ISPD Asia-Pacific Chapter Newsletter, December 2024

VOLUME 22, ISSUE 3

Prepared by Chia-Te Liao and Talerngsak Kanjanabuch

News from the ISPD

ISPD APC 2027 meeting call for bidding

Deadline for bidding

28 February 2025

Submission of application

Eligibility Criteria: Potential bidders must not have hosted ISPD or APCM-ISPD conferences within the last 5 years.

A soft copy of the bid application should be sent to the ISPD APC coordinator:

Professor Talerngsak Kanjanabuch; Email address: golfnephro@hotmail.com

Content of the bid application

- The name of president of the local organizing committee
- Confirmation of support from the national or regional society of nephrology
- The proposed timing and venue of conference
- The convention facilities with preferably a venue hotel in the convention complex.
- The bidders are encouraged to provide information on their previous experience hosting similar conferences to assess their capability
- The strength and experience of the local organizing committee, national or regional society of nephrology in relation to PD practice, development, research, and organization of conferences
- Rationale why Asia Pacific Chapter conference should be hosted in that country
- Transportation information and accommodation details (at different budgetary levels)
- The proposed budget to host the meeting
- Local attractions for visitors

Financial Arrangement

Any profits arising from the Congress will be split 50-50 between the Local Organization Committee and the ISPD. Most of the profit going to ISPD will be used for promotion and development of PD in the Asia Pacific region. Any further financial loss will be the responsibility of the organizing committee.

Proposal Review Process

All applications will be shortlisted and presented at **APCM-ISPD 2025 in Kuala Lumpur, Malaysia**. Decisions will be announced shortly after the event.

ISPD Call for Research Proposals open now!

The ISPD welcomes research proposals that are of importance to the international peritoneal dialysis community. The study requires international collaboration.

How to Prepare Your Application

Please read the application guidelines carefully, available here: **APPLICATION GUIDELINES.**

Funding

Small grants (up to $10,000 USD) may be awarded at the discretion of the ISPD Council to help enable these projects.

Eligibility Criteria

Any member or non-member of ISPD can submit proposals (receipt of grant is conditional on confirming membership).

Submission Deadlines

Applicants are encouraged to discuss the proposal with the ISPD International Studies Committee before finalising and submitting the application. Please contact the team by email admin@ispd.org before **February 15th 2025** with a brief research summary and a few available times to meet, and a member of the International Studies Committee (Chair A/Prof Yeoungjee Cho) will contact you with a meeting time.

Finalised applications should be submitted to admin@ispd.org by **February 28th 2025**.

ISPD Call for Expression of Interest for Joining the ISPD Guideline Writing Groups

The ISPD Standard and Guideline Committee is looking for motivated ISPD members from any region to join the following ISPD Guidelines Writing Working Groups as either lead or member:

1. **Cardiovascular Guideline (Update)**
2. **Position Statement on Contributors to Carbon Footprint for PD (New)**

If you know of any motivated ISPD members who can contribute to these guidelines with their expertise, don't hesitate to encourage them to submit their expression of interest for these important writing groups.

Submission Deadlines

The deadline to submit your Expression of Interest is **December 15th 2024**.
Please contact the ISPD secretariat with any questions via admin@ispd.org

Application and Selection Process

To apply as lead or member of any of the above writing groups, please send an email to admin@ispd.org indicating the writing group you want to apply for and the role. The email should include a short motivation letter of 250-300 words and your CV (up to 5 pages).
Having a valid ISPD membership (or being an Associate ISPD Nurse/AHP) is a requirement to participate in the writing group. You can become an ISPD member now, consider joining or renew your membership (see below).

Monthly Joint ISN-ISPD Online Case Discussion (Zoom Meeting)

Organised between ISN-Oceania and South East Asia (OSEA) Regional Board and ISPD APC

The case presentation will alternate monthly between glomerulonephritis case and peritoneal dialysis case, respectively.

1. Objective: The Case Discussion aims to foster dialogue and facilitate learning among nephrologists and healthcare professionals in the OSEA region.
2. Target Audience: This discussion is open to all nephrologists, nephrology fellows, nurses, and other healthcare professionals interested in PD.
3. Case Submission: We encourage members to submit PD cases for discussion directly via email to Professor Talerngsak Kanjanabuch; Email address: golfnephro@hotmail.com.
4. The information will be disseminated through the regional network one week before the meeting.

