Renal Palliative Medicine

Oxford General Medicine Course
St. Anne’s College
January 2017

60% of cancer patients have CKD 2-5


Table 1. Renal Function stratified by estimated glomerular filtration rate (eGFR)

<table>
<thead>
<tr>
<th>Stage</th>
<th>eGFR (mL/min/1.73m²)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>&gt;45</td>
<td>Normal or increased GFR, with other evidence of kidney damage</td>
</tr>
<tr>
<td>1B</td>
<td>30-45</td>
<td>Moderate decrease in GFR, with or without evidence of kidney damage</td>
</tr>
<tr>
<td>2A</td>
<td>15-29</td>
<td>Severe decrease in GFR, with or without evidence of kidney damage</td>
</tr>
<tr>
<td>2B</td>
<td>&lt;15</td>
<td>End-stage kidney disease</td>
</tr>
</tbody>
</table>


The Royal Free Hospital
Evening News 1965

THE LUCKY THIRTEEN
These People Cheat Death In The Lifeline Club
The Changing Epidemiology of Renal Replacement Therapy

Dialysis – Cranach’s Fountain of Youth

What about the ‘Third Pathway’?
In patients over 75 years with 2 or more co-morbidities (one of which was IHD or CCF) there was no survival advantage with dialysis compared to those who did not commence dialysis.

One-third of non-dialysis patients lived more than 12 months after eGFR fell below 10ml/min.

Renal Replacement Therapy (RRT) v Maximum Conservative Management (MCM)

Distribution of Days Survived

Multiple Symptoms

<table>
<thead>
<tr>
<th>Symptom Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 symptoms</td>
<td>37%</td>
</tr>
<tr>
<td>6-10 symptoms</td>
<td>44%</td>
</tr>
<tr>
<td>&gt;11 symptoms</td>
<td>19%</td>
</tr>
<tr>
<td>None</td>
<td>13%</td>
</tr>
</tbody>
</table>
Figure 1. Bar chart showing the proportion of patients reporting each symptom and the severity of the reported symptom.

SOB = shortness of breath.


<table>
<thead>
<tr>
<th>Symptom</th>
<th>OUR STUDY Pos-S Renal % (mean)</th>
<th>COPD, CHF, cirrhosis % (MSAS-SF)</th>
<th>CANCER % (MSAS-SF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortness breath</td>
<td>55% (86)</td>
<td>23%</td>
<td>63%</td>
</tr>
<tr>
<td>Pain</td>
<td>64% (49)</td>
<td>63%</td>
<td>30%</td>
</tr>
<tr>
<td>Constipation</td>
<td>44% (30)</td>
<td>34%</td>
<td>64%</td>
</tr>
<tr>
<td>Nausea</td>
<td>38% (28)</td>
<td>45%</td>
<td>64%</td>
</tr>
<tr>
<td>Difficulty sleeping</td>
<td>55% (64)</td>
<td>53%</td>
<td>64%</td>
</tr>
<tr>
<td>Lack appetite</td>
<td>45% (43)</td>
<td>44%</td>
<td>64%</td>
</tr>
<tr>
<td>Restless legs</td>
<td>47%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>


Am I Seriously Ill?

Have you ever experienced Serious Illness?

- NEVER
- BLANK
- YES

20%

End of life care preferences and needs

“Something bubbling in my blood”: the experience of advanced chronic kidney disease as a hidden illness


How important is it for you to be informed about your prognosis (i.e., how your illness will progress)?

90.6%
“The following is my current view of my medical history and operations: I was diagnosed as having a high sugar level by an insurance doctor ... who put me on insulin and said he would need to give me dialyses otherwise I would lose both my kidneys. I was admitted to hospital for various tests........


........I had 7 vascular operations on my left arm to find a vistula access but to no avail, instead my head was swollen like a pumpkin, I was to have two further operations on my left arm to relieve the pressure on my head. Then followed an operation on my groin which badly haemorrhaged for hours and a special team of doctors had to be brought in...and they decided to put a graphot onto my right leg but with no success as it was located to deep. They then fitted a second graphot on top of the first one and I had serious internal bleeding.........

