exit site infection is about one episode per 100 patient-months in peritoneal dialysis (PD) patients. 15-20% patients with exit site infection needs catheter removal. Traditionally, the clinical approach relies on patients to visually inspect and preliminarily assess the condition of the catheter exit site, but the accuracy and timeliness of such evaluations are limited. The purpose of this study is to establish an artificial intelligence (AI) cloud platform to early assist detection of exit site infections in PD patients and monitor exit site conditions of patients by medical staffs remotely.

Methods: From March 2022 to February 2023, patients and medical personnel used smartphone cameras to photograph the exit sites of Tenckhoff catheter in PD patients. Exit site abnormalities were defined as the presence of redness, swelling, crusting, or discharge. Two medical professionals reviewed and categorized the images as either normal or abnormal. Object detection algorithms including the Yolo model, DETR-transformer, and the ResNet series were employed. The dataset was divided into training, validation, and testing sets in a 7:1:2 ratio. An AI cloud platform was established accordingly.

Results: A total of 220 images were reviewed by medical professionals, with 150 classified as abnormal and 70 as normal. In terms of object detection, Yolo v4 demonstrated the best performance, achieving an average precision (AP50) of 0.805 at an intersection over union (IoU) threshold of 0.5. For image classification, the Yolo v4 model attained an accuracy of 0.911, an area under the curve (AUC) of 0.864, and a positive precision of 0.935 at a probability threshold of 0.81. An AI cloud platform (https://www.mindit.com.tw/EGE/SDHCP/) assisted detection and remote monitoring of exit site infection in peritoneal dialysis patients were set up.

Conclusion: Through deep learning and training on clinical image datasets, AI models can identify signs of infection with high accuracy. The Yolo v4 model can achieve an accuracy of 0.911 and a precision of 0.935, with an area under the ROC curve (AUC) of 0.864, indicating strong diagnostic performance. Patients can simply take a photo of the catheter exit site and upload it to a cloud-based platform. The system can then rapidly analyze the image and provide immediate feedback, facilitating early detection of potential infection and enhancing the safety of home-based dialysis care. In addition, medical staffs could monitor the exit site conditions of patients remotely.

Keywords：artificial intelligence; exit site infection; peritoneal dialysis.

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250727

Association of Plasma PCSK9 with Hypercholesterolemia in Patients on Peritoneal Dialysis

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Abstract

Background: Peritoneal dialysis (PD) is one of the therapeutic options for stage 5 chronic kidney disease (CKD) patients. Patients on PD have hypercholesterolemia that poses a significant cardiovascular risk. Proprotein convertase subtilisin/kexin type 9 (PCSK9) levels that are elevated in these patients may exacerbate lipid dysregulation.

Objective: To examine the relationship between PCSK9 and hypercholesterolemia in patients on peritoneal dialysis.

Methods: This study was carried out at the Department of Nephrology, National Institute of Kidney Diseases & Urology (NIKDU), Dhaka, Bangladesh. Total eighty (80) patients were included; of them 40 were patients on peritoneal dialysis (Group A) and rest 40 were apparently healthy subjects (Group B). Fasting lipid profile, serum albumin, serum creatinine, and plasma PCSK9 levels of all participants were measured accordingly. Data were analyzed and compared by statistical tests.

Results: Mean age of the PD patients was 63.32±9.92 years; their mean body mass index (BMI) was 25.44±4.64 kg/m2. Among 40 patients on PD; 77% had diabetes mellitus, 18% had hypertension and 5% had glomerulonephritis. PD patients had significantly elevated levels of total cholesterol (TC), low-density lipoprotein (LDL) cholesterol, and triglyceride (TG) compared to healthy controls ($p<0.001$). However, high-density lipoprotein (HDL) cholesterol level was not significantly different between the groups ($p= 0.187$). PD patients exhibited a significantly higher level of PCSK9 compared to controls ($p<0.001$). In PD patients; PCSK9 had a significant positive correlation with TC ($r= 0.863$, $p<0.001$) and LDL cholesterol ($r= 0.986$, $p<0.001$); but no significant correlation was found between PCSK9 with TG ($r= 0.012$, $p= 0.941$) and HDL cholesterol ($r= -0.157$, $p= 0.332$).

