

2014

Renal Supportive Care – an overview. Frank Brennan, Palliative Care Physician.

## Renal Palliative Care – Caring for adult patients with ESKD – an overview

Frank Brennan Palliative Care Consultant Department of Nephrology St George Hospital Sydney, Australia

British Columbia Kidney Days, Vancouver, British Columbia, Canada October 2014

#### A 53 year old woman

- Type 2 Diabetes Mellitus
- Hypertension
- OA mild
- ESKD Diabetic Nephropathy
- HD 3/week for 5 years

• Shuffled in to the clinic room

• Head down

• No eye contact

"My legs move all through the night" – Severe Restless Legs Syndrome - 2 years "I itch all the time... often it becomes ferocious" Severe uraemic pruritus – 3 years "My feet and calves burn and get pins and needles – it is awful" Severe diabetic peripheral neuropathy – 18 months

### And sleep ?

"I don't sleep... I doze in 5 minute lots...

"I sit on a chair and put my elbows on my knees to hold them still...

and I pray to die."



#### What is Palliative Care ?

#### What role does Palliative Care have in Nephrology ?

Withholding and withdrawing from dialysis

What exactly is the conservative, non-dialytic management of ESKD ?

Symptom management

Care of the dying patient with ESKD

### Creating and nurturing a Renal Supportive Care service

#### What is Palliative Care ?



WHO definition (2002) Palliative Care is an approach which improves the quality of life of patients and their families facing lifethreatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.

#### **Myths**

There is virtually no common ground for active treatment of disease and palliative care.



#### That palliative care is simply the care of the dying



### That palliative care means giving up hope

#### **Modern view of Palliative Medicine**

A. Early involvement : "There is wide recognition that the principles of palliative care should be applied as early as possible in the course of any chronic, ultimately fatal illness." B. The concept of concurrent care : that active care and palliative care can and should occur together.

C. That bringing in a palliative approach as the person is dying is a set of missed opportunities.

Benefits of early involvement– - reinforcement of idea of comfort.

- that symptom control is impeccable throughout.
- establishing a rapport/trust
- demystifying analgesia (opioids)
- introducing idea of Community Care
- helps avoid sense of abandonment

# D. That palliative care can be applied to all life-limiting illnesses

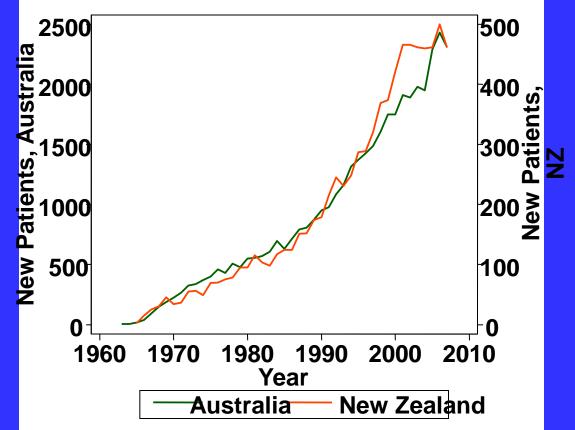
# What possible role does Palliative Care play in End Stage Kidney Disease ?

1. Epidemiology

## **DIALYSIS PATIENTS**

In developed nations the characteristics of patients on dialysis have changed over the years.

Essentially more elderly patients with comorbidities. Number Starting Renal Replacement Therapy Dialysis or Transplantation Australia and New Zealand



In western nations the mean age of commencement on Renal Replacement Therapy is 60 - 65 years.

Increasing number of patients returning to dialysis after transplant failure.

# The age cohort that has the greatest prevalence is the 65-84 year old group.

Canadian Organ Replacement Register (CORR) Report 2014

The other aspect of this change which will be a rising challenge globally is the rise of Diabetes Mellitus

#### In Canada - Prevalent ESKD by primary diagnosis

Diabetes – 27.1 %

CORR Report 2014

#### Does everyone who has ESKD commence dialysis ?

In Australia, for every one patient with ESKD receiving Renal Replacement Therapy (RRT)

there is another who does not receive RRT

Australian Institute of Health and Welfare Research, 2011

## 2. Mortality

# **ESRD** patients

Overall patients with ESKD with or without RRT have a reduced life expectancy compared to age-matched controls.



