Insights into managing kidney disease in older patients

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Phyllis

76 year-old woman with lung cancer s/p lobectomy, pulmonary hypertension and cardiac disease
- Hospitalized twice in past year and one acute stay in rehab
- Uses walker for short distances, independent in ADLs

Slowly worsening renal function
- Creatinine 2.0->2.5 mg/dL (eGFR 23->18 ml/min/m^2)
- Albumin/creatinine ratio 35 mg/g
- Albumin 3.0 mg/dL

Phyllis asks whether she will need dialysis?

Objectives:
- Name two tools to predict risk of renal progression in patients with kidney disease
- Describe conservative management outcomes and patients who most benefit
- Incorporate a multimorbidity framework to guide treatment decision-making

Insights into managing kidney disease in older patients

Older patients are the fastest group starting dialysis

Older dialysis patients experience setbacks
- Multimorbidity
  - Average greater than 3.5 comorbidities
  - Associated with increased mortality
- Geriatric syndromes
  - 50% have a walking disability
  - Five-fold risk of frailty
  - 30-60% have cognitive impairment
- Symptom and emotional burden
  - Associated with impaired QOL and hospitalization

CKD is common in geriatrics

- Incidence
  - Stage 3-4: 38.7%

- Causes
  - Diabetes and hypertension
  - Renal senescence
  - eGFR reporting

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Older dialysis patients are more likely to be hospitalized in last month of life

<table>
<thead>
<tr>
<th>Medicare Beneficiaries</th>
<th>Dialysis (Present Study)</th>
<th>Cancer Failure 1,3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity of Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitalization, %</td>
<td>76.0</td>
<td>61.3</td>
</tr>
<tr>
<td>Days hospitalized, mean</td>
<td>9.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Intensive care admission, %</td>
<td>48.9</td>
<td>NA</td>
</tr>
<tr>
<td>Days in an intensive care unit, mean</td>
<td>3.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Any invasive procedure, %</td>
<td>29.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Hospice use, %</td>
<td>20.0</td>
<td>55.0</td>
</tr>
<tr>
<td>Death in a hospital, %</td>
<td>44.6</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Abbreviation: NA, not available.

Dialysis is often started without an informed conversation

- Dialysis decisions occur during acute illness
- Often in setting of AKI
- Momentum of clinical events
- Less opportunity to incorporate values into decision
- Patients often not prepared to make informed decision
- Little understanding of the risks and benefits of dialysis
- Most have never heard of conservative management
- Rarely engaged in prognosis discussions

Guiding Principles for the Care of Older Adults with Multimorbidity: An Approach for Clinicians

- Consider prognosis and relevant outcomes
- Consider the risk of harm versus benefit
- Consider the patient preferences
- Communicate and decide plan of care
- Reassess care plan at defined intervals

Risk factors for renal progression in older patients

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What is this patient’s risk of renal progression in the next two years?

- A) 100%
- B) 60%
- C) 30%
- D) 10%
- E) 5%
Art Buchwald: “Too Soon to Say Goodbye”

- 80 year old American writer
- Told to “begin dialysis immediately” so that he could get amputation
- Stopped after 5 weeks: “I don’t see a future in this”

Which patients are at risk?
CKD Heat Map

Elderly experience slow renal progression

Calculating Kidney Failure Risk at 2 and 5 years

Risk factors for progression

- Co-morbid illness
  - Cardiovascular disease, diabetes
- Type of kidney disease
  - Nephritic/nephrotic syndromes
- Episodes of acute kidney injury (illness, hospitalization)
- Trajectory of progression
  - Slow versus fast progressors
Treatment options for older patients with multimorbidity

Treatment decision-making in patients with multimorbidity
- Consider prognosis and relevant outcomes
- Consider the risk of harm versus benefit
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Treatment options for advanced kidney disease
- Conservative (no-dialysis) management
- Dialysis
- Time-limited trial

Conservative management
- Goals are to optimize quality of life, treat symptoms of kidney failure and when appropriate preserve residual renal function
- Intended for patients who:
  1) may not meaningfully benefit from renal replacement therapies
  2) whose goals are to focus on the quality of life rather than intensive treatments to prolong survival

Conservative management outcomes
- Survival
  1. Median survival between 6.3 to 23.4 months
  2. Elderly patients tend to maintain residual renal function at very low levels
- Symptoms/QOL
  1. More likely to receive symptom management
  2. Functional status preserved until last 2 months of life
- End of life
  1. Less likely to die in hospital and more likely to receive symptom management at end of life