Conclusion: The plasma PCSK9 level is significantly higher in patients on peritoneal dialysis. Serum TC, LDL cholesterol, and TG levels are significantly elevated in PD patients. PCSK9 level have a significant positive correlation with TC and LDL cholesterol in PD patients.

Keywords：Chronic Kidney Disease (CKD), Hypercholesterolemia, Lipid Profile, Peritoneal Dialysis (PD), Proprotein Convertase Subtilisin/Kexin Type 9 (PCSK9)

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250306

The Effects of Canagliflozin in Peritoneal Dialysis Patients with Type 2 Diabetes

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Abstract

Background

Sodium-glucose cotransporter 2 (SGLT2) inhibitors offer cardiovascular and renal protective effects beyond glycemic control. While large trials have shown their benefits in reducing heart failure hospitalization and slowing CKD progression, evidence in end-stage renal disease (ESRD), particularly among peritoneal dialysis (PD) patients, remains limited. PD patients face high cardiovascular risk and progressive peritoneal membrane deterioration, affecting dialysis efficiency and outcomes. Managing both cardiovascular risk and preserving peritoneal membrane function is critical in this population. This study aimed to evaluate the effects of canagliflozin (CNF), an SGLT2 inhibitor, on heart failure parameters and peritoneal membrane function in PD patients with type 2 diabetes

Methods

A multicenter, prospective, randomized controlled trial was conducted in PD patients with type 2 diabetes. Patients were stratified by age, sex, and baseline brain natriuretic peptide (BNP) levels and randomly assigned to either CNF group or the control group for 24 weeks of treatment. The primary endpoint was the plasma BNP level at week 24, analyzed using the per-protocol set.

Results

A total of 27 patients who completed the 24-week treatment (CNF group: 14; control group: 13) were analyzed. The primary outcome, BNP levels at 24 weeks, showed no significant difference between two groups (CNF: 138.6 ± 180.6 pg/mL vs. Control: 252.67 ± 324.1 pg/mL; $p = 0.45$). However, the BNP change rate (ΔBNP%) was significantly lower in the CNF group compared to the control group (CNF: -20.3±41.1% vs. Control: 49.6±87.6%; $p = 0.03$). In peritoneal function tests, the CNF group demonstrated a lower percentage change in D/P creatinine ratio (ΔD/P; $p = 0.02$) and a higher percentage change in dialysate glucose concentration at 4 hours (ΔD; $p = 0.003$).

Conclusion

CNF treatment resulted in a significantly lower BNP change rate compared to the control group, suggesting potential benefits for heart failure prevention, while also supporting the maintenance of peritoneal membrane function in PD patients with type 2 diabetes. These findings suggest a potential therapeutic role for SGLT2 inhibitors in this high-risk population.

Keywords：peritoneal dialysis

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250911

The Effect of Low-GDP, Neutral pH Solutions on Peritoneal Dialysis-associated Peritonitis and Mortality: A Territory-wide, Propensity Score-matched Cohort in Hong Kong