# For patients on dialysis 15.7 % die each year (CORR Report 2014)

#### For those aged 75 years and older that figure is 25 %

(CORR Report 2014)

3. Symptomatology

Patients with ESKD have a significant symptom burden related to both the disease itself and other co-morbidities

What are the common symptoms associated with ESKD ?

#### The Prevalence of Symptoms in End-stage Renal Disease : A systematic Review

Murtagh FE et al. *Advances in Chronic Kidney Disease* Vol 14, No 1 (January) 2007; pp 82-99

### A Cross-sectional Survey of Symptom Prevalence in Stage 5 CKD managed without Dialysis

Murtagh FEM et al. J Pall Med (2007) 10;6:1266-1276

# SYMPTOM PREVALENCE

	Dialysis	Conservative
FATIGUE/TIREDNESS	71%	75%
PRURITUS	55%	74%
CONSTIPATION	53%	
ANOREXIA	49%	47%
PAIN	47%	53%
SLEEP DISTURBANCE	44%	42%

# SYMPTOM PREVALENCE

	Dialysis	Conservative
ANXIETY	38 %	
DYSPNEA	35 %	61 %
NAUSEA	33 %	
RESTLESS LEGS	30 %	48 %
DEPRESSION	27 %	

• Symptoms are prevalent

Symptoms are multiple

• Symptoms are burdensome

#### The management of symptoms are challenging

# with the altered pharmacokinetics of most medications in renal impairment

4. Quality of life

## QOL - St George dialysis (SF-36 Scores)



5. The "quality" of dying

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

## Communication

# Once ESRD is diagnosed it is important examine the various options



#### Conservative

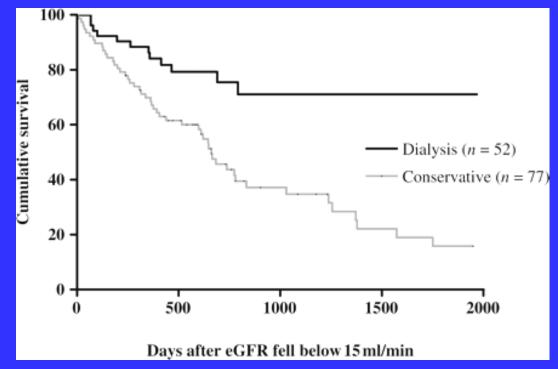
#### **Decision making around dialysis**

## Survival

Dialysis or not ? A comparative study of survival of patients over 75 years with CKD Stage 5.

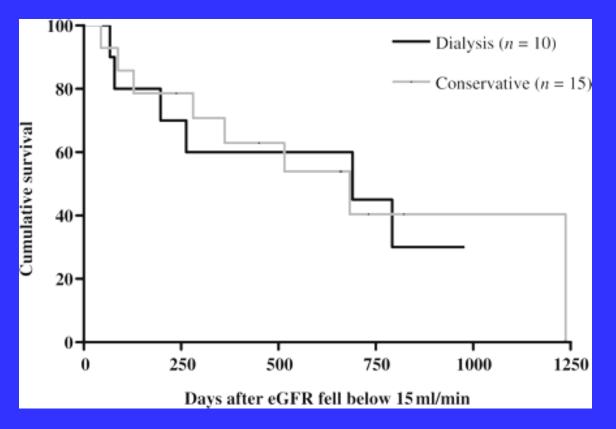
Murtagh FEM et al. Neprol Dial Transplant 2007;22:1955-1962

# Survival



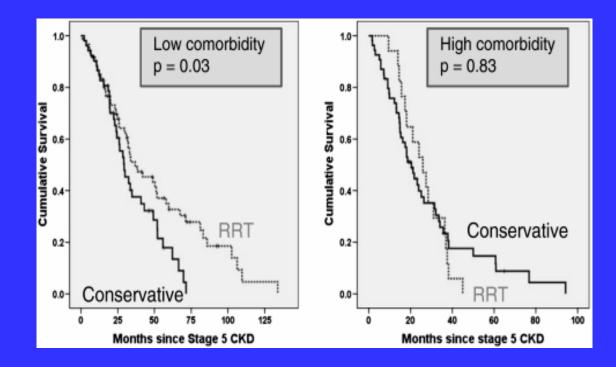
Murtagh et al. NDT. 2007;22:1955-62

#### Survival benefit lost if Co-morbidities include IHD



Murtagh et al. NDT. 2007;22:1955-62

#### RRT v Conservative Chandra et al NDT Nov 2010



#### Dialysis in Frail Elders — A Role for Palliative Care

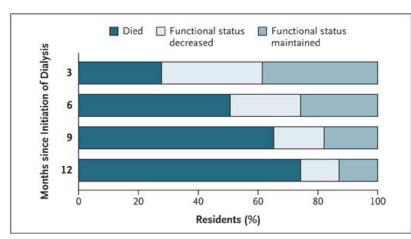
Robert M. Arnold, M.D., and Mark L. Zeidel, M.D.