The next PD Case Discussion will be in **January 2025**.

Renew your membership!

Visit https://ispd.org/memberships/ to join the ISPD or renew your membership.

Membership benefits of the ISPD include:

- print and/or online subscription to Peritoneal Dialysis International
- Receipt of PD News
- Online access to ISPD Guidelines

- Special registration fees at ISPD Congress, Chapter Meetings and the Annual Dialysis Conference
- Application for ISPD Scholarships and Grants

Membership for developing countries can be done at advantageous rates, by grouping members by institution or region geographical area. Write to admin@ispd.org for more information.

New options to stay engaged with ISPD:https://mailchi.mp/ispd/members-2024

- **ISPD Associate Nurse/AHP:** a new modality for engaging in ISPD activities and obtaining the most relevant membership benefits for these profiles: participation on ISPD Committees, access to information and education resources, travel grants, fellowships, and discounts for events and congresses. To be able to lower the association fee to only $15 USD/year, this modality does not include the right to participate in the ISPD elections (neither being a candidate nor voting for the candidates) and does not include access to the PDI Journal either.This new modality of engagement will allow ISPD to reach many more nurses and allied health professionals, having a positive impact on their work and improving the well-being of many more kidney patients.To join as an Associate Nurse/AHP: CLICK HERE. We encourage all ISPD members to disseminate this new membership option among nurses and allied health professionals within their networks.
- **ISPD Retired Membership:** all membership benefits of a full member, while enjoying a reduced rate of only $80 USD/year, for retired members who can prove their retired status and who have been ISPD members for at least five years. An option to retain the experience and knowledge of valuable professionals who will stay engaged in the PD Community, contributing to the ISPD work through our committees and other activities.To obtain the retired membership, please provide proof of your status as a retired doctor/professor/nurse/AHP by emailing admin@ispd.org. After validation of your status, we will provide you with instructions on how to subscribe.

Upcoming Meetings

11th ISPD Asia Pacific Chapter Meeting 2025

The Malaysian Society of Nephrology (MSN) will be hosting the 11th APCM-ISPD congress in Kuala Lumpur, Malaysia, 4-7th September 2025.

The conference theme is "*Transforming and Empowering Success in PD*" with an aspiration moving towards home therapies especially in the Asia Pacific region. Together with colleagues from the Asia Pacific Chapter-ISPD core members, the local organizing committee had geared up preparing a varied and attractive scientific programme for the congress.

We would like to announce important dates for the congress:

- Registration open, Early bird: 1 January 2025 to 31 May 2025
- Standard registration: 1 June 2025 to 31 August 2025
- Abstract Submissions: 1 January 2025 to 1 June 2025

Please scan the QR code in the flyer below to register your interest to receive important reminders and exciting updates.

Research News from Asia-Pacific Region

Management of Tuberculous Peritonitis: One Glove Does Not Fit All



Chau Wei Ling [1] (left), Kamal Sud [2,3,4] (middle), Vincent W Lee [5,6] (right)

[1] Pharmacy Division, Singapore General Hospital, Singapore

[2] Nepean Kidney Research Centre, Department of Renal Medicine, Nepean Hospital, Sydney, New South Wales, Australia

[3] Peritoneal Dialysis Unit, Regional Dialysis Centre, Blacktown Hospital, Sydney, New South Wales, Australia

[4] Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry- Peritoneal Dialysis Working Group

[5] Department of Renal Medicine, Westmead Hospital, New South Wales, Australia

[6] Westmead Applied Research Centre, Faculty of Medicine and Health, The University of Sydney, Australia

Correspondence to: Associate Professor Vincent W Lee; Email address: vincent.lee@sydney.edu.au

Mycobacterium tuberculosis (*M. tuberculosis) spp.* is a rare but serious cause of bacterial peritonitis in patients on peritoneal dialysis (PD) [1], which has been associated with permanent transition to haemodialysis (HD) and high mortality rates [2]. Compared to the general population, the risk of tuberculosis (TB) in patients with kidney failure was reported to be 100-fold higher [3]. This is likely due to impaired cellular immunity [4] that can trigger the reactivation of latent TB in the peritoneum caused by the haematogenous spread from previous infections or active pulmonary or miliary tuberculosis [5].

