## (16)

## 慶祝臺灣腹膜透析治療四十年:歷史見證與未來展望

## Celebrating 40 Years of Peritoneal Dialysis in Taiwan: Historical Testimony and Prospective Development

時 間:113 年 6 月 22 ⊟(星期六) 08:30~12:00
地 點:臺北榮民總醫院 重粒子中心會議室

08:30-08:35	Opening Remarks	唐德成教授 Der-Cherng Tarng
	座長: 吳麥斯 校長 (Mai-Szu Wu)	
08:35-09:05	提升技術存活率與延長 PD 療程:更有效管理患者的策略 Improving Technique Survival and Extending ToT: Strategy to Better Manage Patients on PD	Dr. Allen Liu Yan Lun (新加坡)
	座長:洪冠予 副校長 (Kuan-Yu Hung)	
09:05-09:35	超音波在腹膜透析的應用 Sonography in Peritoneal Dialysis	黄政文教授 Jenq-Wen Huang
	座長:陳永昌 教授 (Yong-Chang Chen)	
09:35-10:05	腹膜透析在心腎症候群的角色 The Role of Peritoneal Dialysis in Cardiorenal Syndrome	鄭本忠副教授 Ben-Chung Cheng
10:05-10:20	Coffee Break	
	座長:黃尚志 教授 (Shang-Jyh Hwang)	
10:20-10:50	Sharesource:一個對醫生具有巨大潛力的工具 Sharesource: A Tool with Tremendous Potential for the Physician	Dr. Karumathil Murali (澳洲)
	座長:楊智宇 教授 (Chih-Yu Yang)	
10:50-11:20	混合式腹膜透析導管植入術 Hybrid Method for PD Catheter Insertion	黎思源副教授 Szu-Yuan Li
	座長:吳明儒 教授 (Ming-Ju Wu)	
11:20-11:50	腹膜透析在臺中榮總的照顧經驗 Peritoneal Dialysis Care Experience at Taichung Veterans General Hospital	鍾牧圻助理教授 Mu-Chi Chung
11:50-12:00	Panel Discussions & Closing Remarks	林志慶教授 Chih-Ching Lin

## **Improving technique survival and extending ToT: Strategy to better manage patients on PD**

## 提升技術存活率與延長 PD 療程:更有效管理患者的策略

#### Allen Liu Yan Lun

Khoo Teck Puat Hospital (KTPH), Singapore 邱德拔醫院

Technique failure in peritoneal dialysis (PD), characterised by the necessity to switch from PD to haemodialysis or due to mortality, is a critical concern affecting patient outcomes. The presentation delineates insights for different duration-based definitions, which offer evidence to the likelihood of returning to PD post-failure.

The presentation discusses early technique failures, including infections, mechanical issues with catheters, and psychosocial factors. Mechanical causes, due to their reversible nature, show a higher probability of return to PD.

Risk factors for technique failure are scrutinised, revealing critical elements like prior renal replacement therapy, demographic influences such as age and race, and clinical settings, including centre size and patient management strategies. Moreover, several preventive strategies aim to reduce the incidence of technique failure, emphasising the importance of tailored treatment approaches and the specialised management of complications like catheter dysfunction and infections.

In conclusion, this presentation illuminates the complexities surrounding technique failure in PD and provides a comprehensive overview of how to effectively manage and potentially reduce these failures through strategic interventions and patient-centric care.

## Sonography in peritoneal dialysis

## 超音波在腹膜透析的應用

#### Jenq-Wen Huang

#### 黄政文

Division of Nephrology, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan, ROC 臺大醫院內科部 腎臟科

Ultrasound is a convenient examination tool with no risk of radiation exposure, and it can be readily performed by clinicians. In the context of complications in peritoneal dialysis (PD), there are many aspects where ultrasound can be utilized. For exit site infections, it can detect fluid accumulation around the external cuff, serving as an index for severity evaluation and a tracking indicator for treatment effectiveness. Fluid collection around the subcutaneous catheter can also confirm evidence of tunnel infection which could not be diagnosed solely by clinical inspection of the skin overlying the catheter sometimes. Fluid accumulation around the internal cuff confirms that the infection has affected the vicinity of the peritoneum, greatly increasing the chances of peritonitis which might need urgent catheter removal. Ultrasound can easily distinguish between hernias and leaks. Hernias keep intact peritoneum and contain a sac of fluid. On the other hand, leaks have peritoneal tear and soft tissue edema. In encapsulating peritoneal sclerosis (EPS), ultrasound can visualize calcification of the peritoneum, peritoneal thickening, loculated ascites, fibrin septum, gastrointestinal motility, and whether encapsulation has occurred. Therefore, ultrasound is a convenient, safe, and effective diagnostic and therapeutic monitoring tool in the management of complications in PD.

Since the detecting depth is shallow, less than 1 cm for catheter and cuff and less than 4 cm for the bowel loops, high frequency probe, around 7-12 GHz, should be used. In addition, dialysate or ascites serves as a good interface between parietal peritoneum lining on abdominal wall and visceral peritoneum wrapping the bowel loops.