Volume 361:1597-1598

200

#### Change in Functional Status after Initiation of Dialysis



#### 3702 Nursing home residents mean age 73

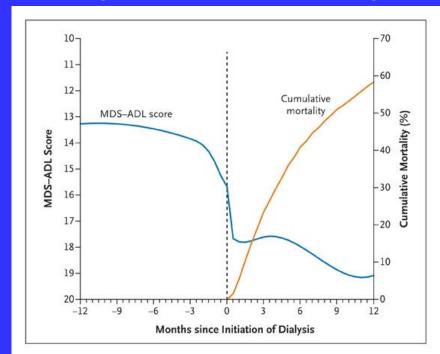
Mean eGFR 10 Female 60% Diabetes 68% CHF 66% CHD 44% Cerebrovascular dis. 39% Depression 35% Dementia 22%

Kurella Tamura et al. 361 (16): 1539, October 15, 2009



Smoothed Trajectory of Functional Status before and after the Initiation of Dialysis and Cumulative Mortality Rate

[Nursing home residents mean age 73]



Kurella Tamura et al. 361 (16): 1539, October 15, 2009



The NEW ENGLAND JOURNAL of MEDICINE 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

 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,</li>
(d) Severe chronic malnutrition (s. Albumin < 25.)</li>

**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

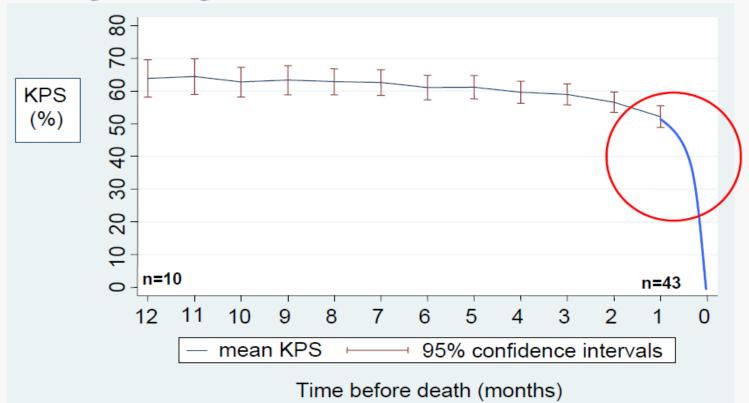
Blood Pressure Calcium/Phosphate Anaemia Fluid balance

Symptom management Psychosocial support Care of the dying There is a modest, but growing body of literature of research on this cohort of patients.

#### Longitudinal study of conservative stage 5 CKD

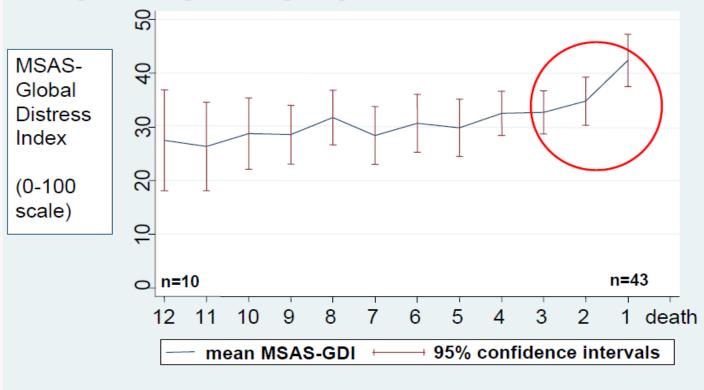
- Included patients with Stage 5 Chronic Kidney Disease with definite decision for conservative (non dialysis) management, and with capacity for consent
- 73 participants (response rate 62%)
- 49 (66%) died during follow-up
  - mean age 81 years, range 58-95 yrs
  - 24 (49%) men
  - median follow-up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