To date, the optimal treatment strategies for tuberculous peritonitis in patients on PD remain uncertain. Whilst the International Society for Peritoneal Dialysis (ISPD) peritonitis guidelines provided level 2C recommendations to treat with antituberculosis drugs *without* PD catheter removal [6], one size might not fit all as the recommendations were limited by expert opinion based on low-quality evidence from either case reports or small retrospective series. Furthermore, the current recommendations for treating tuberculous peritonitis are extrapolated from the guidelines for treating pulmonary and other extra-pulmonary TB [7]. Given the variation in antituberculosis regimens and outcomes in PD patients, it is imperative to identify optimal treatment strategies to improve the survival rates and prolong the length of time on PD modality.

Our recent systematic review and multicentre bi-national Registry analysis have highlighted higher survival rates in the Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry cases (94%) as compared to case studies (65%) and cohort studies (74%) reported in the literature [8]. This could be attributed to higher proportions (82% vs 23% and 20%) and earlier (7 (6-10) vs. 13 (7-20) days) PD catheter removal in the ANZDATA Registry group as compared to case studies and cohort studies, respectively [8].

PD catheter removal and PD outcomes

Our study suggested earlier PD catheter removal was associated with better outcomes **(Table 1)** [8]. Possible explanation include eradicating the biofilm in PD catheters that can limit the penetration of antituberculosis drugs with PD catheter removal.

The ISPD's level 2C recommendations to treat tuberculous peritonitis with antituberculosis drugs *without* PD catheter removal remain controversial as there are conflicting results in the literature [9-13]. Whilst several studies have reported successful treatment of tuberculous peritonitis *without* PD catheter removal and PD catheter removal was not associated with higher survival rates, others reported that PD catheter removal was necessary [8]. In the study by Yang *et al*. [14], the authors suggested that antitubercular treatment *without* PD catheter removal can be achieved with early diagnosis of tuberculous peritonitis. However, early diagnosis is not achievable in the vast majority of patients since, as opposed to other bacterial peritonitis infections where

identification of the causative organism typically takes only a few days, identification of *M. tuberculosis* can take up to 6 weeks due to its insidious growth and requires specialised culture media, leading to delayed diagnosis. While culture results for *M. tuberculosis* are pending, patients are usually diagnosed initially as 'culture-negative' peritonitis and treated with empiric antibiotics since patients have cloudy bags with elevated PD effluent cell count that do not grow a specific organism with routine culturing techniques. Given that these 'culture-negative' episodes do not respond to the initial empirical antibiotic regimens, most clinicians will consider PD catheter removal based on the current ISPD peritonitis guidelines with a level 1D recommendations to remove PD catheters in patients with PD effluent that fails to clear after 5 days of appropriate antibiotics [6]. Therefore, we suggest that the ISPD peritonitis guidelines' level 2C recommendations of antituberculosis treatment while retaining the PD catheter could only be relevant and implemented in centres equipped with rapid diagnostics such as Xpert ® MTB/RIF (Gene Xpert) and Xpert MTB/RIF Ultra (Xpert ® Ultra) or peritoneal biopsies that allow early diagnosis of tuberculous peritonitis. On the other hand, as recommended by ISPD peritonitis guidelines, prompt removal of PD catheters needs to continue to be undertaken in patients who do not respond after 5 days of empiric antibiotics for 'culture-negative' peritonitis (level 1D recommendation), especially in centres that rely on culture diagnosis of *M. tuberculosis* infection by culturing in specialised culture media.

Table 1: Relationship between mortality and PD catheter removal [8]

	Case studies (n=151)			
	Death related to tuberculous peritonitis (1), n (%)	**Died while receiving antituberculosis therapy for tuberculous peritonitis (2), n (%)**	**Alive, n (%)**	**Living status not reported by the authors, n (%)**
PD catheter removed	17 (11.3%)	12 (7.9%)	55 (36.4%)	3 (2.0%)
PD catheter not removed	9 (6.0%)	10 (6.6%)	41 (27.2%)	0 (0.0%)
Status of PD catheter removal not reported	2 (1.3%)	0 (0.0%)	2 (1.3%)	0 (0.0%)

[Note] 1. Death related to tuberculous peritonitis as reported by the authors or within 30 days of diagnosis of tuberculous peritonitis. 2. Death that occurred >30 days of diagnosis of tuberculous peritonitis and unrelated to tuberculous peritonitis while receiving antituberculosis therapy for tuberculous peritonitis. (Data did not sum up to 100% due to rounding)

	ANZDATA Registry (n=17)	
	Death related to tuberculous peritonitis (1), n (%)	**Alive, n (%)**
PD catheter removed	0 (0%)	14 (82%)
PD catheter not removed	1 (6%)	2 (12%)

[Note] 1. Death within 30 days of diagnosis of tuberculous peritonitis.