I do not have the use of my right leg as it is filled with fluid and is like a wooden leg. They put a line in my jugglar vain right hand side which they are using at the moment.........

I broke both my feet while walking to the toilet. Despite many complaints from me they just told me to take paracetamol..

I am still waiting for a transplant. Why is this?........

On a positive note the staff have been very caring and attentive otherwise.”

Attributes which positively influence HRQoL

Symptoms which most adversely influence HRQoL

Poor Mobility

Pain

Diarrhoea
How much of the variability in EQ5D scores can be accounted for by symptom burden?

- $R^2 = 21\%$

Predicting Poor HRQoL

- In a linear regression model adjusted $r^2 = 21\%$
- Approximately 21% of variability in the EQ5D summary index is explained by symptom burden...
- So a lot of what affects patients’ HRQoL is not explained by symptom burden alone...

Expression of Illness in an Open Field

- Lifestyle Issues
  - “No time to spend with my kids”
  - “I dream about cabbage”

- Existential Issues
  - “No light at the end of the tunnel”
  - “Watching all the golden girls die”
  - “Why me?”

Patients who died v Patients who are still living

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Alive</th>
<th>Died</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility Problems</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Pos Score (0-68)

- $P=0.006$
In our study the (EQ VAS) was independently associated with all-cause mortality even after adjusting for potential confounding.

This visual analogue scale was associated with mortality to a similar magnitude as the previously validated ‘Surprise’ question.

A possible potential advantage to a simple self-rated health tool compared to the ‘Surprise’ question might include less susceptibility to inter-rater variability and pragmatic application.
End of life care preferences and needs

Which members of the Health Care Team would you like to talk with about end-of-life issues?

- Kidney doctor (nephrologist) 47.6%

The Nephrologist

"As a renal physicians we know that from the day they first walk into our clinic, we are likely to have unrelenting involvement in their healthcare. Many physicians do not find it easy to involve themselves in the management of end of life. For physicians familiar with rigorous intervention in complex and acute illness, the argot of success is prolongation of life. But life-long involvement is a special privilege of the renal physician, one that comes with a special responsibility...”

Professor John Feehally
Honorary Professor of Renal Medicine
University of Leicester

The cause of death for 25% of patients on haemodialysis in our Trust is elective withdrawal

Realistically, given issues of manpower, it may not be possible for a Palliative Care health professional to be present in every Renal Unit

What are the core competencies in a “Palliative approach” to patients with ESKD for medical practitioners?
4 Pillars of a Palliative approach

- Communication
- Symptom management
- Psychosocial support
- Care of the dying patient

**Decision making around dialysis**

Once ESRD is diagnosed it is important to examine the various options. Clinical Practice Guidelines on Shared Decision-Making in the Appropriate Initiation of and Withdrawal from Dialysis

Renal Physicians Association of the USA 2010.
Recommendation No. 6

It is reasonable to consider forgoing dialysis for ESRD patients who have a very poor prognosis or for whom dialysis cannot be provided safely.

1. Those whose medical condition precludes the technical process of dialysis because the patient:
   (a) is unable to co-operate (eg. Advanced Dementia)
   (b) unstable medically (eg. Significant hypotension)

2. Another life-limiting illness – although this may be negotiated

3. Over 75 years with 2 or more of the following statistically significant criteria predictive of very poor prognosis:
   (a) Surprise question.
   (b) High Co-morbidity Score
   (c) Significantly impaired Functional status such as Karnofsky < 40,
   (d) Severe chronic malnutrition (s. Albumin < 25.)

Conservative management of ESRD

This may be decided in consultation with a Nephrologist, or

The patient is not referred to a Nephrologist in the first place.
What level of care occurs for this group?

If this is being raised as an option:

What does a Conservative pathway mean?

What is its content?

Can we make predictions about their course?

Challenge is to ensure that this pathway of management is not seen as “second best” or inadequate but is thorough, systematic and evidenced-based.

Renal Medicine  Palliative approach

Blood Pressure  Symptom management
Calcium/Phosphate  Psychosocial support
Anaemia  Care of the dying
Fluid balance

There is a modest, but growing body of literature of research on this cohort of patients.