## The role of peritoneal dialysis in cardiorenal syndrome

## 腹膜透析在心腎症候群的角色

#### **Ben-Chung Cheng**

鄭本忠

Department of Nephrology, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan, ROC 高雄長庚紀念醫院 腎臟科

This lecture examines the role of peritoneal dialysis in cardiorenal syndrome, a complex condition characterized by the interplay between heart and kidney dysfunction commonly seen in heart failure patients. Peritoneal dialysis, as a therapeutic modality, aids in alleviating symptoms and slowing the progression of cardiorenal syndrome by removing excess fluid and metabolic waste from the body. The lecture discusses the application, efficacy, comparative analysis with other treatment modalities, and future research directions of peritoneal dialysis in the management of cardiorenal syndrome. Through a comprehensive exploration of the role of peritoneal dialysis in cardiorenal syndrome, we aim to enhance understanding and management of this intricate condition, ultimately improving patients' quality of life and prognosis.

# Sharesource: A tool with tremendous potential for the physician Sharesource : 一個對醫生具有巨大潛力的工具

#### Karumathil Murali

Wollongong Hospital, Australia 澳大利亞 臥龍崗醫院

Peritoneal dialysis (PD) programs worldwide have integrated cloud-based remote monitoring tools such as Sharesource® into automated PD delivery. Sharesource® has become a ubiquitous tool within PD nurses' daily workflows, offering near-real-time monitoring of crucial PD parameters. Its utilization enhances patient-provider engagement, enables early detection of problems, and facilitates timely interventions, potentially reducing hospitalizations and enhancing PD outcomes. While physicians currently utilize Sharesource® to a much lesser extent than nurses, its significant potential not only lies in providing comprehensive insights into PD efficacy, adherence, and catheter function but aids in the evaluation of PD complexities. The rich data collected and presented by Sharesource® serves as a valuable resource for understanding and troubleshooting PD complications in conjunction with other clinical information, which is demonstrated by real-life examples. Sharesource Analytics® offers insightful trends derived from pooled data, aiding clinicians in navigating the complex treatment paths of PD patients, particularly in challenging clinical scenarios.

## Hybrid method for PD catheter insertion

## 混合式腹膜透析導管植入術

#### Szu-Yuan Li

#### 黎思源

Divisin of Nephrology, Deppart of Medicine Taipei Veterans General Hospital, Taipei, Taiwan, ROC National Yang-Ming Chiao Tung University School of Medicine, Taipei, Taiwan, ROC 國立陽明交通大學及臺北榮民總醫院 腎臟科

**Background:** Peritoneal Dialysis (PD) stands as a cornerstone in treating end-stage kidney disease (ESKD), offering patients various methods for catheter insertion, each with its own set of pros and cons. The existing techniques include open surgery, laparoscopy, and percutaneous placement, chosen based on individual patient needs and medical history. Exploring innovative approaches to PD catheter insertion holds promise for expediting recovery and reducing complications, thus enhancing PD care quality. Researching novel methods of PD catheter insertion to expedite recovery and decrease the probability of complications may enhance the quality of PD care.We here reported a hybrid method of PD catheter insertion, which combines laparoscopic and percutaneous placement.

**Methods:** This retrospective study included patients who were undergoing their first PD catheter insertion, and a total of 20% of the enrolled patients had a past medical history of abdominal surgery. Out of these, one group of patients underwent the laparoscopic method, and another group underwent a new invented hybrid method. The study aimed to compare the surgical outcomes, incidence of early and late complications, hospital stay, and medical expenses between the two groups.

**Results:** There were no notable differences in basic demographic features and comorbid conditions between the two groups. The results of our data revealed that the hybrid group had a significantly shorter break-in period and did not require temporary hemodialysis. Additionally, length of hospital stay and medical costs were significantly lower in the hybrid group. The incidence of early complications was lower in the hybrid group, while the incidence of late complications was comparable between the two groups.

**Conclusion:** The hybrid method of PD catheter insertion provides a safe and efficient alternative to the traditional laparoscopic method, enabling urgent-start PD and reducing hospital stays and medical expenses. Our findings support the use of the hybrid method as a new standard of care for ESKD patients undergoing PD catheter insertion.

## Peritoneal dialysis care experience at Taichung Veterans General Hospital

### 腹膜透析在臺中榮總的照顧經驗

#### **Mu-Chi Chung**

#### 鍾牧圻

Division of Nephrology, Depart of medicine, Taichung Veterans General Hospital, Taichung, Taiwan, ROC 臺中榮民總醫院 腎臟科

This review delves into Taichung Veterans General Hospital's (TVGH) pioneering efforts in peritoneal dialysis (PD) care, emphasizing its contributions to research and innovative patient management strategies. TVGH's research has significantly advanced our understanding of hypokalemia and PD peritonitis, guiding targeted interventions to improve patient outcomes. The hospital's multidisciplinary team collaborates on translational studies, bridging the gap between bench and bedside to inform clinical practice.

Central to TVGH's approach is the implementation of a cloud management system tailored for PD patients. This technology enables real-time monitoring of vital signs and treatment adherence, facilitating early detection and intervention for complications such as PD peritonitis. By harnessing data analytics and remote monitoring, TVGH enhances efficiency and efficacy in patient care delivery.

Moreover, TVGH prioritizes patient-centered care, tailoring treatment plans to individual needs and fostering collaboration between patients and clinicians. Through shared decision-making and holistic support, TVGH empowers patients to actively participate in their treatment journey, ultimately enhancing their quality of life.

In summary, this review highlights TVGH's commitment to excellence, innovation, and patient-centered care in PD management. By advancing research, leveraging technology, and promoting collaborative care, TVGH sets a standard of excellence in nephrology, continually striving to optimize patient outcomes and redefine the future of renal care.