Retaining of PD catheter and PD outcomes

In our study, two patients from the ANZDATA Registry who remained on PD were permanently transferred to HD after a mean duration of 20 months of diagnosis of tuberculous peritonitis due to inadequate small solute transport. Although the sample size is small and lacks a control group, our findings suggest that retaining a PD catheter during tuberculous peritonitis could be associated with worse outcomes, including peritoneal membrane failure. Possible explanations include persistent and prolonged inflammation of the peritoneal membrane from peritonitis [15], resulting in pathological structural and functional alterations to the peritoneal membrane. However, further studies are warranted to evaluate whether solute transport and ultrafiltration can be maintained while PD catheters are retained while on antituberculosis treatment in centres equipped with rapid diagnostics tests for *M. tuberculosis*.

Restart of PD and PD outcomes

Little is known about the optimal time to restart PD (and regaining peritoneal membrane function) following PD recommencement after tuberculous peritonitis. Several previous studies have reported alterations in peritoneal transport characteristics, such as the decline in ultrafiltration and an increase in the dialysate/peritoneal (D/P) creatinine ratio after severe bacterial peritonitis. In our ANZDATA Registry analysis, none of the patients returned to PD after tuberculous peritonitis following PD catheter removal. Therefore, we could not evaluate peritoneal membrane characteristics in this group of patients. Nevertheless, our findings highlight the need for more studies to determine the optimal time to restart PD and evaluate whether an episode of tuberculous peritonitis is associated with changes in the peritoneal membrane characteristics that could impact on decisions to return to PD after a period of interim HD.

Variation in antitubercular regimen

Our study observed wide variations in the antituberculosis regimens used to treat tubercular peritonitis. While rifampicin, isoniazid, and pyrazinamide are the most common antituberculosis drugs observed in the literature review and ANZDATA Registry case groups, the choice of antituberculosis therapy would need to be individualised based on centre- and demographic-specific factors. Successful treatment of tuberculous peritonitis also relies on adequate drug concentrations in the peritoneal cavity and the organism's susceptibility to antituberculosis drugs, which could be another argument for the removal of PD catheters and shifting patients to HD.
Finally, most (82.3%) of the patients in our literature review group had additional risk factors for tuberculous peritonitis. These findings highlight the need to identify and manage risk factors associated with tuberculous peritonitis. These include diabetes, long-term steroids and immunosuppression (i.e., human immunodeficiency disease (HIV) and antineoplastic drugs), history of pulmonary TB, and malnutrition.

In summary, peritonitis due to *M. tuberculosis* is uncommon but is associated with poor outcomes. In addition to early laboratory diagnosis of this infection that will likely improve patient outcomes, prospective studies are warranted to study the effect on retaining PD catheters after *M. tuberculosis* infection is diagnosed early while patients receive antituberculosis treatment. Whilst we acknowledge that the 2022 ISPD peritonitis guidelines [6] and Thompson *et al* [2] have recommended retaining the PD catheter in patients with tuberculous peritonitis while receiving antituberculosis treatment, our findings from the ANZDATA Registry suggest that prompt PD catheter removal may have contributed to better survival in PD patients with tuberculous peritonitis. Our study also highlights the need for robust prospective studies to identify the optimal antitubercular regimens for treating tuberculous peritonitis to optimise outcomes while maintaining PD therapy.

