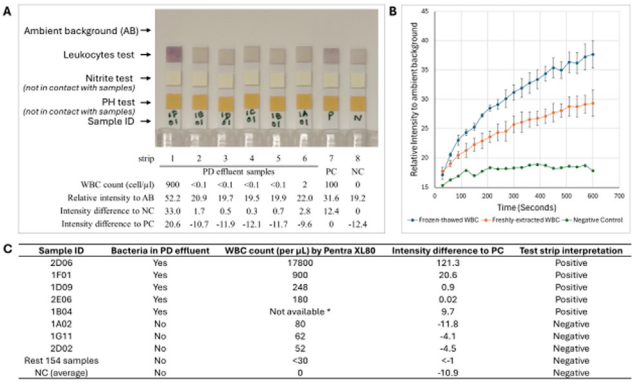
For the negative control (NC), we prepared a buffer containing 1.06% dextrose by mixing 4.25% dextrose DELFLEX® (Fresenius Medical Care, 054-20224) and 1xPBS (pH 7.2) in a 1:3 ratio. For the positive control (PC), WBCs were purified from the blood of a healthy donor, resuspended in the NC buffer, diluted to 100 cells/µL (PDRP threshold per ISPD guidelines), aliquoted, and stored at -80°C until analysis.

For the leukocyte strip test, a thawed PC, an NC, and six thawed spent PDE (250 µL each) were arranged in a row. Eight urinary test strips containing leukocytes test pads (LotFancy, 11J-2136-D.1) were simultaneously dipped into samples for two seconds, then laid flat while a video was recorded to capture the color changes over 10 minutes. Signal intensities were analyzed by ImageJ (https://imagej.net/).

Results:



C

Sample ID	Bacteria in PD effluent	WBC count (per µL) by Pentra XL80	Intensity difference to PC	Test strip interpretation
2D06	Yes	17800	121.3	Positive
1F01	Yes	900	20.6	Positive
1D09	Yes	248	0.9	Positive
2E06	Yes	180	0.02	Positive
1B04	Yes	Not available *	9.7	Positive
1A02	No	80	-11.8	Negative
1G11	No	62	-4.1	Negative
2D02	No	52	-4.5	Negative
Rest 154 samples	No	<30	<-1	Negative
NC (average)	No	0	-10.9	Negative

Figure 1. Evaluation of Urinary Leukocyte Test Strips for peritonitis screening. A. an example of a still image extracted from a video at the 5-minute mark. **B.** Quantitative leukocyte test strip results of freshly extracted and frozen-thawed WBCs at 100 cells/µl. **C.** Strip test results of all 162 PD effluent samples.
* Lab measurement was invalid.
Abbreviation: WBC, white blood cell; AB, ambient background; PC, positive control; NC, negative control; PD, peritoneal dialysis.

Figure 1. Apresents an example of a still image extracted from a video at the 5-minute mark. Sample 1F01 is a clinically diagnosed bacterial peritonitis case. Note that neither nitrite nor pH tests were performed.

Test strip results for freshly extracted and frozen-thawed WBCs at 100 cells/µL were compared. Both were from the same batch, with the frozen-thawed WBCs frozen at -80°C for an hour, while the fresh cells were kept at room temperature for the same duration. The results showed that the signal intensity from the frozen-thawed WBCs was consistently higher than that from the fresh WBCs (Figure 1B). For the fresh WBCs, the color change was visible to the naked eye as early as 2 minutes.

Among the 162 PDE, five were identified as bacterial peritonitis through clinical diagnosis or positive bacterial culture. All five PDE exhibited color intensities higher than the PC, yielding a test sensitivity of 100%. The remaining 157 PDE showed either no color change or intensities lower than the PC, resulting in a test specificity of 100%.Figure 1Csummarizes the results alongside their WBC counts, focusing on samples with WBC $>$ 30 cells/µl.

Conclusions: We demonstrate that urinary leukocyte test strips are a rapid and effective screening tool for PDRP, with 100% sensitivity and 100% specificity. Future research with fresh bedside samples in larger patient cohorts is warranted to validate these results. If corroborated, urinary test strips could provide an effective and inexpensive point-of-care test (less than 10 U.S. cents per test) to detect elevated leucocyte counts in PDE. This method would be of particular interest in resource-constrained settings, such as low- and middle-income countries.

I have no potential conflict of interest to disclose.

I did not use generative AI and AI-assisted technologies in the writing process.

WCN25-1326

PERITONEAL DIALYSIS IN ICU PATIENTS

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Introduction: AKI is associated with substantial mortality among patients admitted to intensive care units (ICU) [1-3]. Patients with kidney failure are more frequently admitted to critical care units, facing higher death risks compared to those with preserved kidney function[4,5]. Peritoneal dialysis as a dialysis modality over CRRT in critically sick patients still holds good. Despite limited data available , we will like to bring in discussion few cases in which peritoneal dialysis as a renal replacement modality did better results than other modalities of dialysis.