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Abstract

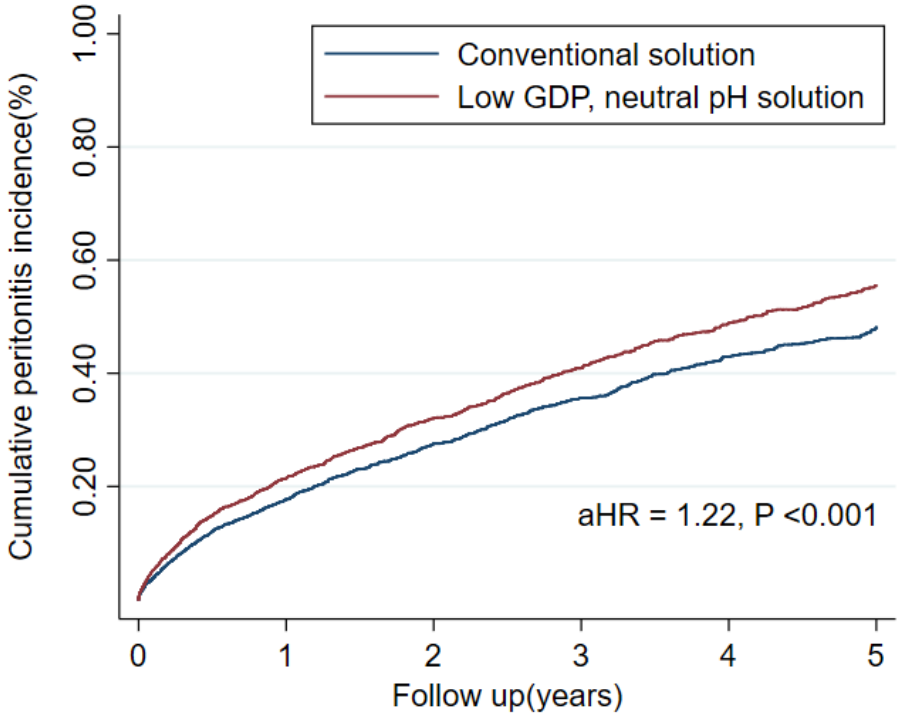
Background: Meta-analyses demonstrated that peritoneal dialysis (PD) solutions with low glucose degradation product (GDP) and neutral pH preserved residual kidney function in PD patients. However, their effect on peritonitis and survival remained uncertain, which may be attributed to small sample size and relatively short follow-up duration in clinical trials.

Methods: This retrospective, territory-wide cohort study used an electronic healthcare database in Hong Kong to identify adult incident PD patients from 1st January 2009 to 31st December 2023. The primary outcome was the occurrence of first episode of peritonitis. Secondary outcomes included occurrence of organism-specific peritonitis and all-cause mortality. Patients were categorized into users of low GDP, neutral pH PD solutions or conventional PD solutions, and were matched at a ratio of 1:2 by propensity score (PS). Cox proportional hazards models were used to estimate the 5-year adjusted hazard ratios (aHRs).

Results: Among 15,931 patients who initiated PD during the study period, 2,160 (13.6%) used low GDP, neutral pH solutions. The uptake of this solution increased by more than 3-fold across 15 years (6.0% in 2009-2013 versus 21.5% in 2019-2023). Overall, 2,160 users of low GDP, neutral pH solutions and 4,320 matched users of conventional solutions were followed up for a median of 32.5 (IQR 15.8-55.8) months. The mean age of the matched cohort was 59.7 years, and 58.6% were men. Most of the participants (93.0%) were on CAPD. Compared with conventional PD solutions, low GDP, neutral pH solutions were significantly associated with an increased risk of peritonitis (aHR 1.22, 95% CI 1.11-1.34, P <0.001). The risk of developing culture-negative peritonitis was highest (aHR 1.69, 95% CI 1.46-1.97) compared to peritonitis caused by other organisms. Furthermore, no significant heterogeneity in the association of low GDP, neutral pH solutions on risk of peritonitis were observed across subgroups (age >65 vs. ≤65 years; male vs. female; albumin <35 vs. ≥35g/l, all P for interactions >0.05). In contrast, patients who initiated PD with low GDP, neutral pH solutions had significantly reduced all-cause mortality (aHR 0.76, 95% CI 0.69-0.84). Sensitivity analysis by considering transfer to hemodialysis, transplantation and death as competing events showed that low GDP, neutral pH solutions remained an independent predictor of all-cause peritonitis (subdistribution HR 1.27, 95% CI 1.17-1.39).

Conclusions: In this territory-wide, PS-matched cohort, low GDP, neutral pH PD solutions were associated with an increase in risk of peritonitis but maintained survival benefit in incident PD patients.

Keywords：peritoneal dialysis, low GDP, peritoneal dialysis solution, peritonitis



Number at risk						
Conventional solution	4320	2909	1990	1341	882	600
Low GDP solution	2160	1423	971	632	398	239

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250518

A Comparative Study of Depression and Insomnia Among Patients on Continuous Ambulatory Peritoneal Dialysis versus Hemodialysis

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Abstract

The study was done to compare the prevalence of depression and insomnia in patients undergoing Haemodialysis (HD) versus Continuous ambulatory peritoneal dialysis (PD) within the Indian Armed Forces' dialysis services.

• Study Objectives: The primary objective was to compare the prevalence of depression and insomnia between HD and PD patients, while the secondary objective examined clinical and laboratory parameters related to these conditions.