References

1. Lye WC. Rapid diagnosis of Mycobacterium tuberculous peritonitis in two continuous ambulatory peritoneal dialysis patients, using DNA amplification by polymerase chain reaction. *Adv Perit Dial.* 2002;18:154-7.
2. Thomson BKA, Vaughan S, Momciu B. Mycobacterium tuberculosis peritonitis in peritoneal dialysis patients: A scoping review. *Nephrology (Carlton).* 2022;27(2):133-44.
3. Moore DA, Lightstone L, Javid B, et al. High rates of tuberculosis in end-stage renal failure: the impact of international migration. *Emerg Infect Dis.* 2002;8(1):77-8.
4. Romanowski K, Clark EG, Levin A, et al. Tuberculosis and chronic kidney disease: an emerging global syndemic. *Kidney Int.* 2016;90(1):34-40.
5. Vadivel N, Tucker JK, Trikudanathan S, et al. Tuberculous peritonitis: A race against time. *Kidney International.* 2006;70(5):969-72.
6. Li PK, Chow KM, Cho Y, et al. ISPD peritonitis guideline recommendations: 2022 update on prevention and treatment. *Perit Dial Int.* 2022;42(2):110-53.
7. Unsal A, Ahbap E, Basturk T, et al. Tuberculosis in dialysis patients: a nine-year retrospective analysis. *J Infect Dev Ctries.* 2013;7(3):208-13.
8. Ling CW, Sud K, Castelino RL, et al. Systematic Review on Treatment and Outcomes of Tuberculous Peritonitis in Patients on Peritoneal Dialysis. *Kidney Int Rep.* 2024;9(2):277-86.
9. Waness A, Al Shohaib S. Tuberculous peritonitis associated with peritoneal dialysis. *Saudi J Kidney Dis Transpl.* 2012;23(1):44-7.
10. MacCormick JOCM. Tuberculous Peritonitis in Patients on CAPD-The Importance of Lympholytosis in the Peritoneal Fluid. *Perit Dial Int. 1980;1(6):106.*
11. Khanna R, Fenton S, Cattran D, et al. Tuberculous peritonitis in patients undergoing continuous ambulatory peritoneal dialysis (CAPD). *Perit Dial Int.* 1980;1(3):10-2.
12. Cheng IK, Chan PC, Chan MK. Tuberculous peritonitis complicating long-term peritoneal dialysis. Report of 5 cases and review of the literature. *Am J Nephrol.* 1989;9(2):155-61.
13. Yorioka N, Oda H, Joarder ZH, et al. Tuberculous peritonitis in a patient undergoing continuous ambulatory peritoneal dialysis. *Hiroshima Journal of Medical Sciences.* 1988;37(2):93-5.
14. Yang TY, Tian YC, Yen TH, et al. Tuberculous peritonitis in patients on peritoneal dialysis: a 35-year experience from a large medical center in Northern Taiwan. *Ren Fail.* 2023;45(1):2153064.
15. Cho Y, Hawley CM, Johnson DW. Clinical causes of inflammation in peritoneal dialysis patients. *Int J Nephrol.* 2014:909373.

Innovating Diagnosis in Tuberculous Peritonitis for PD Patients: A Path to Improved Outcomes


Solos Jaturapisanukul, M.D. [1] (left) and Talerngsak Kanjanabuch, M.D. [1,2] (right)

[1] Division of Nephrology and Renal Replacement Therapy, Faculty of Medicine Vajira Hospital, Navamindradhiraj University, Bangkok, Thailand

[2] Division of Nephrology and Center of Excellence in Kidney Metabolic Disorders, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Correspondence to: Professor Talerngsak Kanjanabuch; Email address: golfnephro@hotmail.com

Colleagues, *tuberculous peritonitis* in peritoneal dialysis (PD) patients is a profound clinical challenge, with **mortality rates** ranging from 15% to 58%. The 2022 **International Society for Peritoneal Dialysis (ISPD) guidelines** [1] recommend anti-tuberculous therapy without requiring catheter removal, yet many clinicians advocate for catheter removal, noting improved outcomes. Regardless of approach, **timely diagnosis and treatment** are critical to managing this high-risk condition.

One major obstacle in TB peritonitis is that its **nonspecific symptoms** closely resemble bacterial peritonitis, often delaying suspicion and treatment. The current gold standard, TB culture, is reliable but **time-intensive**, taking over a month. Sadly, some patients do not survive long enough to benefit from these delayed results. Rapid detection methods like **GeneXpert**, while endorsed by the WHO, are costly and have limited effectiveness for extra-pulmonary TB in resource-limited settings. Conventional PCR is quicker but insufficiently sensitive for PD effluent, where TB organisms are typically scarce.