Methods: we have described the mode of presentation , the parameters at admission ,12 hrs and 24 hrs and (as guided by response to therapy) dialysis outcome and the overall outcome in 5 critically sick patients who attended in our hospital during last 1 year .The parameters included are Hemoglobin, serum creatinine ,serum sodium ,serum potassium ,blood urea, pH ,bicarbonate ,lactate along with vital parameters.

Results: 5 cases discussed here highlights that acute peritoneal dialysis is highly effective in correcting acidosis ,electrolyte imbalance while maintaining hemodynamic stability in critically sick adult patients with several co morbidities and clinical presentation leading to develop AKI and requiring dialysissupport.In recent era ,CRRT being the most preferred RRT option in AKI in ICU set up ,however in conditions like CVA ,CLDwith bleeding tendencies where use of heparin /CRRT difficult ,acute peritoneal dialysis still hold a good place in managing them.

Conclusions: There is sufficient evidence of comparable outcomes between PD and extracorporeal therapies even in critically ill ICU patients. The benefits of reduced risk of bleeding , cost effectiveness, ease of training, and reduced need for electricity and water make it the optimal form of therapy for low-resource environments.

I have no potential conflict of interest to disclose.

I did not use generative AI and AI-assisted technologies in the writing process.

WCN25-1344

GUT MICROBIOTA AND BLOOD METABOLIC PROFILE IN PATIENTS ON PERITONEAL DIALYSIS

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Introduction: The study of the microbiome: intestinal microbiota and metabolites in patients with CKD, especially on peritoneal dialysis, is of great interest due to the involvement of altered intestinal microflora in the accumulation of uremic toxins and in the onset of typical complications (cardiovascular diseases, vascular calcification, infections, dialysis peritonitis)the occurrence of characteristic complications (cardiovascular diseases, vascular calcification, infections, dialysis peritonitis). In addition, the use of probiotics can significantly affect the intestinal microflora and metabolites.

The aim of this study was to investigate the features of the intestinal microbiota in patients on peritoneal dialysis and the effect of the treatment with "Normoflorin", a probiotic drug, on the blood metabolic profile of patients with CKD.

Methods: In our study we included 60 patients, age 55±16.4 years (32 f/28 m), who received peritoneal dialysis at our nephrology center. Participants were divided into two groups: one group received "Normoflorin" for 1 month (N=38) and the other group did not (N = 22). We examined standard biochemical analysis in all patients. Fecal samples were collected between June 2023 and March 2024. The intestinal microbiota was analyzed using 16s rRNA sequencing. 1H nuclear magnetic resonance spectroscopy was utilized to analyze the serum samples, focusing on low-molecular-weight metabolites. We used standard statistical methods.

Results: Fig.1shows microorganisms at the phylum, class, order, family and genus level in patients receiving PD. The visual shows that, on average, the prevailing phylum in the samples was Bacillota, and the second largest phylum was Bacterioidota. The presence of Actinomycetota and Proteobacteria was also observed in significant amounts. Bacterioidia of the Bacterioidota phylum and Clostridia and Bacilli of the Bacillota phylum were significant at the class level. A decrease in the alpha diversity of microorganisms correlated with high ferritin levels and the frequency of dialysis peritonitis. There were no significant correlations with age and the studied biochemical parameters. A total of 55 metabolites were identified in serum samples from patients with CKD. The t-test demonstrated statistically significant changes in several metabolites following "Normoflorin" treatment, including

sarcosine, fumarate, hypoxanthine, methionine, isobutyrate, ornithine, acetylcholine and pyruvate (Fig. 2). These findings indicate that "Normoflorin" therapy induces specific metabolic alterations in patients with CKD, predominantly impacting amino acid metabolism and, to a lesser extent, glycerophospholipid metabolism and the TCA cycle.

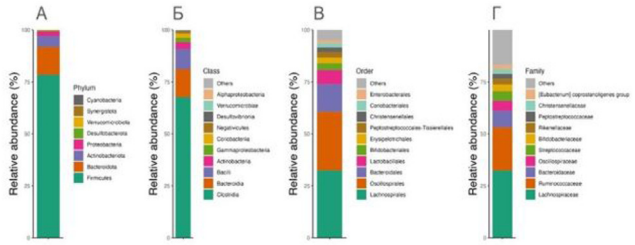

Fig.1 Relative average number of bacteria in samples at the level of A - phylum, B - class, C - order, G - family.

