ISPD ASIAN CHAPTER NEWSLETTER

International Society for Peritoneal Dialysis (ISPD)

Volume 9, Issue 3, Fall 2011

FROM THE EDITORIAL OFFICE

Dear All,

Welcome back to those who attended the 5th Asian Chapter Meeting of the ISPD in Pattaya, Thailand this October. The program was terrific and well received by the participants. In this issue, we are delighted to have Dr. KS Nayak sharing some of the remarkable moments of the meeting. In addition, Dr. Jacob George from India will share his experience of using PD for treatment of acute kidney injury in the intensive care unit setting.

You are most welcome to distribute this newsletter electronically, or in printed form to your colleagues or others who may be interested. If you or your colleagues would like to receive this newsletter directly from our editorial office, please send your e-mail address to: administration@multi-med.com.

Sincerely,

Dr. Cheuk-Chun SZETO
Editor, Asian Chapter Newsletter
International Society for Peritoneal Dialysis
c/o Department of Medicine & Therapeutics
The Chinese University of Hong Kong
Prince of Wales Hospital
Shatin, Hong Kong
E-mail: ccszeto@cuhk.edu.hk

HIGHLIGHTS OF THE 5TH ASIAN CHAPTER MEETING OF THE ISPD 2011

The Dusit Thani Resort and International Convention Center, Pattaya, Thailand was an excellent choice for the 5th Asian Chapter Meeting of the ISPD 2011, which was held from October 6-8th, 2011. The immaculate facilities and the efforts by Prof. Dusit Lumlertgul, and his team, made this meeting memorable. With a record attendance of 1400 delegates from all over Asia and a top class international faculty presenting 'cutting edge' lectures, the meeting was a great success.

The talking point was the remarkable progress Thailand has made in PD with its 'PD First' policy. There are currently over 12,000 patients active on this therapy; whilst four years ago, there were less than 800. Thailand is adding about 300 patients every month on PD, which is astounding for a country with a population slightly below 40 million people. Thailand is now a standing example for countries around the world on how to maximally utilise finite funds cost effectively for Chronic Kidney Disease care.

Another hugely appreciated highlight, and a first time event in a PD meeting, was the lively audio-visual 'Asian PD Contest', with Dr. KS Nayak as the Quiz Master. The team from Chulalongkorn University, Thailand emerged victorious. The 'Asian Core Group' meeting was held with poor attendance due to the email ID's of its members not being properly updated. It is requested that the present Asian Chapter Core Group members send in their current email ID to the Chief Coordinator of ACM-ISPD, Dr. KS Nayak at drksnayak@gmail.com. This is to be done on a priority basis to enable optimal functioning of this important initiative. The 6th ACM-ISPD is scheduled for September 2013, to be held in Taipei City, Taiwan.

Dr. KS Nayak
Chief Co-ordinator, Asian Chapter-ISPD

FIGURE 1. The Presidential Dinner with the Organisers of all five Asian Chapter Meetings together. (left to right, Dr. Lumlertgul, Dr. KS Nayak, Dr. Lo, Dr. Kawanishi and Dr. Wang).

FIGURE 2. The Asian PD Quiz Contest in progress.

FIGURE 3. The venue, Dusit Thani Resort & Convention Center, Pattaya, Thailand.

PERITONEAL DIALYSIS IN ACUTE KIDNEY INJURY IN THE INTENSIVE CARE SETTING

Dr. Jacob George, MD, DM, DNB, FISN, FICP, FRCP
Professor and Head of Nephrology,
Medical College Hospital,
Thiruvananthapuram, Kerala, India

Dialysis in critically ill patients with Acute Kidney Injury (AKI) is challenging due to hemodynamic instability, multi-organ failure requiring inotropic and ventilatory support, and bleeding tendencies. In this setting, Continuous Peritoneal Dialysis (CPD) has the advantage of ease of administration, minimal hemodynamic alterations and safety in those with bleeding tendency and heparin allergy. However, its use has been decreasing in developed countries probably due to concerns about lower efficacy, though it has been shown to be effective even in hypercatabolic states [1,2]. We recently randomized 67 critically ill patients with AKI to receive either pump-assisted continuous venovenous hemodiafiltration (CVVHDF) or CPD [3]. The causes of AKI were predominantly sepsis and acute tubular necrosis followed by pre-renal factors. The groups had similar premorbid conditions. Though correction of uremia and fluid overload were better with CVVHDF, and acidotic correction better with CPD, we did not observe any difference in correction of hyperkalemia, hemodynamic disturbances, altered sensorium or final outcome in both groups. The main complication in the CVVHDF group was hemodynamic disturbance in as much as 40%, whereas this was seen in only 8% in those on CPD. The cost of CVVHDF was almost two and a half times more than CPD. Factors influencing outcome were APACHE II score and need for ventilatory support.