• Methodology Overview: A cross-sectional, comparative study was conducted from November 2024 to January 2025, including dialysis patients from various military hospitals in North India.

• Inclusion and Exclusion Criteria: Patients aged 18 and older, with a dialysis duration of at least three months and a PHQ-9 score greater than 5, were included, while those with preexisting psychiatric disorders or chronic infections were excluded.

• Data Collection: Psychometric instruments such as the PHQ-9 and Beck Depression Inventory were used to assess depression, alongside demographic and clinical data collection.

• Results: The overall prevalence of depression was 47.96%(n= 51) and 43.98% (n = 37) in HD and PD patients respectively using PHQ 9 score. Most patients had mild depression as per PHQ 9 score (HD: PD - 25.7%:22.61%) followed by moderate depression (HD: PD -16.19%:15.47%) and moderately severe depression (HD: PD - 6.6%:5.9%). The mean Hemoglobin level was significantly more in mild depression group compared to moderately severe group. The albumin level was significantly low in PD group with moderately severe depression.

Conclusion: The study highlights that depression and insomnia are prevalent in half of the patients undergoing any modality of dialysis. There was no difference in overall prevalence and severity of depression between HD or PD. Most patients suffered from mild depression. It is important to screen for depression and insomnia in all dialysis patients.

Keywords：Dialysis, Depression, Insomnia

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250568

Staphylococcal Virulence and Host Risk Factors Associated with Refractory and Non-Resolution Peritonitis in Peritoneal Dialysis Patients

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Abstract

Background: Peritoneal dialysis (PD)-related peritonitis remains a major complication, contributing to refractory episodes (10%–88%), relapse (3%–20%), and mortality (2%–6%). Staphylococcal species, particularly coagulase-negative staphylococci (CoNS) and Staphylococcus aureus (SA), are the most prevalent causative pathogens globally. This study aimed to identify bacterial virulence traits and host factors associated with adverse clinical outcomes of PD-related peritonitis caused by CoNS and SA.

Methods: We retrospectively analyzed 151 episodes of staphylococcal peritonitis in 129 PD patients at National Cheng Kung University Hospital (1998–2018). Clinical data were reviewed from medical records, and stored bacterial isolates were assessed for virulence markers. Polymerase chain reaction (PCR) identified staphylococcal virulence genes. Enzymatic (lipase, lecithinase, nuclease, thermonuclease) and toxin (hemolysin) production was evaluated. Outcomes were categorized as complete resolution or non-resolution (refractory or relapsing peritonitis).

Results: Longer PD duration was independently associated with refractory peritonitis (OR 1.2; 95% CI: 1.04–1.4; P = 0.01) and non-resolution (OR 1.2; 95% CI: 1.1–1.4; P = 0.008). Among bacterial traits, lecithinase production was strongly associated with refractory peritonitis (OR 19.0; 95% CI: 4.4–82.2; P < 0.001) and non-resolution (OR 8.2; 95% CI: 2.4–28.1; P < 0.001). Moderate-to-strong biofilm production also independently predicted non-resolution (OR 9.3; 95% CI: 1.5–57.6; P = 0.02). Lecithinase showed good predictive performance for refractory peritonitis (AUC 0.79) and non-resolution (AUC 0.70). Biofilm production was moderately predictive of non-resolution (AUC 0.65).

Conclusion: Lecithinase and biofilm formation are significant microbial predictors of poor outcomes in staphylococcal PD-related peritonitis. Integrating bacterial virulence profiling with clinical risk factors may improve prognostication and support tailored treatment strategies for at-risk patients.

Keywords：Peritoneal dialysis, peritonitis, staphylococcal virulences, host factor, refractory peritonitis, non-resolution peritonitis

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20251163

Impact of Diabetes on Clinical Features and Outcomes of Peritoneal Dialysis-Associated Peritonitis

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Abstract

Introduction:
Diabetes mellitus is a common comorbidity in peritoneal dialysis (PD) patients and may influence the presentation and progression of PD-associated peritonitis. This study aimed to compare the clinical features and outcomes of peritonitis episodes in diabetic versus non-diabetic PD patients.