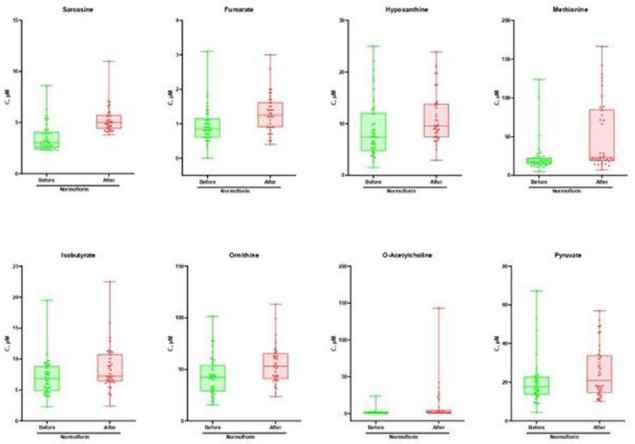

Fig.2 The changes in metabolites after treatment with "Normoflorin" (statistically significant).

Conclusions: In patients undergoing peritoneal dialysis, a decrease in microbial alpha diversity was found, correlating with high ferritin levels and the incidence of dialysis peritonitis.

The use of «Normoflorin» resulted in an improvement in the metabolic profile.

I have potential conflict of interest to disclose.

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WCN25-1408

PATIENT-REPORTED EXPERIENCE MEASURE (PREM) WITH SHARESOURCE ANALYTICS 1.0 IN REMOTE MONITORING PROGRAM FOR PERITONEAL DIALYSIS

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Introduction: Patient-reported experience measurement (PREM) in peritoneal dialysis patients is essential to ensure patient-centered care and improve treatment quality. PREMs provide valuable insights into the patient perspective, helping clinical teams tailor their approaches to meet individual needs. Positive patient experiences are closely linked to improved adherence and clinical outcomes, making PREMs a critical tool for improving overall care.

Methods: This observational multicenter cohort study was conducted between April and July 2024. Renal PREMs were evaluated in patients in an automated peritoneal dialysis program with remote monitoring using the Sharesource Analytics 1.0 platform. The Kidney PREM survey, a comprehensive tool consisting of 38 items grouped into 13 themes, was used to assess patient experience. These items and themes cover a wide range of aspects related to peritoneal dialysis, providing a detailed understanding of the patient's journey. All items were rated on a 7-point Likert scale ranging from 1 (never) to 7 (always).

Results: A total of 259 patients were evaluated; the mean age was 56.9 years, the majority were men (55.2%), 33.2% were diabetic, and 43.2% had residual kidney function, seeTable 1. Patients rated their overall experience with the service provided by their renal unit as 6.9 (SD 0.3), which is the best experience they could have. However, the study identified several areas for improvement, such as accessibility, comfort, cleanliness, parking, transportation, and some aspects of laboratory testing. For instance, patients expressed a need for better transportation services to and from the dialysis center, and a desire for more comfortable and cleaner facilities. See details inTable 2.

Characteristics	N= 259
Age, years, mean (SD)	56.9 (16.1)
Sex, n (%): Male	143 (55.2)
Ethnicity, n(%): Afro-american	11 (4.2)
Diabetes history, n (%): Yes	86 (33.2)
Vintage of KRT, years, median (IQR)	2.8 (1.6; 4.9)
Body Mass index, mean (SD)	25.4 (4.6)
Urine output ml/day; n (%): < 250	147 (56.8)
>= 250	112 (43.2)
Hemoglobin, g/dL, mean (SD)	12.1 (1.9)
Albumin, g/dL, mean (SD)	3.8 (0.5)
Phosphorus, mg/dL, mean (SD)	5.1 (1.3)
Potassium, mE/L , mean (SD)	4.5 (0.8)
Kt/V, mean (SD)	2.1 (0.4)

Domains	Mean Score (SD)
Access to the renal team	6.9 (0.4)
Support	6.2 (0.9)
Communication	6.2 (0.7)
Patient information	6.2 (0.7)
Fluid intake and diet	7.0 (0.1)
Needling	7.0 (0.1)
Test	5.5 (0.7)
Sharing decisions about your care	6.9 (0.2)
Privacy and dignity	6.9 (0.3)
Scheduling and planning	6.5 (1.4)
How the renal team treats you	6.9 (0.4)
Transport	4.1 (1.1)
The environment	5.9 (0.6)
Your overall experience	6.9 (0.3)
Overall score	**6.2 (0.2)**

* Maximum possible score being 7

Conclusions: Patients in the automated peritoneal dialysis program using Sharesource Analytics 1.0 reported high overall satisfaction. Key strengths included access to the nephrology team and communication. These findings underscore the crucial role of using PREMs to improve patient-centered care and guide future improvements in dialysis services based on patient feedback.