Hospice and Palliative Care for the Patient with Renal Disease

Christian T Sinclair, MD
Associate Medical Director Kansas City Hospice & Palliative Care
(Talk adapted with permission from Lindy Landzaat, DO)

Heartland Kidney Network Webinar Series - July 14, 2011

This Session will Begin Momentarily
The Session is Being Recorded and Open Thereafter for Q & A
Objectives

1. Understand the broad role for hospice and palliative care services for the patient with renal disease

2. Recognize common symptoms associated with renal failure

3. Identify preferred opioids in renal failure
Overview of Today’s Talk

• Mortality of ESRD
• Prognostication
• Symptom Issues ESRD
• Unique Problems in ESRD
• Opioids in ESRD
• Hospice and Palliative Care Role
True or False?

Can a patient be on Hospice and Chronic Hemodialysis?
In 2007, 110,000 patients began dialysis
At end of 2007:
   341,246 on HD
   26,340 on PD
   158,739 transplant patients
   71,415 patients on list

5.8% of Medicare = 23.9 BILLION $
18-23%  1 year mortality rate (Wellman)
20-25%  1 year mortality rate (Davidson)
24%     1 year mortality rate (Moss)
18-23%  1 year mortality rate  (Wellman)
20-25%  1 year mortality rate  (Davidson)
24%    1 year mortality rate  (Moss)
6.7 - 8.5 times higher all-cause mortality

USRDS 09
Majority die of a non-renal cause (Murtagh 08)
Majority die of a non-renal cause (Murtagh 08)

20% of ESRD patients withdraw from HD prior to death (Yong, Moss)
Majority die of a non-renal cause (Murtagh 08)

20% of ESRD patients withdraw from HD prior to death (Yong, Moss)

Less than half used hospice (Moss)
**TABLE 2**

Five-year survival rates for stage 5 chronic kidney disease and common cancers

<table>
<thead>
<tr>
<th>Condition</th>
<th>Five-year survival (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 5 patients on renal replacement therapy age over 65 years</td>
<td>23.2</td>
</tr>
<tr>
<td>Stage 5 patients on renal replacement therapy (all ages)</td>
<td>43.5</td>
</tr>
<tr>
<td>Stage 5 chronic kidney disease ages 18-64 years</td>
<td>64.1</td>
</tr>
<tr>
<td>Testicular cancer</td>
<td>96.5</td>
</tr>
<tr>
<td>Melanoma</td>
<td>89.4</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>81.0</td>
</tr>
<tr>
<td>Prostate cancer</td>
<td>74.4</td>
</tr>
<tr>
<td>Colon cancer</td>
<td>49.6</td>
</tr>
</tbody>
</table>

*(Ansell et al 2007, Westlake 2008)*
“Although dialysis therapy may extend life, it is now increasingly clear that it often fails to restore health and that many patients suffer from distressing symptoms or disability prior to death.”

Tamura
“Among nursing home residents starting dialysis, we recently demonstrated that dialysis initiation was associated with a substantial and sustained decline in functional status at the start of dialysis in addition to a very high mortality.”

58% mortality
Pre-dialysis functional status maintained in 13%

Tamura NEJM 10.15.09
Mod. Charlson Comorbidity Index

1 point each for
- CAD, CHF, PVD, CVA, Dementia, COPD,
- Peptic ulcer, Mild liver disease, Diabetes

1 point for every decade over 40

2 points each for
- hemiplegia, moderate-to-severe renal disease (including being on dialysis),
- diabetes with end-organ damage, cancer (including leukemia or lymphoma)

3 points for moderate-to-severe liver disease

6 points each for metastatic solid tumor or AIDS

<table>
<thead>
<tr>
<th>Modified CCI Score Total</th>
<th>Annual Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt;3</td>
<td>3%</td>
</tr>
<tr>
<td>Moderate 4-5</td>
<td>13%</td>
</tr>
<tr>
<td>High 6-7</td>
<td>27%</td>
</tr>
<tr>
<td>Very High &gt;8</td>
<td>49%</td>
</tr>
</tbody>
</table>
“Surprise” Study

“Would you be surprised if this patient died in the next 12 months?”