Our study, published in *Kidney International Reports* (2024) [2], explored an **innovative approach** by comparing PCR with and without culture enrichment for TB peritonitis in PD patients. Among 1,843 PD-related peritonitis cases across 48 centers, 49 were identified as TB peritonitis, with 37 cases analyzed. **Enriched PCR** showed **progressive sensitivity** improvements, reaching 87% by day 15 and 100% by day 20, while standard PCR reached only 32% (Figure 1). At the crucial **15-day mark**, enriched PCR provided a **median diagnosis time of 17 days**, much shorter than the 32 days required for traditional culture. This earlier diagnosis had substantial implications: **27% of patients** died before culture results were available, but only **14% passed away** prior to the 15-day enriched PCR results.

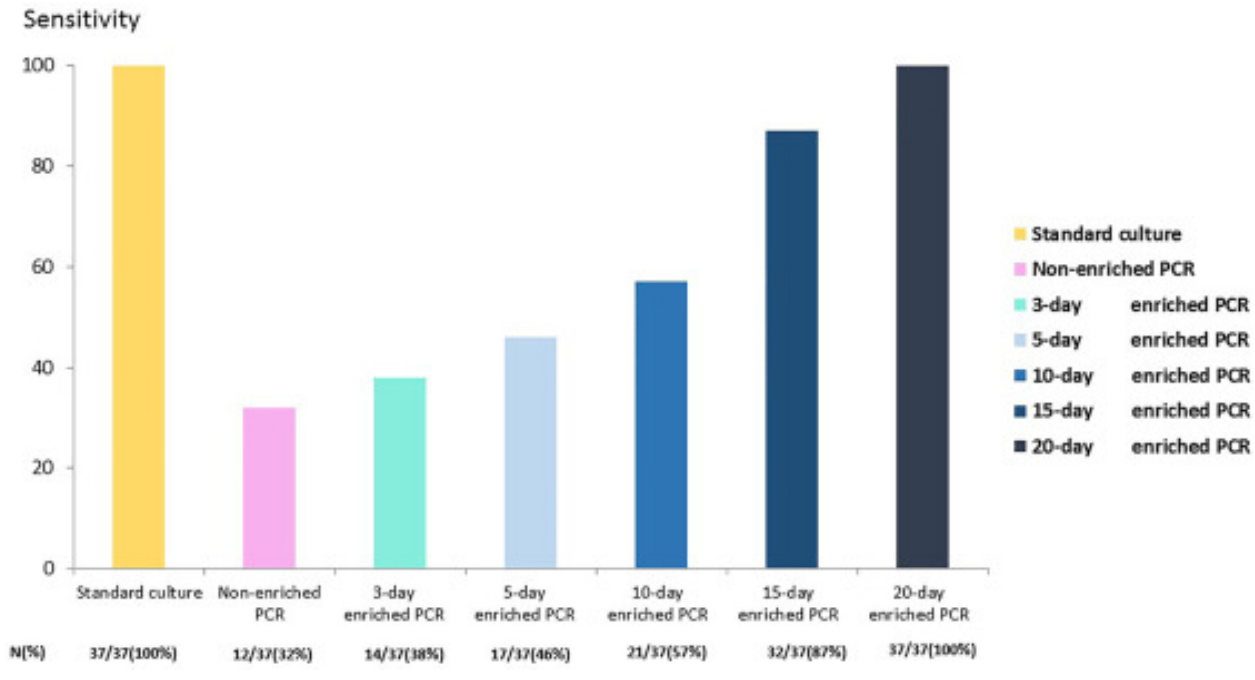

Figure 1. Comparative Sensitivity and Time-to-Diagnosis of Standard PCR, Enriched PCR, and Culture Methods in Detecting Tuberculous Peritonitis in PD Patients.

These findings position **PCR with culture enrichment** as a promising tool for diagnosing TB peritonitis in PD patients, particularly in resource-limited settings. It offers **sensitivity comparable to traditional culture** but with a much earlier diagnostic window. The 15-day enrichment period enabled 87% sensitivity, facilitating **timely intervention**. Although the study faced limitations, including a smaller sample size and COVID-19 delays, the evidence suggests that **enriched PCR** could significantly improve diagnostic accuracy and **reduce mortality** through earlier, targeted treatment.

These results serve as a **call to action**. Embracing PCR with culture enrichment allows us to **shift the paradigm** in diagnosing and managing TB peritonitis in PD, particularly in resource-limited settings. We encourage centers to adopt, refine, and share insights on this approach to **enhance care standards** in PD.

