CHRONIC KIDNEY DISEASE AND END STAGE RENAL DISEASE - Lecture Outline

1. CKD definition and epidemiology
2. CKD Staging system – KDIGO
3. Calculation of estimated GFR – MDRD formula
4. Prevalence of CKD in NHANES participants
5. Life expectancy based on presence or absence of CKD
6. Major causes of CKD: Diabetes mellitus, hypertension account for nearly 75% of all cases

4. CKD snapshots
   a. Diabetic nephropathy
   b. Hypertensive nephropathy
   c. Glomerular diseases
      i. Glomerulonephritis
         1. IgA nephropathy
         2. Post-infectious glomerulonephritis
         3. Membranoproliferative glomerulonephritis
         4. Lupus nephritis
         5. Rapidly progressive glomerulonephritis
      ii. Nephrotic syndrome
         1. Minimal change disease
         2. Focal segmental glomerulosclerosis
         3. Membranous nephropathy
4. Amyloidosis

iii. Miscellaneous: cholesterol atheroembolic disease
d. Polycystic kidney disease

5. CKD management

Consequences of renal failure
a. Stage II/III management: “conservative renoprotection”
b. Stage IV management
i. Nephrology referral first step
ii. Hypertension control
iii. Proteinuria reduction
iv. Management of mineral/bone disorders

1. Management of hyperparathyroidism
v. Management of anemia
vi. Management of metabolic acidosis

6. ESRD: Renal replacement therapy options

7. Trends in Kidney Transplantation

8. Dialysis
a. Description of procedure
b. Principal Mechanisms in HD
c. Principal Mechanisms in PD

9. Sequelae of ESRD