

Progression of Training and Skills Nephrology

Preamble

As the population ages and other at-risk populations increase, end stage renal disease incidence is sharply on the rise. The U.S. incidence is the highest in the world, 210 per million. Diabetes accounts for more than 40% of all new cases and hypertension for 26%. Disease processes leading most frequently to chronic renal disease - hypertension, diabetes and senescence - dominate family medicine practice.

Goals

- Evaluation and management of patients with fluid and electrolyte disorders and understanding of acid base pathophysiology and management
- Familiarity with mechanisms, clinical manifestations, and diagnostic strategies for patients with acute and chronic diseases of the kidney
- Understanding of renoprotective strategies
- Recognition of indications for timely nephrology subspecialist referral
- Familiarity with principles, indications, and complications of acute and chronic hemo- and peritoneal dialysis, renal biopsy and vascular access placement

Objectives

- Demonstrates ability to document an accurate and complete history from patient, caretaker or outside resource
- Understands risk factors for ARF, nephrotoxic drugs and etiology of CRF
- Demonstrates ability to perform a routine exam for volume status
- Assesses vascular access for appropriate bruit and signs of infection
- Initiates diagnostic testing for:
 - sodium disorders
 - hypokalemia and hyperkalemia
 - acute renal failure
 - calcium and phosphate disorders
 - metabolic acidosis and alkalosis
- Identifies reasons for urgent dialysis
- Applies relevant clinical and basic science knowledge to:
 - acid base disorders
 - fluid and electrolyte disorders
 - acute and chronic renal failure
 - indications for emergent dialysis
- Interprets results of urinalysis, urine culture and sensitivity
- Understands the indications for renal ultrasound and catheter placement
- Effectively establishes rapport with patients and families and communicates complex issues understandably

Goals and objectives are achieved through a combination of structured inpatient/ outpatient experience, together with didactic instruction.

[Revised and approved at the Faculty Meeting April 3, 2012]

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Suggested reading:

[Chronic kidney disease: detection and evaluation](#)

[Diabetic nephropathy--the family physician's role](#)

[Diagnosis and management of acute interstitial nephritis](#)

[Disorders in potassium and acid-base balance](#)

[Hyperkalemia](#)

[Management of acute renal failure](#)

[Management of hyponatremia](#)

[Nephrotic syndrome in adults: diagnosis and management](#)

[Treatment and prevention of kidney stones: an update](#)