The observation that the dialysis modality did not influence the final outcome has therapeutic implications in the Asian setting and resource strapped centres, as CPD is cheaper and can be done in centers which lack sophisticated continuous renal replacement therapy machines and trained personnel [4]. It is thus specifically suited in peripheral hospitals where a significant delay can occur in transporting critically ill patients to tertiary referral centres. If dialysis can be started in the early stages of renal failure before gross fluid overload or advanced uremia sets in, CPD would be an ideal form of continuous renal replacement therapy. Because of lesser fluid shifts with CPD, monitoring can be less intensive and less taxing than CVVHDF on the nursing personnel. If a situation arises where it is felt that metabolic derangements are not being adequately corrected, such patients could be shifted to alternate modalities of dialysis or better-equipped hospitals [5]. This could have a profound economic impact on the health delivery system.

Though use of a flexible Tenckhoff catheter may have advantages when prolonged dialysis is needed, it may need previous training in either percutaneous placement using a Trocar, peel away sheath or an open surgical technique. A stiff peritoneal dialysis catheter offers simplicity in placement and can often suffice as an initial modality. Local sterile peritoneal dialysis fluid can be procured at a cheaper rate than commercially available CAPD fluids in plasticizer free bags. The former can be safely used in this setting, as peritoneal damage due to plasticizers in ordinary bags made of polyvinyl chloride is unlikely as dialysis will be required only for a limited period. CPD can also be used as a bridge to CVVHDF or conventional hemodialysis if CPD is found to be ineffective especially after hemodynamic stability occurs. As this situation is infrequent, CPD can be a cost conscious alternative and often the sole form of continuous renal replacement therapy in critically ill patients.

REFERENCES

1. Chitalia V, Almeida AF, Rai H. et al. Is peritoneal dialysis adequate for hypercatabolic acute renal failure in developing countries? *Kidney Int* 2002; 61: 747-757.
2. Gabriel DP, Caramori JT, Martim LC, Barretti P, Balbi AL. Continuous peritoneal dialysis compared with daily hemodialysis in patients with acute kidney injury. *Perit Dial Int* 2009; 29: S62-S71.
3. George J, Varma S, Kumar S, Thomas J, Gopi S, Pisharody R. Comparing continuous venovenous hemodiafiltration and peritoneal dialysis in critically ill patients with acute kidney injury: a pilot study. *Perit Dial Int* 2011; 31: 422–429.
4. Sharma SK, Manandhar D, Singh J, et al. Acute peritoneal dialysis in Eastern Nepal. *Perit Dial Int* 2003; 23: S196-199.
5. Mohandas N, Chellapandian D. Value of intermittent peritoneal dialysis in rural setup. *Indian J Perit Dial* 2004; 6: 19-20.

LEADERSHIP IN PERITONEAL DIALYSIS PROGRAM

Dr. Adrian Liew
MBBS, MRCP(UK), FAMS, FASN, FRCP(Edin)
Consultant and Head
Department of Renal Medicine,
Tan Tock Seng Hospital, Singapore
Email: Adrian_Liew@ttsh.com.sg

"The best leader is the one who has sense enough to pick good men to do what he wants done, and self-restraint to keep from meddling with them while they do it." – Theodore Roosevelt.

Over the last decade, the world has seen a rapid increase in the incidence of end-stage renal disease (ESRD) [1]. While the proportion of ESRD patients receiving peritoneal dialysis (PD) as a renal replacement modality had remained constant, the number of new PD programs had not paralleled this rise. On the other hand, the PD-first policy in Thailand had resulted in a logarithmic explosion in the burden of PD patients on the renal community. As a result, programs had reported hundreds of PD patients under the care of a single trained PD physician.

With such a heavy workload, the over reliance on the scarce and endangered PD physician resource could no longer be used as a model to deliver quality medical care. As early as the 1990s, a team approach to the management of PD patients had been reported to be best suited for the needs of the patients and their family [2]. This was reverberated again in the 21st century, where a consistent approach by all the team members in a PD unit in Canada was able to achieve better blood pressure control using fewer drugs in their PD patients [3]. Hence in this era where the physician to patient ratio is trending low, the traditional roles of the

various team members had to be re-examined, and the PD program director/physician must step-up to his/her role as the leader of the PD team. How, then, should the leadership drive the PD program to ensure optimal care and excellent outcomes?

1. Empowering the Team

With an increasing PD patient pool, it is no longer possible or optimal for the PD physician to single-handedly provide every aspect of the medical, nutritional, social and psychological care for every single PD patient. Patient and technique outcomes invariably suffer when the attention to clinical care becomes diluted due to increasing workload demands. It is increasingly recognized that a PD program providing a team approach is most effective in the delivery of patient care [4]. Whilst most PD units function on a primary nursing care model, the traditional role of a PD nurse should be expanded to mitigate the lack of available trained physicians. The PD nurse or even other members of the allied health team should be empowered to take over some of the simple tasks that are customarily carried out by the physician. These tasks could involve running the physician-consult in the outpatient; deciding on the routine and ad-hoc investigations; managing hypertension, anemia, calcium, phosphate homeostasis through lifestyle and pharmacological interventions; adjusting PD prescriptions - many synonymous with "doctoring".

