Chapter 28:

LEARNING OBJECTIVES

On completion of the chapter, the reader will be able to:

1. Identify patients at high risk of developing acute kidney injury (AKI).
2. Compare and contrast the three main classification systems for AKI: (a) Risk, Injury, Failure, Loss of Kidney Function, and End-Stage Kidney Disease (RIFLE); (b) Acute Kidney Injury Network (AKIN); and (c) Kidney Disease: Improving Global Outcomes (KDIGO).
3. Describe the pathophysiology and etiology of prerenal, intrinsic, and postrenal AKI.
4. Determine the type of AKI a patient is experiencing from an assessment of the patient’s history, physical examination findings, and laboratory results.
5. Discuss the pros and cons of conventional versus novel biomarkers of kidney function as they pertain to a patient with AKI.
6. Propose (non)pharmacologic strategies to decrease the risk of contrast-induced nephropathy.
7. Distinguish effective versus ineffective (non)pharmacologic strategies for prevention of AKI based on evidence-based literature and KDIGO guidelines.
8. Assess the impact of the various supportive therapies during the course of AKI.
9. Provide patient-specific monitoring recommendations for a patient with established AKI.
10. Compare and contrast intermittent versus continuous renal replacement therapies.
11. Discuss pros and cons of renal replacement therapy in the prevention and management of AKI.
12. Devise a strategy to manage diuretic resistance in a volume-overloaded patient with AKI.
13. Interpret the most common electrolyte disturbances in patients with AKI.
14. Discuss the pharmacokinetic alterations that can accompany AKI.
15. Monitor and assess the safety and efficacy of the therapeutic plan for a patient with AKI.
16. Discuss key considerations for adjusting medication therapy in the setting of AKI versus chronic kidney disease, including the influence of renal replacement therapy.