NEPHROLOGY II

Learning Objectives for Bone Metabolism and Disease in Chronic Kidney Disease

1. Analyze the alterations in phosphorus, calcium, vitamin D, and parathyroid hormone regulation that occur in patients with chronic kidney disease (CKD).
2. Classify the type of bone disease that occurs in patients with CKD based on the evaluation of biochemical markers.
3. Construct a therapeutic plan to monitor bone metabolism and the effects of treatment that is individualized for the stage of CKD.
4. Assess the role of various treatment options such as phosphorus restriction, phosphate binders, calcium supplements, vitamin D agents, and calcimimetics based on the pathophysiology of the disease state.
5. Devise a therapeutic plan for a specific patient with alterations of phosphorus, calcium, vitamin D, and intact parathyroid hormone regulation.
6. Evaluate therapeutic non-adherence as a potential cause of treatment failure.
7. Devise strategies to increase patient adherence and optimize pharmaceutical care.

Learning Objectives for Contrast-Induced Nephropathy

1. Evaluate patients for risk of contrast-induced nephropathy (CIN).
2. Explain how drugs can prevent CIN based on pathophysiology and pharmacology.
3. Develop protocols to prevent CIN.
4. Argue for the use or nonuse of nonpharmacological and pharmacological therapies to prevent CIN.
5. Apply knowledge of non-pharmacological and pharmacological therapies for prevention of CIN to specific patients.
6. Evaluate CIN prevention protocols for effectiveness.
7. Distinguish between proven and unproven therapies for CIN prevention by evaluation of the literature.

Learning Objectives for Drug Issues in Renal Replacement Therapies

1. Compare and contrast renal replacement therapies (RRTs) with respect to operational characteristics, solution requirements, and complications.
2. Devise a therapeutic plan to manage potential complications of RRTs.
3. Apply pharmacokinetic principles to determine the likelihood of drug removal by RRTs.
4. Compute appropriate empiric drug dosing regimens for patients receiving RRTs.
5. Design appropriate therapeutic drug monitoring strategies for patients receiving RRTs.