• HD for 3 months
• Followed for 1 year
• N=147
• Overall mortality 15%
• “Yes” 10.6%
• “No” 29.4%
• Odds of dying 3.5 times higher in “No”
### 6 month prognosis in elderly

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI less than 18.5</td>
<td>2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
</tr>
<tr>
<td>CHF Stage III or IV</td>
<td>1</td>
</tr>
<tr>
<td>PVD Stage III or IV</td>
<td>2</td>
</tr>
<tr>
<td>Dysrhythmia</td>
<td>2</td>
</tr>
<tr>
<td>Active Malignancy</td>
<td>1</td>
</tr>
<tr>
<td>Severe Behavioral Disorder</td>
<td>2</td>
</tr>
<tr>
<td>Totally Dependent for transfers</td>
<td>3</td>
</tr>
<tr>
<td>RRT initiated unplanned</td>
<td>2</td>
</tr>
</tbody>
</table>
6 month prognosis in elderly

Couchard
96% of patients died within 30 days of stopping HD
Overview of Today’s Talk

- Mortality of ESRD
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- Symptom Issues ESRD
- Unique Problems in ESRD
- Opioids in ESRD
- Hospice and Palliative Care Role
Uremia

- Lethargy
- Somnolence
- Confusion
- Neuromuscular irritability
- HTN
- CHF

- Nausea
- Vomiting
- Metallic taste
- Pruritis
- Sleep disturbances
- Pericarditis
- Anorexia
Symptoms in ESRD Patients

• Yong 2009
• Average of 9.1 symptoms/patient

• Fatigue
• Difficulty sleeping
• Cold aversion
• Lower Torso Weakness
• Pruritis
• Sexual Problems
• Pain in 41%
Symptoms in CRF

Daily symptom burden in end-stage chronic organ failure: a systematic review

DJA Janssen Central Department of Treatment and Care, Proteion Thuis, Horn, MA Spruit Staff functionary

• Lit search on daily symptom burden in CHF, COPD, CRF at EOL
• 595 articles → 39 included
• 8 CHF, 7 COPD, 2 CHF/COPD, 22 CRF
End Stage Organ Failure Symptoms Compared

Janssen
End Stage Organ Failure Symptoms Compared
## Symptoms of HD Withdrawal

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confusion/Agitation</td>
<td>70%</td>
</tr>
<tr>
<td>Pain</td>
<td>55%</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>48%</td>
</tr>
<tr>
<td>Nausea</td>
<td>36%</td>
</tr>
<tr>
<td>Myoclonus/Seizures</td>
<td>27%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>27%</td>
</tr>
<tr>
<td>Pruritis</td>
<td>24%</td>
</tr>
<tr>
<td>Edema</td>
<td>21%</td>
</tr>
</tbody>
</table>

*Fast Fact #208*
Symptoms in ESRD without HD

Murtagh, JPSM 2010
Overview of Today’s Talk

• Mortality of ESRD
• Prognosticating
• Symptom Issues ESRD
• **Unique Problems in ESRD**
• Opioids in ESRD
• Hospice and Palliative Care Role
ESRD Problems

- Vascular Access Issues
- Calciphylaxis
- Mental Status Changes
- Uremic Frost
- Sleep Disorders
- Depression
Monthly incidence of stroke during the transition to ESRD. 2006

Figure 5.25 (Volume 1)

Incident ESRD patients, 2006, age 67 & older at initiation; excludes those with a stroke between 12 & 24 months prior to ESRD

USRDS 2009 ADR
Calciphylaxisis

- Vascular calcification
- Soft Tissue Necrosis
- Ischemic Necrosis of skin
- Extremely painful
- Lower extremities
- Unknown mechanism
- Normalize calcium-phosphage
- Meticulous wound care
- Mortality 80%

Mental Status Changes

- Mentation slows when GFR < 50% of normal
- Dialysis Dementia due to aluminum accumulation, old problem
- Today’s encephalopathy maybe from uremic toxins, dialysis, or other underlying diseases

<table>
<thead>
<tr>
<th>Stage</th>
<th>eGFR</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt;90 mL/min</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>60-89 mL/min *</td>
<td>Mildly Reduced</td>
</tr>
<tr>
<td>3</td>
<td>30-59 mL/min</td>
<td>Moderately Reduced</td>
</tr>
<tr>
<td>4</td>
<td>15-29 mL/min</td>
<td>Severely Reduced</td>
</tr>
<tr>
<td>5</td>
<td>&lt;15 mL/min</td>
<td>Very Severe/End Stage</td>
</tr>
</tbody>
</table>
Depression

• Symptoms may overlap

• Focus on feelings of
  – Helplessness
  – Guilt
  – Worthlessness
  – Suicide

• Fluxotine, sertraline, citalopram, avoid buproprian

• Low employment

Wellman
Uremic Pruritis

- Unknown MOA
- Doesn’t correlate with BUN
- Chronic > Acute
- Back, symmetric, continuous
- Nocturnal, dry, heat
- 17% increase mortality associated