However, the current norms of the existing hierarchy between the physician and the non-physicians, as well as the unfamiliarity and traditional training of the other members of the PD team, pose the greatest challenges to this endeavor. In fact, more often than not, the most resistance will come from the PD nurses, who are the ones that need to rise to the occasion. The PD Physician may then strive to empower his/her PD team, using the 4E strategy:

a. Expose the team to the unfamiliar tasks. The immediate and simplest way is to allow the PD nurse to assume the a tending consult during the outpatient sessions.
b. Enable the self-decision process. Each question posed by the PD nurse is returned with "What would you like to do?". This doesn't mean abandoning the problem to the individual, but allows an opportunity for self-directed and physician-moderated teaching and training. With time, the PD nurse will be able to function independently and confidently in their new role.
c. Encourage and highlight every good outcome that came about as a decision made by the team.
d. Enhance the infrastructure, training and the job description of each team member to take on this new role.

In time to come, current norms are restructured and empowerment will become a natural behavior in the program.

2. Equipping with Protocols

Once the team has been empowered to function in ways similar to a PD physician, they must experience fulfilling results from the clinical interventions that they had carried out. As their training had always been dissimilar to those of a physician, protocols must be established to assist in the decision making process for every medical issues that they face as they take on their new role. The leader of the PD program should then:

Identify the clinical problems that the team is expected to tackle. Initially, this may include hypertension, hypotension, dyslipidemia, poorly controlled diabetes, anemia, hypercalcemia, hyperphosphatemia, hypoalbuminemia, fluid overload, poor solute clearance, peritonitis and exit site infection. With time, as the team becomes more experienced, other more complicated clinical problems may be identified as suitable issues to be care for by the various team members.

Develop an alogorithmic-based, decision making matrix and intervention tool for each of the identified clinical problem. So that when the PD nurse is confronted with a patient with for example, hypertension, he or she will be able to logically evaluate systematically the causes and institute the appropriate treatment. Teach these tools to the entire team. So as to make the entire team own and be familiar with these flowcharts, every team member is task to present one of these clinical scenarios to the program on a regular basis.

3. Enlightening with CQIs

As a leader, one should never be satisfied with a constant and non-progressive state of a program. An improvement atmosphere must be developed in the program to constantly review inefficient practices, reveal unsatisfactory outcomes, institute and assess changes, and formalize new ideas. The PDSA cycle is a familiar CQI process, which the leader should refrain from doing himself/herself. Rather, the CQI processes need to become an integral part of the PD program culture, and the best way to achieve that is to make it a lifestyle for every team member. The leader should teach, instruct, steer and mentor each team member in every CQI journey. Indeed, it has been said, "A good objective of leadership is to help those who are doing poorly to do well and to help those who are doing well to do even better." – Jim Rohn (American entrepreneur, Jim Rohn International).

REFERENCES

1. USRDS Annual Report 2011
2. Harvey E, Secker D, Braj B. et al. The team approach to the management of children on chronic peritoneal dialysis. *Adv Ren Replace Ther* 1996; 3: 3-13.
3. Pagé DE, Lavoie SL, Knoll GA. Team approach in a peritoneal dialysis unit provides better control of hypertension than in a hemodialysis unit. *Adv Perit Dial* 2004; 20: 117-20.
4. Finkelstein FO, Ezekiel OO, Raducu R. Development of a peritoneal dialysis program. *Blood Purif* 2011; 31: 121-24.

Baxter

PD-RELATED INFECTIONS RECOMMENDATIONS: 2010 UPDATE NOW AVAILABLE IN CHINESE

Multimed Inc., publisher of *Peritoneal Dialysis International* is pleased to announce that the *Peritoneal Dialysis-Related Infections Recommendations: 2010 Update* is now available in Chinese.

This translation project is made available through a partnership between the ISPD, Baxter Renal, China and Multimed Inc. and is

a tremendous contribution to Mandarin readers to aid in their PD clinical practice. The 2010 Update was translated by Prof. Wang Mei, Dr. Zhao Huiping and Dr. Wu Bei from Peking University People's Hospital.

The translated Guideline can be viewed freely at http://www.pdiconnect.com/cgi/content/full/30/4/393/DC2.

Look for further Chinese translations of the ISPD Guidelines below, coming soon!

