Side Effects of Late-Stage Kidney Disease

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Thanks to our speakers!

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- Clinical nephrologist and partner of Nephrology Associates in Santa Rosa, California
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- Lead Social Worker for Satellite’s North and East Bay regions in California
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Common physical side effects

- **Uremic pruritus** – dry & itchy skin
- **Sleep disorders**
  - Insomnia
  - Excessive sleepiness
  - Sleep apnea
  - Restless limbs
- **Fatigue, especially after dialysis**
Uremic Pruritus
Dry, itchy skin associated with kidney disease

• Associated with lower quality of life, depression, poor sleep quality, and increased mortality (death rate)
• Under-recognized by health care providers
• Poorly understood cause
• No agreement on treatment
Factors associated with uremic pruritus

- Dry skin
- High phosphorus
- Not enough dialysis
- Hyperparathyroidism
  (high parathyroid hormone or PTH)
How common is uremic pruritus?

18% of patients were very much or extremely bothered by itchy skin.

69% of medical directors underestimated the prevalence of pruritus in their facility.

Among patients nearly always or always bothered by itching, 18% used no treatment for pruritus.

CONCLUSION
Many patients' lives could be improved by increased awareness and treatment of CKD-associated pruritus.

Dry Skin: Practical Tips

• Every day use of skin moisturizers particularly after bathing

• Use of mild cleansers
  – Traditional soaps can irritate dry skin
  – Synthetic detergent cleansers (e.g., Dove, Olay®, Cetaphil®) are preferred

• Avoid washing skin too much or too roughly
Treatment of Pruritus

• 60% of doctors ranked **phosphorus control** as the most important treatment
  – Phosphorus is not effectively removed by dialysis, so it needs to be restricted in the diet – talk to your dietician
  – Phosphorus binders can help eliminate phosphorus – take them with meals

• 15% of doctors ranked **increasing dialysis dose** as the most important treatment
Medication Treatment

**Anti-histamines** (topical, oral, prescription, over-the-counter) account for > 90% of first-line therapy.

Other therapies: *gabapentin,* pregabalin, phototherapy, hemodialysis modifications, and many other systemic and topical treatments.
Sleep Disorders

Up to 44% of renal patients report problems with sleep

Under-recognized by renal healthcare providers

- Insomnia
- Excessive sleepiness
- Sleep apnea
- Restless legs syndrome (RLS) and Periodic limb movement disorder (PLM)
Insomnia

• Reported in 19%-71% of ESRD patients on hemodialysis (HD) or peritoneal dialysis (PD)

• Significant source of stress for patients and associated with increased inflammation and mortality (death rate)

• Contributors to insomnia:
  – Sleep disorders: RLS/PLM, Sleep apnea
  – Metabolic factors: uremia, anemia, hypercalcemia, bone pain, pruritus
  – Poor sleep habits: napping during daytime dialysis, medications
Treatment of Insomnia in ESRD

- **Sleep habits** – limit daytime napping, consistent sleep-wake times, exposure to sunlight & darkness, limiting screen-time before bed

- **Medications**: melatonin, sleeping aids (may be habit-forming)
  - Trouble sleeping and restless legs were among the most common symptoms in uremic patients and improved notably after starting PD.
  - Patients reported less insomnia after kidney transplant compared with waitlisted patients on dialysis.

Excessive Sleepiness

- Reported by more than HALF of all HD and PD patients
- **Factors:** Restless legs/PLM, sleep apnea, undertreated kidney disease or uremia (associated with higher pre-dialysis BUN)
- In one study, daytime sleepiness was reduced by switching to nocturnal HD

Sleep Apnea

- Both **obstructive** (periodic closure of airway) and **central** (periodic loss of drive to breathe) sleep apnea occur in ESRD patients.
- Sleep apnea increases frequency of high blood pressure, coronary artery disease, cerebrovascular disease and inflammatory markers; also may increase risk of mortality in patients with kidney failure
- **Nocturnal HD** may reduce sleep apnea, but may increase sleep fragmentation (waking up during the night)
- **Fluid removal with PD** improves sleep apnea symptoms

Obstructive sleep apnea treated with CPAP mask
Restless Legs Syndrome (RLS)  
Periodic Limb Movement Disorder (PLM)  

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<tr>
<th>RLS</th>
<th>PLM</th>
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<td>Unpleasant sensation in legs with an urge to move them, worse during inactivity, relieved by movement</td>
<td>Jerking movement of legs during sleep that can not be controlled (can occur in absence of RLS)</td>
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- Prevalence of RLS in HD patients: 14-57%, compared to 5-15% in general population
- Prevalence in ESRD: >50%, reduced to 5% after kidney transplant (similar to general population)

- Both are related to poor sleep quality, impaired health-related quality of life and depression.
- May improve with kidney transplant, more frequent (short, daily) dialysis, moderate exercise, and fixing iron deficiency
FREEDOM Trial:
Significant decrease in RLS symptoms with short daily HD

Jaber et al. CJASN 6:1049, 2011.
Fatigue or “Why am I so tired?”

Fatigue goes by many names:
- Feeling tired or feeling sleepy
- Low energy
- Dialysis “kicks my butt”
- Can be confused with or made worse by:
  - Depression
  - Under-dialysis or untreated chronic kidney disease
  - Poor strength/conditioning, physical inactivity
  - Poor sleep
  - Poor diet
Fatigue – Dialysis Recovery Times

The Intermittent Dialysis See-Saw

UREMIC TOXINS

SUNDAY

SUNDAY
How to Beat Fatigue

- Consider a change in dialysis schedule or type of dialysis
- Discuss anemia management or symptoms of depression with your doctor
- Eat small, healthy portions of food more often
- Get moving – walking, water exercise, stationary bike
- Get stronger – resistance training using body weight, bands, or small weights
- Get good sleep
- Reduce caffeine, alcohol
- Reduce stress
Finding Support and Resources

Diane Ruddell, LCSW
Who is on your team?
(It’s larger than you think)

• Nephrologist, nurse, dietician, social worker
• Family (biological and other)
• Fellow patients (peer support), faith community
• Mental health professionals, support group
Be your own advocate!

- Prepare for visits
- Write questions down ahead of time
- Bring a support person with you
- Keep a notebook (visit notes, track labs, important contacts)
Emotional Support
(Getting help when you need it)

- Depression and anxiety symptoms are common with kidney patients; it’s NORMAL to be impacted emotionally by your disease
- Physical effects of kidney disease can impact patients emotionally
- Self care – what does it look like for you?
- Getting help – reaching out to “your team” and ADDING to your team when needed
Resources

- RSNhope.org (Renal Support Network)
- kidneyschool.org (Interactive learning modules on range of topics)
- AAKP.org (American Association of Kidney patients)
- Kidneyfund.org (American Kidney Fund)
- Kidney.org (National Kidney Foundation)
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• Why diversity in clinical trials participants matters
• The benefits clinical trials offer for science and can offer for your health

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