References

1. Li PK, Chow KM, Cho Y, et al. ISPD peritonitis guideline rec- ommendations: 2022 update on prevention and treatment. *Perit Dial Int*. 2022;42:110–153.
2. Pavatung P, Kanjanabuch T, Thammathiwat T, et al. Enriched-Culture Polymerase Chain Reaction, a Promising Approach for Diagnosing Tuberculous Peritonitis. *Kidney Int Rep*. 2024;9(9):2819-2823.

Innovating Peritoneal Dialysis: Cross-Disciplinary Solutions to Catheter Obstruction


Tanawoot Limlek, M.D., [1] (left) and Talerngsak Kanjanabuch, M.D., [2] (right)

[1] Department of Medicine, Krabi Hospital, Thailand

[2] Division of Nephrology and Center of Excellence in Kidney Metabolic Disorders, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Correspondence to: Professor Talerngsak Kanjanabuch; Email address: golfnephro@hotmail.com

In peritoneal dialysis (PD), catheter obstructions are a common and frustrating challenge. These obstructions, often caused by blood clots or fibrin buildup, can result in poor dialysate flow, leading to treatment failure and the eventual shift to hemodialysis. Traditionally, managing this issue involves flushing the catheter with **heparinized saline** or administering **thrombolytic agents**. But what happens when these methods fall short? Is there a way to think beyond the conventional approaches?

Here’s where innovation steps in.

A recent case report published in *Journal of Nephrology* 2024 [1] presents an exciting and **novel technique** that can raise PD peer awareness and inspire new innovations: the use of a **targeted thrombolytic agent** in combination with tools from gastroenterology—specifically, an endoscopic retrograde cholangiopancreatography (**ERCP**) **guidewire** and a **Swing Tip cannula**. This method was employed to successfully salvage a PD catheter obstructed by a persistent blood clot, where traditional approaches such as thrombolytics and intraluminal brushing had failed.1 The integration of this targeted approach emphasizes the **importance of thinking outside the box**, leveraging tools and knowledge from other medical fields to solve persistent issues in PD.

The Power of Cross-Disciplinary Innovation

One of the standout features of this approach is its **cross-disciplinary nature**. The use of **ERCP** technology, typically reserved for gastrointestinal procedures, highlights a critical point: **innovation often thrives at the intersection of different specialties**. The ERCP guidewire, which was advanced through the coiled PD catheter, played a crucial role in puncturing and creating holes within the clot, allowing for precise delivery of the thrombolytic agent. The Swing Tip cannula then enabled **direct infusion of the clot-busting drug** into the precise location of the obstruction, further enhancing the effectiveness of the treatment **(Figure 1)**.

This method not only salvaged the catheter but also **prevented unnecessary surgery**, reducing the risks and recovery time for the patient. Such an approach demonstrates the **potential of targeted, less invasive interventions** that can maintain the functionality of the original catheter, especially in patients with high surgical risks [1].