## **Trajectory of functional status:**



www.kcl.ac.uk/palliative

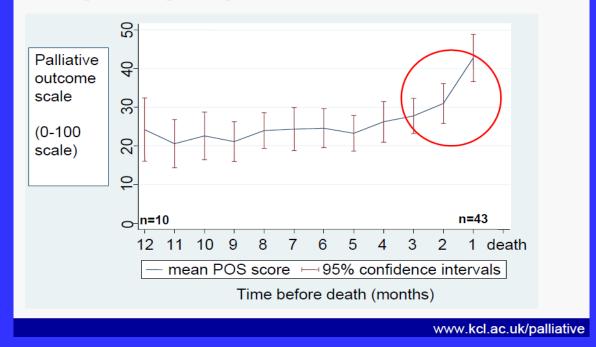
## **Trajectory of symptom distress:**



Time before death (months)

www.kcl.ac.uk/palliative

#### Trajectory of palliative needs:



Symptom management

# SYMPTOM PREVALENCE

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Symptom control is challenging

Symptoms interact and compound each other

## Nocturnal :

U.Pruritus RLS Ins<del>om</del>nia Pain

## Fatigue

## Symptoms may derive from the co-morbidities

ESKD constrains the use of medication

## Pharmacology in the context of CKD is complex

Multiple gaps in knowledge

Recommendations in published data occasionally conflict on the specific doses of medications to be used.

## Principles of symptom management

1. Think of the cause(s).

2. Be meticulous

3. Principle of non-abandonment

## PAIN

# Impact on QOL

Davison (2002) 69 dialysis patients

62% stated that pain interfered with their ability to participate and enjoy recreational activities.

Am J Kid Diseases 2003; 42(6): 1239-1247

## 51 % stated that pain caused them "extreme suffering"

## 41 % stated that pain caused them to consider ceasing Dialysis

#### Positive correlation with depression

#### Davison S, Jhangri GS. J Pain Symptom Management 2005; 30(5): 465-473

**Causes of Pain** 

# ESRD Co-morbidities and its treatment

## **ESRD** and treatment

Disease related :

- Polycystic Kidney Disease
- Renal Bone Disease
- Amyloid
- Calciphylaxis

## Dialysis-related pain :

- PD pts with recurrent abdominal pain
- AV Fistulae > 'Steal syndrome'
- Cramps





## • Diabetic neuropathy

### • PVD / IHD

# Pain etiquette

• ENQUIRE REGULARLY

RESPOND COMPASSIONATELY

• TREAT COMPETENTLY

• REFER WISELY

Principles of pain management

1. Always enquire about pain.

- 2. Treat the underlying cause of the pain.
- 3. Treat the pain meticulously.
- 4. Treat the pain proportionately.
- 5. Constantly reassess.



## Acetaminetophen

"It is considered the non-narcotic analgesic of choice for mild-moderate pain in CKD patients."

Davison S, Ferro CJ. Management of Pain in CKD. *Progress in Palliative Care* 2009; 17: 186-195.

# Acetaminophen at conventional doses is safe = 1 g qid



#### Tramadol



#### Tramadol "is the least problematic of the Step 2 Analgesics for ESRD patients"

Nevertheless use with caution – use a bd dose.

## 90 % of Tramadol and its metabolites are Renally excreted

Need for dose adjustment

If on Dialysis or on Conservative pathway eGFR 15-30

Commence 50mg bd

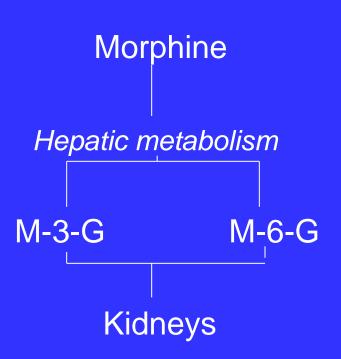
Maximum 100mg bd

### If on a Conservative pathway eGFR < 15

Tramadol 50mg bd (maximum)



### Morphine



Morphine is not recommended in CKD

#### Oxycodone

Short-acting

Long-acting

Endone Oxynorm Oxycontin

"Overall consensus is that Oxycodone is reasonably safe to use in CKD if monitored carefully."