Which patients would benefit from conservative management
- Patients > 80 years
- Patients > 75 with 2 or more of the following
  1. Multiple comorbidities (especially CVD)
  2. Poor functional status
  3. Malnutrition
  4. ‘No’ to the Surprise question
  5. Geriatric syndromes: frailty, cognitive dysfunction, sarcopenia, falls
- Poor quality of life unrelated to kidney disease
No significant survival benefit with dialysis for older patients with high comorbidity

Chandna et al. NDT, 2010

No significant survival with dialysis for those over 80 independent of co-morbidity

Verberne et al. CJASN, 2016

Survived days with dialysis often spent receiving medical care

Carson et al. CJASN, 2009

Survival at 6 months:

A) 100%
B) 75%
C) 50%
C) 25%

Based on the touch calc esrd calculator:

Albumin <3.5, age > 75, ADLs, Nursing home, Cancer, Heart Failure and Hospitalization
6 month survival 49%

Based on simple risk assessment questionnaire:

Prognosis for our patient if she elects dialysis?

http://touchcalc.com/calculators/sq

6-month ESRD mortality predictor

Cohen et al. CJASN, 2010

Simple Dialysis Initiation Risk Score

<table>
<thead>
<tr>
<th>Patient’s Condition</th>
<th>Score FYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age category</td>
<td>Score</td>
</tr>
<tr>
<td>&lt;70 y</td>
<td>0</td>
</tr>
<tr>
<td>70-74 y</td>
<td>1</td>
</tr>
<tr>
<td>75-79 y</td>
<td>1</td>
</tr>
<tr>
<td>80-84 y</td>
<td>1</td>
</tr>
<tr>
<td>85-89 y</td>
<td>2</td>
</tr>
<tr>
<td>≥90 y</td>
<td>3</td>
</tr>
<tr>
<td>Albumin level low (&lt;3.5 g/dL) or unknown!</td>
<td>1</td>
</tr>
<tr>
<td>Needs assistance in daily living!</td>
<td>1</td>
</tr>
<tr>
<td>Lives in nursing home?</td>
<td>1</td>
</tr>
<tr>
<td>Had or has cancer?</td>
<td>1</td>
</tr>
<tr>
<td>Had or has heart failure!</td>
<td>1</td>
</tr>
<tr>
<td>Hospitalized &gt;1 or &gt;1 mo in last year?</td>
<td>1</td>
</tr>
</tbody>
</table>

Thamer et al. AJKD, 2015

Survival (months) including first 60 days

Census et al. CJASN 2009

3, 6 month mortality risk:

Score 0 = 2%, 4%
Score 3 = 12%, 20%
Score 7 = 34%, 49%
Score ≥ 8 = 39%, 55%
Treatment decision-making in patients with multimorbidity

- Consider prognosis and relevant outcomes
- Consider the risk of harm versus benefit
- Consider the patient preferences
- Communicate and decide plan of care
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Explore patient preferences to learn values and goals

- What have the doctors told you about your condition?
- What has been your experience?
- What’s important as you think about the future:
  - What do you hope for?
  - What are your worries?

Prognosis and patient preferences determine treatment plan

Make a plan that matches prognosis and patient preferences

- Conservative (no-dialysis) management
  - Goals focus on quality of life… rather than survival alone
  - Typically less exposure to the healthcare system

- Dialysis
  - Goals focus more on life extension than quality of life
  - Trade off between benefit and burden
  - Typically more exposure to the healthcare system

- Time-limited trial
  - Prognosis and preferences do not match
  - Uncertainty in prognosis

Phyllis

- Hospitalized for volume overload, worsening renal function
- Her goal was to ‘get better’
  - Get rid of swelling, improvement in appetite, be home
  - Would be ok with short time in rehab

- Renal consulted and dialysis catheter placed

Dialysis as a time-limited trial

- Opportunity to hope for the best and prepare for the worst
- Define clinical and patient goals –
  - what would success look like
  - what would failure look like
- Acknowledge the emotion
- Define a check-in time

- Communicate your worries to the nephrologist
Summary

- Prognostic tools exist to guide dialysis conversations
  - Dialysis Initiation Score or ESRD 6 month calc
  - Cardiovascular disease and age over 75 less likely to gain survival with dialysis

- Conservative management should be offered to all patients who may not do well on dialysis
  - Survival time can be months

- Time-limited trials done well can respond to prognostic uncertainty

Other helpful tools

- Coalition for Supportive Care of Kidney Patients
  - www.kidneyeol.org

- Tangri 4- and 8-variable kidney failure risk equation
  - Calculate by QxMD

- Thamer Dialysis Initiation Score
  - pmidCALC.org

- 6-month ESRD mortality calculator
  - http://touchcalc.com/calculators/sq

Thank you!

- Questions?
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