Study Design and Methods:
We conducted a retrospective, single-center cohort study reviewing all episodes of PD-associated peritonitis from January 2013 to July 2024. Data on demographics, clinical presentation, imaging utilization, and peritonitis-related outcomes were collected and compared between diabetic and non-diabetic PD patients. The primary objective was to evaluate whether diabetes status affected the clinical course and outcomes of peritonitis.

Findings:
Among 691 peritonitis episodes in 376 PD patients, 312 episodes occurred in 187 diabetic patients and 379 in 189 non-diabetic patients. Diabetic patients were older (mean age 64.7 ± 13 vs 60.3 ± 14 years, p=0.002), had a higher prevalence of cardiovascular disease (52% vs 23%, p=0.03), and more often received welfare support (47% vs 36%, p=0.03). Median time to first peritonitis was similar (14.6 vs 15.8 months, p=0.20). Diabetic patients were less likely to present with abdominal pain (73% vs 81%, p=0.01) or fever (23% vs 30%, p=0.04). No significant differences were found in the presence of cloudy effluent (69% vs 74%, p=0.14) or hypotension (9% vs 11%, p=0.38). Imaging was performed less frequently in diabetic patients (46% vs 54%, p=0.06). Diabetes was not independently associated with medical cure (AOR 1.36; 95% CI: 0.53–3.50), relapsing or recurrent peritonitis (AOR 1.14; 95% CI: 0.71–1.83), catheter removal (AOR 0.67; 95% CI: 0.24–1.81), hospitalization (AOR 0.85; 95% CI: 0.29–2.60), or death (AOR 1.46; 95% CI: 0.71–2.30).

Conclusion:
Although diabetic PD patients were older and had more comorbidities, their peritonitis-related outcomes were comparable to non-diabetic patients. Clinical vigilance is necessary to recognize atypical symptom presentation in diabetic individuals for timely diagnosis and appropriate management.

Keywords：Peritoneal dialysis related Peritonitis, Diabetes mellitus, Clinical presentation, Catheter removal, Hospitalization, Mortality

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
Abstract Submission No.：APCN20250643

A 10-Year Journey of Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis: Lessons from Dr. Saiful Anwar Hospital, Malang, Indonesia

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Abstract

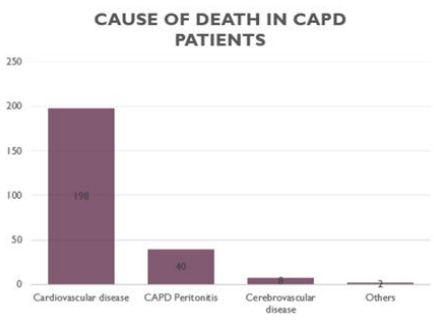
Introduction: Continuous Ambulatory Peritoneal Dialysis (CAPD) is an essential renal replacement therapy for patients with end-stage renal disease (ESRD), offering an alternative to hemodialysis. However, CAPD-associated peritonitis remains a major complication that threatens patient survival and long-term treatment success. Globally, CAPD peritonitis accounts for significant morbidity and mortality, with a reported mortality rate of 5%, contributing to death in 16% of infected patients. Understanding the etiological patterns of CAPD peritonitis is crucial for optimizing prevention and treatment strategies. This study aims to analyze the etiological characteristics of CAPD peritonitis as a major cause of mortality over ten years at Dr. Saiful Anwar Hospital, Malang.

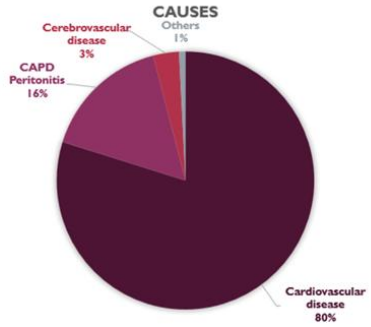
Methods: A retrospective descriptive study was conducted on 40 ESRD patients undergoing CAPD therapy who succumbed to peritonitis. Data were collected from medical records in the CAPD Center of Dr. Saiful Anwar Hospital between August 2014 and December 2024. The study examined patient demographics, causative pathogens, and mortality trends associated with CAPD peritonitis.

