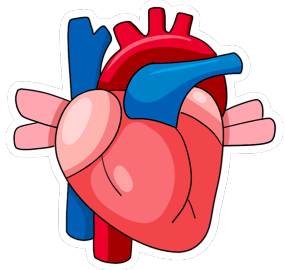




By H.T



Summary

Key Concepts

Blood Pressure

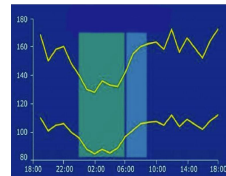
- **Definition:** The force exerted by circulating blood on artery walls.
- **Measurements:**
- **Systolic Pressure:** Highest pressure during heart contraction.
- **Diastolic Pressure:** Lowest pressure during heart rest.
- **Normal Range:** 120/80 mmHg.
- **Formula:** Blood pressure = Cardiac Output (CO) x Peripheral Vascular Resistance (PVR).

Hypertension

- **Definition:** Elevated arterial blood pressure above 130/80 mmHg.
- **Diagnosis Criteria:** Requires multiple readings over time, considering factors like stress and circadian rhythm.

Classification of Hypertension

- **Primary (Essential) Hypertension:**
- **Prevalence:** 90% of cases with no identifiable cause.
- **Contributors:** Genetics, stress, diet (high salt).
- **Secondary Hypertension:** Caused by identifiable medical conditions (e.g., kidney disorders).



Risk Factors

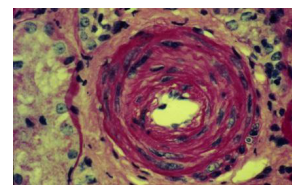
- **Genetics:** Family history increases susceptibility.
- **Diet:** High salt intake leads to increased blood volume and pressure.
- **Lifestyle:** Smoking increases blood pressure directly and indirectly (tissue hypoxia).

Clinical Presentation

- Often asymptomatic; termed a "silent killer."
- Symptoms might include headaches, often misattributed to other causes.

Complications of Hypertension

- **End-Organ Damage:** Chronic hypertension can lead to:
- Decreased blood vessel diameter.
- Cardiac hypertrophy and heart failure.
- Major risks include heart attack, stroke, and renal failure.



Treatment Approaches

- **Lifestyle Modifications:** Diet changes, smoking cessation, stress management, and exercise.
- **Drug Treatments:** Multiple classes of antihypertensive drugs, including:
 - Diuretics
 - Calcium channel blockers
 - Beta blockers
 - ACE inhibitors
 - ARBs

Drug Selection Criteria

- **Comorbidities:** Consider underlying conditions.
- **Ethnicity:** Responses to medications can vary (e.g., diuretics for African Americans).

- **Severity of Hypertension:** Treatment intensity increases with severity.
- **Pregnancy Considerations:** Certain drugs are contraindicated.
- **Patient Compliance:** Aim to minimize polypharmacy.

Summary & Key Takeaways

- Blood pressure is crucial for understanding hypertension, which requires careful diagnosis and monitoring.
- Treatment can involve lifestyle changes and various medications tailored to individual patient profiles.
- Understanding risk factors and complications aids in effective management and prevention strategies.