



Dialysis: the long case

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The case – SD

1. What significant things have been omitted from the history ?
2. Physical findings
 - 70 RTA; mitral regurg murmur; JVP normal; chest clear; no edema; BP 160/100
 - Abdo – scars from surgery; large L kidney palpable
 - Not anemic;
 - thin
 - Neuro normal – cranial nerves normal; no peripheral neuropathy
 - Peripheral pulses normal; AVF – good thrill & bruit
3. What are the key management issues?



Management issues

1. The impact of ESKD on her life
 - Work; travel; loss; family dynamics; QOL
2. Can she be transplanted?
3. Hypertension
4. Atrial flutter
5. Headaches – berry aneurysms
6. Address standard HD issues
 - Dialysis adequacy & AVF
 - BSL & exercise capacity
 - Calcium; Phosphate & PTH
 - Anemia & Fe management
 - Vaccinations



The 10 secrets to success:

1. **Primary renal disease and associations**
2. **General health & co-morbidity**
3. **Dialysis technique, complications, adequacy**
4. **Cardiovascular**
5. **Metabolic syndrome**
6. **Bones and Calcium metabolism**
7. **Anemia and iron management**
8. **Vaccinations**
9. **Transplant list**
10. **QOL, symptom burden, survival and social impact**



I. Primary disease and associations

1. Diabetes

1. Vision; neuropathy; autonomic; peripheral vascular; coronary; stroke

2. Glomerulonephritis

1. IgA; FSGS; systemic disorder e.g. SLE
 1. Ask immunosuppression & complications

3. Polycystic kidney disease

1. Autosomal dominant – family members screening
2. Berry aneurysms; MVP; liver & other cysts; diverticulae; UTI; calculi

4. Reflux nephropathy

1. UTI; family history

5. Hypertension / ischemic nephrosclerosis

1. Treatments; side-effects



Hemodialysis

- In- centre
- Satellite
- Home
 - Includes nocturnal



Peritoneal Dialysis

1. CAPD
 1. Tidal
2. APD
 1. Nocturnal
 2. Day dwell - Icodextrin



2. General Health

- Apart from standard medical history, target:
 - Nausea;
 - dietary restrictions – Na, K, Phosphate?
 - Fluid restriction
 - Is there still a Urine output?
 - Energy; walking distance; SOB
 - Headaches; neuropathy symptoms
 - Bone or muscle pain / weakness
 - Sleep?
- Medications
 - Changes; side-effects



3. Dialysis itself - HD

- Hours per week
- AVF / AVG
 - Revisions? Cannulation?
- Blood flows; Venous pressures
- Dry weight; Pre-dialysis BP
- Cramps, hypotension
- 'Wash out'

- Adequacy tests? – Kt/V; RRF; urea & creatinine; K; Hb; Fluid status

- Best adequacy test – how do you feel?



3. Dialysis itself - PD

- Hours per week
- PD catheter
 - Revisions?
- Dry weight; Daily BP
- Drain volumes; alarms
- Peritonitis & ESI

- Adequacy tests? – Kt/V; RRF; urea & creatinine; K; Hb; Fluid status

- Best adequacy test – how do you feel?



4. Cardiovascular

- Prior coronary disease?
 - ? Full medical therapy – often ignored
- Lipids?
 - Only if established vascular disease
- Hypertension
 - Largely Na & water
 - medications
- PVD / mapping / preservation of vessels
- Cerebrovascular
- Smoking?



5. Metabolic

- BSL checked?
- Don't measure insulin
- Diabetic?
- Weight over time
 - Exercise?



6. Bones & Calcium

- **Phosphate**
 - Caltrate; renagel (sevelamer); lanthanum; Mg; Aluminium hydroxide
- **Calcium**
 - Control phosphate
 - Calcitriol
- **PTH (and ALP)**
 - phosphate control
 - Calcitriol
 - Cinacalcet (Sensipar)
- **25-OH Vit D**
 - Vit D?
- BMD no use
- Generally no imaging unless an event



7. Anemia & Fe management

- Hb (100-120)
- Use of ESA drugs
 - Frequency & mode
 - thrombosis & hypertension
- Fe infusions
 - HD vs PD
 - Sat >20%; Ferritin 200-800
 - Complications?



8. Vaccinations

- Hep B Vax
- Fluvax yearly

- Tetanus
- Pneumococcus
- HPV – young women & men

- ALL respond less well than general population



9. Transplant list workup

- On active transplant list?
 - How long? Antibodies?
 - Live donors?
 - If not, why not? Patient choice?
- Assessment
 - Cardiac
 - Infections
 - Malignancy
 - Immunological
 - General health
 - Psychology



10. Life on dialysis

1. Change in QOL – explore; including work and self worth
2. Depression?
3. Impact on partner – including sexual function
4. Family impact & support – esp. Impact on children
5. Is there a residual symptom burden?
 - Do you feel well overall?
 - If not, what is stopping you feeling that way?
6. Is transplantation on the horizon?
7. Thoughts on prognosis?



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