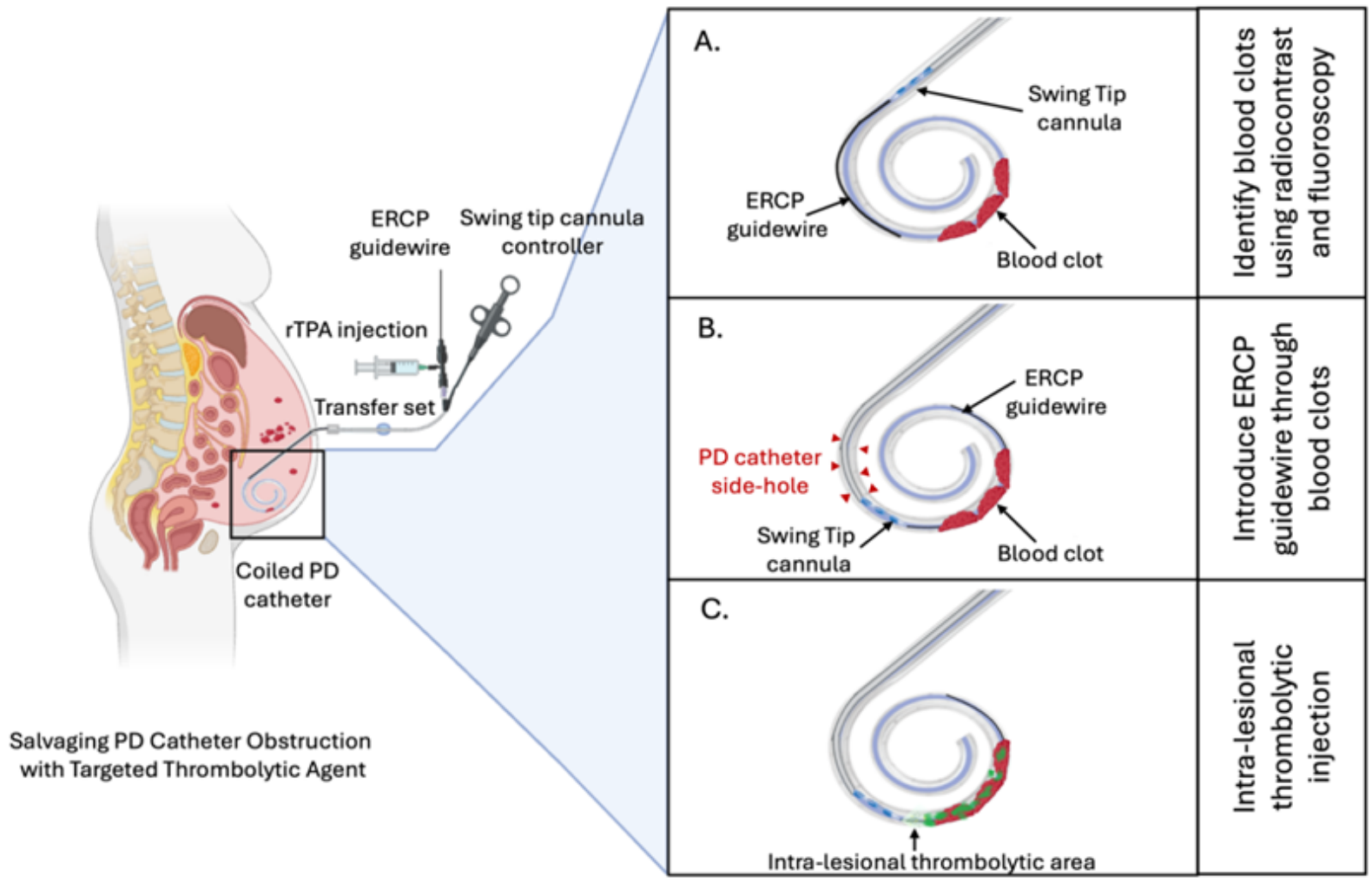

Figure 1. Salvaging PD catheter obstruction with targeted thrombolytic agents.

Why Is This Important for PD Peers?

For those working in PD, this case study highlights the value of **creative problem-solving** and **cross-disciplinary collaboration**. It underscores that when facing challenging cases—especially when conventional treatments fail—it's vital to **explore new avenues** and adopt techniques from other fields of medicine. This kind of innovation doesn't just resolve immediate complications; it opens doors for **further research and development**, potentially leading to **standardized treatment protocols** that could benefit a wider population of PD patients.

Inspiring New Innovations in PD

The success of this approach should encourage the PD community to ask: **What other tools and techniques from different medical fields could be adapted to improve patient outcomes?** Could innovations in imaging, robotics, or even nanotechnology further enhance catheter management and treatment efficacy? By thinking beyond the immediate boundaries of nephrology, we can foster a culture of **continuous learning and innovation**.

Conclusion

In conclusion, the use of **targeted thrombolysis** with the assistance of an **ERCP guidewire** and **Swing Tip cannula** offers a promising solution to **intraluminal PD catheter obstructions**, turning a potentially critical complication into a solvable issue. This case should serve as a **catalyst** for raising PD peer awareness and empowering professionals to explore **new, innovative approaches** to catheter management. By embracing **cross-disciplinary innovation**, we can drive forward better, less invasive, and more effective treatments for our patients.

Let this case inspire you to innovate. Push the boundaries, think beyond the ordinary, and explore how advancements from other fields can empower us to improve the lives of PD patients.

References

1. Kinpayom P, Banjongjit A, Towannang P, Rerknimitr R, Kanjanabuch T. Salvaging intraluminal peritoneal dialysis catheter obstruction from blood clot with a targeted thrombolytic agent: an innovation. *J Nephrol.* 2024;37(7):2021-2024..