### Longitudinal study of conservative stage 5 CKD

- Included patients with Stage 5 Chronic Kidney Disease with definite decision for conservative (non dialysis) management, and with capacity for consent
- 73 participants (response rate 62%)
- 49 (66%) died during follow-up
  - mean age 81 years, range 58-95 yrs
  - 24 (49%) men
  - median follow-up 8 months (range 1-23 months)
- Outcomes measured monthly until death or study end
  - Symptoms (MSAS-SF)
  - Palliative needs (POS)
  - Functional status (KPS)

www.kcl.ac.uk/palliative
The “death-bed consultation” is a set of missed opportunities.

Symptom Burden in 893 Haemodialysis Patients

Lowney et al. JPSM 2015 epub ahead of print
At the point of assessment always consider a differential diagnosis of the pruritus.

Scratching may lead to:
- Impetigo
- Prurigo
- Chronic lichenified dermatitis/eczema

**Associations**
- Poor sleep quality
- Depression
- QOL
- Mortality


The pathogenesis of pruritus remains elusive.
Of the C Fibres that are itch-sensitive:

10% are Histamine-dependent
90% are Histamine-independent

Davidson S. J Neuroscience 2007;27: 10007-14

Myth 1

That all itch is histamine mediated

Myth 2

That the best first line medication for pruritus of whatever cause are Anti-Histamines

Pathogenesis of Uraemic Pruritus

Multiple theories, conflicting findings

Adequacy of dialysis
Dialysis adequacy (as measured by Kt/V) did not correlate with the frequency of UP in large epidemiological studies.


Dry skin is an association and exacerbating factor but not a primary cause.


- There is no correlation between PTH levels and UP

- PTH itself is not pruritogenic
Inconsistent findings on s.Calcium and UP

One study found increased extracellular Calcium ions in the deepest layer of the Epidermis in patients on HD with UP

Momose A et al. Neprol Dial Transplant (2004); 19; 2061-2066

Inconsistent findings on Phosphate and UP

Phosphate

In the DOPPS II study only at a very high Calcium-Phosphate product (ie. > 80 mg2/dL2) was there a correlation with UP frequency

“Despite this vast array of possible explanations, none consistently have been demonstrated to be the underlying cause of pruritus associated with CKD. Large epidemiological studies ultimately may facilitate our understanding of the elusive pathophysiological process of this distressing symptom.”


What therapies have the strongest foundation in evidence – based practice?

• Oral antihistamines and systemic steroids are generally not effective

Approach to Treatment
Approach to Treatment

- There are 3 (three) Level 1 studies showing that Gabapentin has significant efficacy in treating uraemic pruritis
  
  • Naini et al (2007)
  • Razeghi et al (2009)

- On Dialysis
  
  • Gabapentin 100mg after each Dialysis
  • and titrating to effect

• On conservative management with
  • eGFR < 15

  • Gabapentin 100mg every second night
  • and titrating to effect

  • Pregabalin
• Several prospective cohort studies showed efficacy.


• Evening Primrose Oil

• Chen YC et al. Am J Kid Dis 2006; 48: 69-76

Supplementing Gamma-Linolenic Acid (GLA) has an anti-inflammatory/anti-itch effect

• 100mg bd

• = Blackmores Evening Primrose Oil

• contains 100mg GLA per capsule

• Sertraline (SSRI)

• Shakiba M et al. Int J Nephrology 2012; Article ID 363901; 1-6
• Before and after trial of 19 HD patients.

• 50mg daily for 4 months.

• The difference in the grade of pruritus before and after sertraline was significant.

Thalidomide 100mg nocte

Approach to Treatment

Other oral medications

• Anti-Histamines – evidence does not support use.
• Ondansetron – conflicting results. Not recommended.
• Cimetidine – not recommended
• Naltrexone – conflicting results. Not recommended.

Murtagh FEM, Weisbord D. Symptom management in Renal Failure. In : Chambers EJ et al (eds). Supportive Care for the Renal Patient. 2nd ed. 2010. OUP p. 120

Health Related Quality of Life
Self-rated health as a predictor of mortality

Or just...

Listen to what the patient is saying