Davison SN et al Seminars in Dialysis 2014

#### Fentanyl

Metabolised in Liver

Inactive metabolites

• 5-10 % excreted unchanged renally

• Fentanyl is not dialysed

Fentanyl is safe to use at standard doses

#### Methadone

- Metabolised in liver
- Excreted mainly in the feces. Some renal excretion of Methadone and its metabolites
- Not dialysed
- Safe to use, but requires skill in dosing regimen specialist use.

Davison SN, Konicki H, Brennan FP.

Pain in Chronic Kidney Disease : A Scoping Review.

Seminars in Dialysis 2014; 27(2): 188-204.

#### **RESTLESS LEGS SYNDROME**

## Definition

1. An urge to move the limbs, usually associated with parasthesias/dysthesias

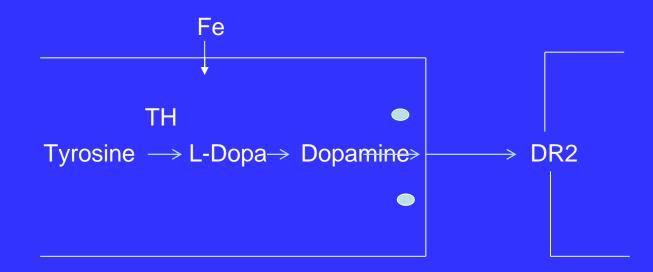
- 2. Motor Restlessness
- 3. Symptoms exclusively while at rest, with relief (completely or partially) with movement.
- 4. Symptoms worse at night.

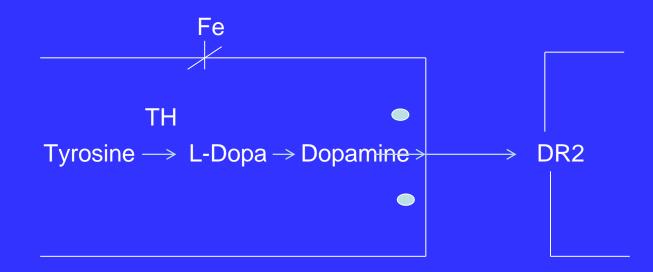
International RLS Study Group – Definition of RLS (1995)

## Incidence in the general population : 2-15 %

#### Incidence in ESRD: 20-30 %

Mechanism is not completely understood







Clonazapem

0.5mg – 1mg nocte

Dopamine agonists

#### • Ergot-Dopamine Agonists (Pergolide, Cabergoline)

#### Non-Ergot Dopamine Agonists (Pramipexole, Ropinirole, Rotigotine)

### Gabapentin

Two Level 1 studies have shown efficacy for Gabapentin in the treatment of RLS in Dialysis patients

 Study A – Placebo controlled – Thorp et al (2001)

 Study B – Gabapentin compared to Levodopa – Micozkadioglu et al (2004)

#### **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

On conservative management with eGFR > 15

Gabapentin 100mg nocte and titrating to effect

#### **URAEMIC PRURITUS**

## Associations

- Poor sleep quality
- Depression
- QOL
- Mortality

Pisoni RL, Wikstrom B et al. Neprol Dial Transplant 2006; 21: 3495-3505.

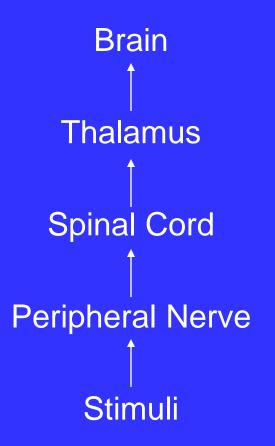
The pathogenesis of pruritus

#### Epidermis

## 

Dermis

Complex neural network within the dermis and nerve fibres enter the Epidermis as free nerve endings





5 - 10 % of the C fibres are itch sensitive

For many years the assumption was :

### Histamine $\rightarrow$ C Fibres $\rightarrow$ Spinal Cord

Of the C Fibres that are itch-sensitive :

20 % are Histamine-sensitive

80 % are Histamine-insensitive



## That all itch is histamine mediated



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

Pathogenesis of Uraemic Pruritus

Multiple theories, conflicting findings

"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."

Patel TS et al. Am J Kidney 2007; 50(1): 11-20.