Wellman
Uremic Pruritis

- Topical emollients
- Capsaicin
- UV Phototherapy
- Gabapentin start 100mg post HD
- Seratonin antagonists
- Remeron
Uremic Frost
Sleep disorders

- 75-85% of ESRD patients
- RLS, uremic pruritis, pain, iron def, etc.
- Treat underlying cause (RLS)
- Sleep hygiene
- Mild hypnotics
- Cooler dialysate (36.0-36.5 degrees)
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Opioid Analgesia
Fentanyl

- Transdermal absorption may be altered
- No active metabolites
- Dialysis does not remove fentanyl
- Generally safe, dose reduction ? necessary
Hydromorphone (Dilaudid)

• Accumulation of hydromorphone-3-Glucuronide
  – Increases potential for neurotoxicity
• Better tolerated than morphine
• Subject to dialysis
Morphine

• Accumulation of Morphine to Glucuronidine
  – Delayed opioid toxicity

• Accumulation of
  Morphine 3 Glucuronide (55% inactive)
  Morphine 6 Glucuronide (10% active)
  – Delayed neurotoxicity

• Hemodialysis (not PD) removes metabolites
Morphine

• Dose reduce
• Extend intervals
• Avoid sustained release
• Hemodialysis related changes in analgesia
Oxycodone

- More data needed
- Oxycodone + metabolites cleared by kidney
  - Noroxycodone
  - Oxymorphine
- CNS toxicity possible even at normal doses
- Reduce dose
- Avoid SR
- ? dialysis
Methadone

- Inactive metabolite
- Fecal excretion
- Relatively safe in renal failure
- Multiple cytochrome metabolism
- Not dialyzed
Opioid Summary

• Long Acting:
  – Fentanyl and Methadone Preferred

• Short Acting:
  – Fentanyl > Dilaudid > oxycodone > morphine
Hospice and Palliative Care Role

• Similarities
  – Patient and family focused
  – Symptom control
  – Communication and coordination of care
  – Serious illness
  – Access in home, hospital, nursing home
  – Specialists across multiple disciplines
Hospice and Palliative Care Role

• Hospice care
  • Focused on last 6 months
  • Goals - Primarily comfort only
  • Can be provided in an inpatient facility
  • Bereavement services
  • Medicare benefit

• Palliative care
  • Time-independent
  • Goals – Curative, rehabilitative, comfort, etc.
  • Can be provided in a clinic setting
  • Billed as traditional medical services
Summary

- 24% of ESRD patients on HD die each year
- Methadone, Fentanyl are preferred in ESRD patients for analgesia
- Fatigue, Dyspnea, Insomnia and Pain are frequent symptoms associated with end stage renal disease
- Some patients qualify for HD and Hospice
Dedicated to End-of-Life Care for Kidney Patient

www.kidn眼eol.com

Fast Fact #161 “Opioid Use in Renal Failure”
Fast Fact #191 “Prognostication in Patient’s Receiving Dialysis”
Fast Fact #207 “Withdrawal of Dialysis: Decision Making”
Fast Fact #208 “Clinical Care Following Withdrawal of Dialysis”

www.eperc.mcw.edu
References

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• Hudson, M., Weisbord and Arnold. Fast Fact # 191 Prognostication in Patients Receiving Dialysis
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• Fine, Perry “When is it time for hospice” Powerpoint slides presented at NHPCO May 2007 accessed at www.kidneyeol.org


• Murtagh, F. et al. “Symptoms in the Month Before Death for Stage 5 Chronic Kidney Disease Patients Managed Without Dialysis. JPSM In press, 2010
Photo Reference

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  http://www.flickr.com/photos/duncan/104321008/
- Newslighter “Plugged into Dialysis”
  http://www.flickr.com/photos/newslighter/523392/
- Dey “Kidney Beans”
  http://www.flickr.com/photos/dey/95133323/
- Mickey “Frosted Marigold”
  http://www.flickr.com/photos/emzee/266841026/
- @rild “Just another stair”
  http://www.flickr.com/photos/arild_storaas/2178513745/
- Aldaron “Parliament Clock”
  http://www.flickr.com/photos/aldaron/536362686/
- Hitthatswitch “Large vitamin pills and tablets”
  http://www.flickr.com/photos/ringai/3174655194/
- Claire_Sambrook “Kidney pool”
  http://www.flickr.com/photos/create_up/267840044/
*A Certificate of Attendance shall be issued to each participant

- Questions About the WebEx?
- Contact Anne Karanja, Community Development Manager
  - at akaranja@nw12.esrd.net or 816.880.1709