

## **Antihypertensives**

## **Chapter 17**

- I. Physiology Background
  - A. Hypertension
  - B. Levels of control
- II. Vascular resistance modifiers
  - A. Physiology pathway
    - 1. angiotensinogen
    - 2. juxtaglomerular cells
    - 3. renin
    - 4. angiotensin I
    - 5. ACE
    - 6. angiotensin II
      - a. actions
    - 7. AT<sub>1</sub>
    - 8. Ca<sup>++</sup> channels
  - B. Renin inhibitor
    - 1. Aliskiren (Tekturna)
  - C. ACE inhibitors
    - 1. action
    - 2. pharmacokinetics
    - 3. adverse effects
    - 4. drugs
      - 1) Captopril (Capoten)
        - a. Lisinopril (Prinivil, Zestril)
        - b. Enalapril (Vasotec)
        - c. Quinapril (Accupril)
  - D. ARBs
    - a. Losartan (Cozaar)
    - b. Valsartan (Diovan)
  - E. Ca<sup>++</sup> channel blockers
    - 1. Classes
      - 1) Verapamil (Calan, Isoprin, Verelan)
      - 2) Diltiazem (Cardizem, Cartia, Dilacor)
      - 3) Amlodipine (Norvasc)
    - 2. Actions
- III. Cardiac output modification
  - A. Background
  - B. Adrenergic receptors
    - 1. classes
  - C. α-blockers
  - D. β-andrenoceptor-blocking agents
    - a. Propranolol (Inderal, Innopran)
    - b. cardio selective
      - 1) Atenolol (Tenormin)
      - 2) Metoprolol (Lopressor, Toprol-XL)
      - 3) Nebivolol (Bystolic)
  - 1. Adverse effects