PD Retention and Drop Out Metric of Success

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Objectives

Identify certain causes of dropout:

- Infectious complications
- Hospitalization
- Catheter Dysfunction
- Psychosocial factors
- Other causes

Discuss strategies to prevent these causes of PD dropout
UCLA PD Program

- 150 patients and growing
- Very low drop out rate due to technique failure
- High transplant rate
- Home penetration 25 – 55 percent
- Home first
- Strong leadership
Home penetration in the US

Prevalent Home Dialysis Patients

Prevalent Patients

Total Dialysis Population
466,607

USRDS 2015
Country specific modalities

Percentage of Patients, by Modality for 2013

USRDS 2015
“True” gains and losses
PD Losses

- Technique Failure
- Transplant
- Death
Net Growth:

Adding new patients or preventing loss
PD Center of Excellence

- Medical Director – A True Champion and Leader
- Team approach
- Staffing
- Size of the program
Retention

- Psychology of trust
- Empowering the team
- Continuous engagement
- Involvement of family and friends
- HOPE
- Right patient selection
- Timely education
- Know when to transition to HD
Training and Education

- Start early and continue throughout
- Don’t forget the family and care givers
- Staff training critical
The team retains the patient

- Retention of staff and consistency of team = critical
- Role of the MD = PD Champion
- Create a calling, not just a job
  - Offer work satisfaction and personal growth
  - Delegate
Work outside the comfort zone

Develop relationships with...

- CKD clinic staff
- Surgeons and IRs
- Hospital
- ICHD team
- Home Hemo Team
Technique Failure

• Peritonitis
• Catheter malfunction
• Hospitalizations
• Adequacy
• UF Failure
• Loss of residual renal function
• Psychosocial factors
Hospitalizations

Critical impact on retention metric
PD hospitalization rates

What should my rate be?

- Know your rate
- Ensure it is at target
- Aim for continual improvement
UCLA approach to hospitalizations

1. Address whether hospitalization was related or unrelated to PD
2. Address preventable causes
3. Leverage hospital stay as opportunity to improve care
Reducing hospitalizations\textsuperscript{1,2}

- ↑ training days/retraining on aseptic technique
- Use prophylactic antibiotics at the CES
- Require optimal PDC placement
- Leverage pre-procedural prophylaxis
- Use prophylaxis to prevent fungal infections
- Utilize bridge antibiotics w/in 2 hrs. of symptoms

Catheter Dysfunction
Tracking catheter complications and loss rate
Surgeon reporting

Broad categories to cover

- Perioperative complications
- Infections early on
- Leak of dialysate fluid
- Catheter malfunction
Surgeon reporting

Placement metric goals

- Perforated bowel < 1%
- Extensive hemorrhage < 1%
- Peritoneal dialysis catheter exit site infection within 2 weeks of placement < 5%
- Peritonitis episodes within 2 weeks of catheter placement < 5%
- Functional catheter failure that requires catheter manipulation or replacement, or leading to technique failure < 20%
- 80% survival of catheter for one year
UCLA approach to catheter dysfunction

- Have RN contact surgeon / IR with results of placement – good or bad
- Maintain close communication with hospital team
- Visit patient in the hospital if possible
Adequacy
Where do we need to be?

Inadequate KT/V (<1.7) drives patient losses

- Measure
- Avoid stale labs
- Model patients not meeting target (Adequest, PatientOnLine, etc.)
UCLA approach to adequacy

1. Stress compliance with
   - PD prescription
   - Medications
   - HCP visits

2. Address constipation at each visit and prevent through lifestyle and medications

3. Conduct home visits when deemed necessary
Peritonitis

Infections, especially gram negative, drive patient losses
After hours: bridge therapy protocol following FDA Guidelines (Fluorquinolones)

Oral Formulary Options for “After Hours” Initial Treatment of Peritonitis: *within 2 hrs. of symptoms*

- **Cephalexin** 500 mg PO Q12 hrs
  - Initial suggested loading dose of 1000 mg x 1
- **Cefdinir** 300 mg PO QD
  - Recommendation for dose to be taken 2 hrs before or 2 hrs after antacids, phosphate binders or oral iron supplements
- 3 days of medication included in the “After Hours” Therapy
- Prescribers can choose between the 2 Formulary “After Hours” antibiotics
- See patients asap for initiation of IP antibiotics within 24-72 hrs.
UCLA approach to peritonitis

- Implement protocol after every infection
- Focus on training / retraining patients and care partners
- Conduct root cause analysis and address
Importance of Residual Kidney Function

The Importance of Residual Kidney Function for Patients on Dialysis: A Critical Review

Jeffrey Perl, MD, and Joanne M. Bargman, MD

Benefits of Residual Kidney Function in ESRD

- Fluid removal\(^1\)
- Sodium removal\(^1\)
- Phosphate removal\(^1,2\)
- Middle molecule clearance\(^1,2\)
- Vitamin D production\(^2\)
- Erythropoietin production\(^1\)
- Reduced Left ventricular hypertrophy\(^1,2\)
- Survival benefit\(^1\)

Preservation of Residual Kidney Function: PD Compared to HD

Lysaght 1991: Early, small study

Comparison of best-fit lines of residual creatinine clearance vs. time from the onset of therapy for HD and CAPD patients. The two regression lines are drawn on a common scale.

\[ Kr = A \times \exp (-Bt) \]

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<thead>
<tr>
<th></th>
<th>A, ml/min</th>
<th>B, months(^{-1})</th>
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<tbody>
<tr>
<td>HD</td>
<td>5.0 ± 0.41</td>
<td>0.056 ± 0.003</td>
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<tr>
<td>CAPD</td>
<td>4.5 ± 0.44</td>
<td>0.029 ± 0.004</td>
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Role of diuretics in the preservation of residual renal function in patients on continuous ambulatory peritoneal dialysis

JAMES F. MEDCALF, KEVIN P.G. HARRIS, and JOHN WALLS

Department of Nephrology, Leicester General Hospital, Leicester, England, United Kingdom
Longitudinal Membrane Changes

Membrane preservation

- RAASi Solutions
- Infections
Some recent advances

- Tele-Health
- Remote monitoring
- Technological advances including new cyclers
- Incremental PD
Extensivists

- PCP
- Deal with more complex cases
- Have a team that supports them like pharmacists, psychotherapists
- Decrease hospitalizations
Sclerosing Encapsulating Peritonitis

- It is rare serious complication of peritoneal dialysis

- Characterized by:
  - Progressive fibrosis of the peritoneum
  - Entrapment of the intestine in fibrous tissue
  - Complete intestinal obstruction
Summary: PD retention action steps

MD role = key to ↑ retention

Build strongest team possible

Achieve maximum retention

Diligently track and address metrics by setting

Hospitalization targets
Catheter complication targets
Adequacy targets (>98%)
PTN improvement plans
Retention
The true metric of a successful PD Program!!!
Thank you!