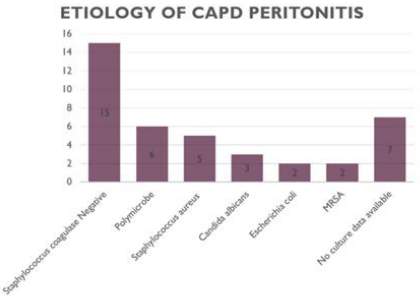
Results: Among 674 ESRD patients receiving CAPD, 248 (36.8%) died, while 426 (63.2%) survived beyond five years. CAPD peritonitis was identified as the second leading cause of mortality (16.1%), following cardiovascular disease. Coagulase-negative Staphylococcus was the predominant pathogen responsible for CAPD peritonitis, identified in 15 cases (37.5%). Other causative microorganisms included Gram-negative bacteria and fungi, indicating that broad-spectrum antimicrobial strategies are needed.

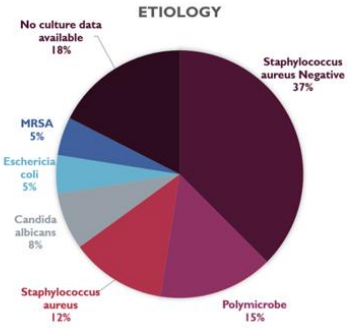
Conclusion: The substantial mortality rate linked to CAPD peritonitis highlights the critical need for enhanced infection prevention strategies and prompt, targeted interventions. Improving CAPD patient education, reinforcing aseptic techniques, and refining antibiotic stewardship programs are imperative to reducing peritonitis-related deaths and improving long-term patient outcomes. Future research should focus on developing predictive models for high-risk patients and evaluating the effectiveness of emerging antimicrobial therapies.

Keywords：CAPD Peritonitis, End-Stage Renal Disease, Continuous Ambulatory Peritoneal Dialysis, Infection Control, Patient Outcomes, Antimicrobial Strategies


CAUSE OF DEATH IN CAPD PATIENTS
250
200
150
100
50
0
198
40
Cardiovascular disease
CAPD Peritonitis
Cerebrovascular disease
Others


CAUSES
Cerebrovascular disease 3%
Others 1%
CAPD Peritonitis 16%
Cardiovascular disease 80%


ETIOLOGY OF CAPD PERITONITIS
16
14
12
10
8
6
4
2
0
15
6
5
3
2
2
7
Staphylococcus coagulase Negative
Polymicrobe
Staphylococcus aureus
Candida albicans
Escherichia coli
MRSA
No culture data available


ETIOLOGY
No culture data available 18%
Staphylococcus aureus Negative 37%
MRSA 5%
Escherichia coli 5%
Candida albicans 8%
Staphylococcus aureus 12%
Polymicrobe 15%

Oral Communications：Peritoneal Dialysis (PD) and Nutrition
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The Impact of Malnutrition on the Obesity Paradox among Patients with End-Stage Kidney Disease Requiring Maintenance Dialysis

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Abstract

Background: Although, obesity is paradoxically linked to better survival in end-stage kidney disease (ESKD) patients, the concurrent presence of obesity and malnutrition, known as the double burden of nutritional disorders, has not yet been studied.