Large number of therapies described

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

## • Oral medications

Topical preparations

• UV Therapy

# Gabapentin

There are 3 (three) Level 1 studies showing that Gabapentin has significant efficacy in treating uraemic pruritis

Gunal et al (2004) Naini et al (2007) Razeghi et al (2009) **Evening Primrose Oil** 

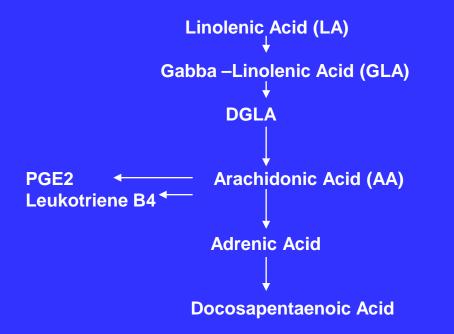
Gabba Linolenic Acid (GLA)

Essential Fatty Acids (EFA) in the epidermis

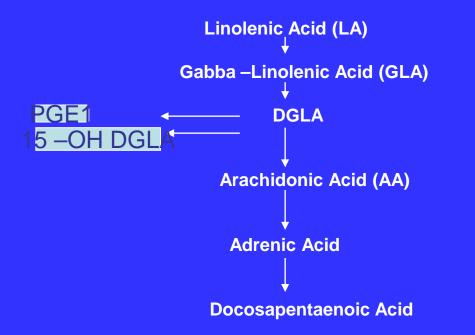
#### n- 6 EFA

```
Linolenic Acid (LA)
Gabba – Linolenic Acid (GLA)
      DGLA
  Arachidonic Acid
    Adrenic Acid
 Docosapentaenoic Acid
```

#### n-EFA



#### n- 6 EFA



So supplementing the Gabba-Linolenic Acid (GLA) has an anti-inflammatory/ anti-itch effect

## 100mg bd

= Evening Primrose Oil contains GLA= 2 capsules bd

## Thalidomide 100mg nocte

Silva SR. *Nephron* 1994; 67(3): 270-273

# **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*. 2<sup>nd</sup> ed. 2010. OUP. p. 120 **Topical preparations** 

Capsaicin cream (0.025 %)

Side effect – transient "burning" feeling on the skin

# UV-B Therapy

### Hassan H et al.

Efficacy and Safety of Gabapentin for Uremic Pruritus and Restless Legs Syndrome in Conservatively Managed Patients With Chronic Kidney Disease

*J Pain & Symptom management* 2014 (In Press)

Of all CKD patients on a conservative pathway

who presented to the RSC clinic with uraemic pruritus

47 % reported its severity as severe to overwhelming.

At Clinic 4 (median 12.6 weeks) -

85 % reported nil to slight pruritus and no patients reported severe or overwhelming severity.

## A 53 year old woman

- Type 2 Diabetes Mellitus
- Hypertension
- OA mild
- ESKD Diabetic Nephropathy
- HD 3/week for 5 years

Referred to clinic because of extreme :

1. Uraemic Pruritus

2. Restless Legs Syndrome

3. Diabetic PN

3. Very poor sleep

## Gabapentin

Gabapentin commenced for all conditions at 200mg at the completion of each dialysis.

### Complete cessation of all symptoms and a markedly improved sleep

• Sleeping "the best I have for a long time."

Care of the dying patient with ESKD

ESKD patients may die :

Having been on dialysis

Never having been on dialysis

## Patients with ESKD on dialysis may die in many different ways

The family's view of the manner of dying and the care given will have a major effect on their bereavement and will echo down the years in the way they view death. A major sentinel event → Sudden death

The "negotiated withdrawal"

- George has been on dialysis for 6 months
- He is increasingly fatigued and more frail. No clear reversible cause.
- Further exacerbations of Chronic Airways Limitation.
- NSTEMI
- He presents with a gangrenous toe post amputation, worsening gangrene... discussion about further surgery.

### Nephrologist 1

"Its time to talk to him and his family about the future. We need to be honest. It is right to say to him that he could withdraw from dialysis at any time, that would be OK. We would then speak about what to expect from that point onwards including our care for he and his family."



## "If he brings it up of course I will talk to him...but only if he raises it. It should come from him."

It is important that any discussion about withdrawal is open and honest at the patient's own pace and includes the family. • What should I expect ?

• Will I suffer ?

• Will I drown in fluids ?

• How long will I live ?

Patients survive a variable time.

• If completely anuric – 7-10 days

• If still passing urine – weeks-months



## HOPE

## The preservation and maintenance of hope

### Resetting the focus of care

I agree that there is no hope for cure, but there is hope that you will be comfortable and supported throughout.