- Length Of Time On Peritoneal Dialysis And Encapsulating Peritoneal Sclerosis: Position Paper For ISPD
- Clinical Practice Guidelines And Recommendations On Peritoneal Dialysis Adequacy 2011
- Guideline On Targets For Solute And Fluid Removal In Adult Patients On Chronic Peritoneal Dialysis
- ISPD Position Statement On Reducing The Risks Of Peritoneal Dialysis-Related Infections

LITERATURE UPDATE

Quinn RR, et al. Selection bias explains apparent differential mortality between dialysis modalities. *J Am Soc Nephrol.* 2011 Aug;22(8):1534-42.
KEY POINT: From a total of 32,285 individuals who received dialysis in Ontario, Canada during a nearly 8-year period, the authors detected no difference in survival between peritoneal dialysis and hemodialysis after adjusting for relevant baseline characteristics. These results suggest that peritoneal dialysis and hemodialysis associate with similar survival among incident dialysis patients who initiate dialysis electively. Selection bias, rather than an effect of the treatment itself, likely explains the previously described change in the relative risk of death over time between hemodialysis and peritoneal dialysis.

Srivastava S, et al. Long-term follow-up of patients randomized to biocompatible or conventional peritoneal dialysis solutions show no difference in peritonitis or technique survival. *Kidney Int.* 2011 Nov;80(9):986-91.
KEY POINT: Finding of non-randomized studies suggesting benefits of the biocompatible PD solutions. However, in this randomized controlled study comparing the use of biocompatible and conventional solutions, accumulating over 7000 patient-months experience, there was no clinically significant advantages in terms of technique survival or peritonitis. The authors suggest that meta-analysis of randomized control trials in this field is essential.

Bonomini M, et al. L-carnitine is an osmotic agent suitable for peritoneal dialysis. *Kidney Int.* 2011 Sep;80(6):645-54.
KEY POINT: Excessive intraperitoneal absorption of glucose during peritoneal dialysis has both local cytotoxic and systemic metabolic effects. In this paper, a series of experiments were conducted to evaluate peritoneal dialysis solutions containing L-carnitine, an osmotically active compound that induces fluid flow across the peritoneum. In short, the data support that L-carnitine has the potential to be developed as an alternative osmotic agent in peritoneal dialysis.

Loureiro J, et al. Blocking TGF-β1 protects the peritoneal membrane from dialysate-induced damage. *J Am Soc Nephrol.* 2011 Sep;22(9):1682-95.
KEY POINT: TGF-β1 can induce mesothelial-to-mesenchymal transition (MMT). In this study, the effect of TGF-β1-blocking peptides in modulating MMT and ameliorating peritoneal damage in a mouse model of PD was explored. In short, the authors found that administration of blocking peptides significantly ameliorated fibrosis and angiogenesis, and improved peritoneal function. Conversely, overexpression of TGF-β1 in the peritoneum by adenovirus-mediated gene transfer led to a marked accumulation of fibroblasts, most of which derived from the mesothelium. These results strongly support the role of TGF-β1-mediated MMT in the pathophysiology of peritoneal-membrane dysfunction.

NEWS FROM THE ISPD

JOIN THE ISPD! www.ispd.org

Membership benefits of the International Society for Peritoneal Dialysis include:

- Print & Online Subscription to Peritoneal Dialysis International (PDI);
- PDI in Press - Articles will be available online to members as soon as they are approved by the authors!
- Receipt of the electronic newsletter of your regional chapter if available
- Access to the Members Only section of the ISPD website
- Online access to all ISPD guidelines
- Special registration fee for all ISPD sponsored meetings including the ISPD Congress, Chapter Meetings and the Annual Dialysis Conference
- Voting right in the General Meetings of the ISPD
- Application for ISPD scholarships and research grants

For more information please visit http://ispd.org/lang-en/join. For developing countries, the ISPD offers an Institutional Membership, where up to ten members can be included in the membership for the cost of one.

ASIAN CHAPTER SCHOLARSHIP

This scholarship supports up to 3 months of training in clinical PD for doctors and nurses from Asia. Application deadline for each round is twice a year on June 30 or December 31. The next deadline is December 31, 2011. Details and application procedures can be found under the Regional Chapters – Asian Chapter, on the ISPD website at http://www.ispd.org/lang-en/chapters/asian-chapter.

ISPD 2012 - 14TH CONGRESS OF THE INTERNATIONAL SOCIETY FOR PERITONEAL DIALYSIS

September 9-12, 2012, Kuala Lumpur, Malaysia
Website: http://www.ispd2012.org.my/index.html

30TH ANNIVERSARY INTERNATIONAL VICENZA COURSE ON PERITONEAL DIALYSIS

June 12-15, 2012, Vicenza, Italy
Website: http://www.vicenzanephrocourses.com

32ND ANNUAL DIALYSIS CONFERENCE

February 26-28, 2012, San Antonio, Texas, USA
Website: http://som.missouri.edu/Dialysis/