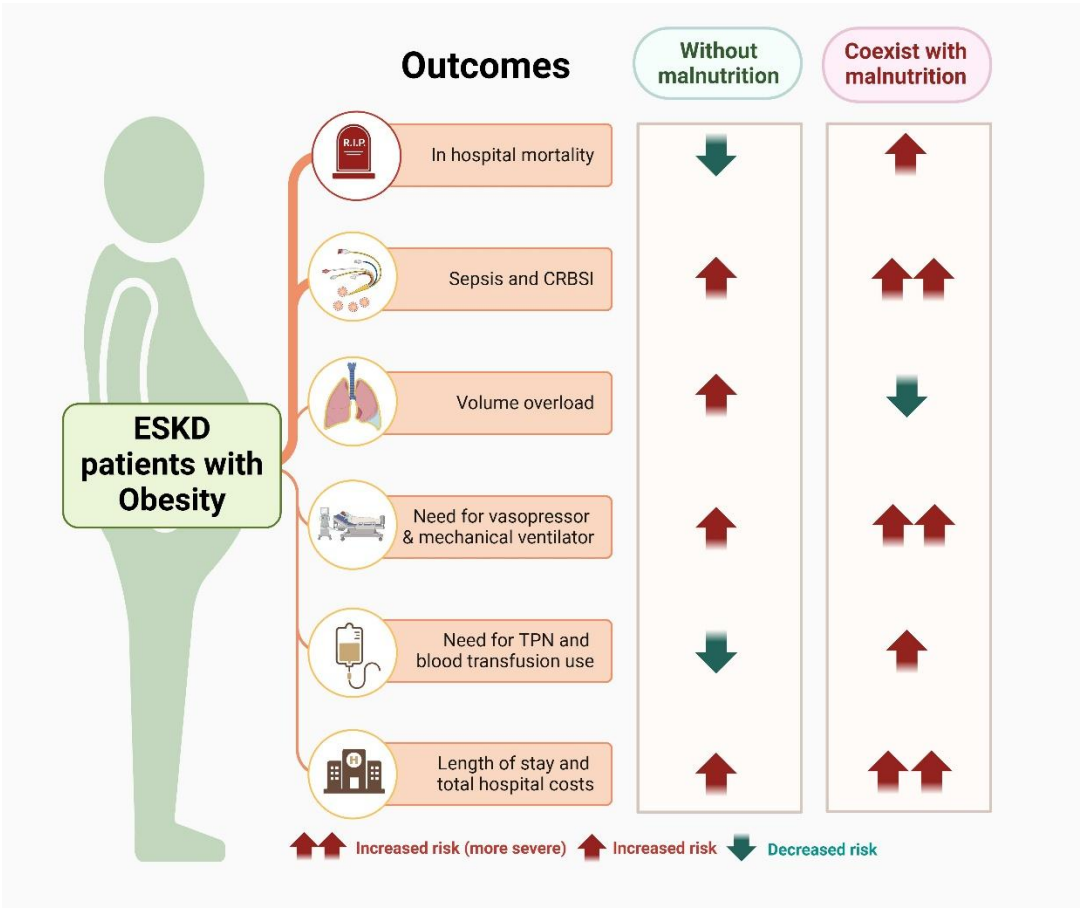
Objective: The aim of this study is to investigate whether malnutrition influences the obesity paradox (survival benefits) and to explore the relationship between obesity with/without malnutrition and in-hospital outcomes among hospitalized ESKD patients.

Methods: This study utilized the National Inpatient Sample (NIS) database between 2016 and 2021. Hospitalized ESKD patients were included and categorized into three groups: non-obese, obese without malnutrition, and obese with malnutrition. Multivariable regression models were used to evaluate the association between obesity with/without malnutrition and in-hospital outcomes, compared to non-obese patients.

Results: A total of 674,367 hospitalized ESKD patients were included, with 125,978 (18.7%) diagnosed with obesity. Among the obesity patients, 119,155 (94.6%) were not malnourished, while 6,823 (5.4%) had malnutrition. Obese ESKD patients without malnutrition were associated with a decreased risk of mortality (adjusted odd ratio [OR] 0.87, 95% CI 0.84 to 0.91), whereas obese patients with malnutrition were associated with an increased risk of mortality (adjusted OR 2.08, 95% CI 1.90 to 2.27), compared to non-obese patients. Furthermore, obesity with/without malnutrition were associated with an increased risk of infection-related complications (sepsis and catheter-related bloodstream infection), greater need for vasopressors and mechanical ventilation, and higher healthcare resource utilization. These effects were notably more pronounced when malnutrition was present.

Conclusions: Our study underscores the significant “obesity paradox” among hospitalized ESKD patients, with survival advantages limited to those without malnutrition. The concurrent presence of malnutrition, however, reverses outcome trajectory, emphasizing the critical importance of identifying malnutrition in obese ESKD patients.

Keywords：end-stage kidney disease, in-hospital outcomes, malnutrition, nationwide study, obesity paradox


Outcomes
Without malnutrition
Coexist with malnutrition
ESKD patients with Obesity
In hospital mortality
Sepsis and CRBSI
Volume overload
Need for vasopressor & mechanical ventilator
Need for TPN and blood transfusion use
Length of stay and total hospital costs
Increased risk (more severe)
Increased risk
Decreased risk