### Not be abandoned.

Always be listened to.

All symptoms treated to the best of our ability.

Will not needlessly suffer.

Treated with respect and dignity at all times. "A crisis withdrawal"



The major sentinel event occurs ...

• Family prepared for imminent death

• Dialysis ceased

Consensus that there will not be an escalation to ICU etc.



The major sentinel event occurs...

No discussion about withdrawal

• Waiting approach

• Patient dies on dialysis, the day of dialysis

# This scenario is considerably assisted if there the patient has had prior conversations with their Nephrologist

including

an Advance Care Plan

Creating and nurturing a Renal Supportive Care service St George Hospital, Sydney, Australia

Collaboration between the departments of Renal Medicine and Palliative Medicine.

### Formation of a Renal Supportive Care Clinic

March 2009

• Held every week

Held in the Renal Unit

 Palliative Care Consultant, Advanced Trainee in Renal Medicine, Renal Clinical Nurse Specialist and Renal Social Worker All patients with ESKD according to needs

Main categories of patients who are referred to the clinic :

- Patients who are on a conservative pathway
- Patients who need assistance in decision making around choosing dialysis or not
- Patients who are on dialysis and have cancer or other terminal conditions.

 Patients on dialysis who are experiencing symptoms which are difficult to manage

 Patients on dialysis who need assistance in decision making regarding withdrawing or continuing with dialysis • Focus on symptom management

### Psychosocial support

Preliminary discussions on ACP

 Access to Renal Social Worker and Renal Dietician

	f No:

Date:	/	/	

#### Questionnaire POS-S (renal) - staff version

Below is a list of symptoms which the patient may or may not have experienced. Please record how these symptoms have affected the patient in the table below. Put a tick in the box to show how you think they have affected how they have been feeling **over the last week**.

	Not at all, no effect	Slightly – but not bothered to be rid of it	Moderately – limits some activity or concentration	Severely – activities or concentration markedly affected	Overwhelmingly – unable to think of anything else
Pain					
Shortness of breath					
Weakness or lack of energy					
Nausea (feeling like you are going to be sick)					
Vomiting (being sick)					
Poor appetite					
Constipation					
Mouth problems					
Drowsiness					
Poor mobility					
Itching					
Difficulty sleeping					
Restless legs or difficulty keeping legs still					
Feeling anxious					
Feeling depressed					
Changes in skin					
Diarrhoea					
Any other symptoms?					

Which symptom has affected the patient the most? .....

Which symptom, if any, has improved the most? .....

Teaching programme for Junior Medical Staff, including Nephrology Trainees on all aspects of Renal-Supportive Care Preparation of documents :

(a) End of Life Pathway for Renal Patients

(b) Commonly used Palliative medications in the context of CKD

(c) A Renal-Palliative Care Reader

### **Annual Renal Memorial Service**

### Annual Renal Palliative Care Symposium

2010 - 2014

### **Renal Supportive Care Curriculum**

- Master classes for trainees

What are the best books and materials in this area ?

Chambers EJ, Germain M, Brown E (eds) *Supportive Care for the Renal Patient* 2<sup>nd</sup> edition, 2010 Oxford University Press Brown E, Murtagh F, Murphy E.(eds) *Kidney Disease – From Advanced Disease to Bereavement.* 2<sup>nd</sup> ed, 2012. Oxford Handbooks.

## Clinical Practice Guideline on Shared Decision-Making in the Appropriate Initiation of and Withdrawal from Dialysis

Renal Physicians Association of the USA and the American Society of Nephrology. 2010.

## Australasian Renal Supportive Care Position Statement

Endorsed by Kidney Health Australia Endorsed by the Australian and New Zealand Society of Nephrology

Nephrology 2013;18(6)

## End-of-life Framework : Recommendations for a Provincial EOL Care Strategy 2009

Work of the BC Provincial Renal Agency



A mutual acknowledgement of need-

The role of Palliative Care/supportive care in ESRD

The last decade has seen considerable levels of advocacy, attitudinal shift, research, publications and collaboration

This approach may come at multiple points in the trajectory of the disease

The core competencies in a "Palliative approach" to patients with ESKD can and should be acquired by all doctors working with these patients. Applies to patients who are being managed either with dialysis or conservatively

The family will remember forever your involvement, your demeanour and your compassion

Your patients remain your patients until their death