Principles of General Medicine

1st Course
Lecture : 7

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<u>Introduction</u>

➤ General Medicine focuses on the diagnosis, treatment, and prevention of adult diseases.

➤ It integrates knowledge from anatomy, physiology, pathology, and pharmacology to manage patients.

<u>Objectives</u>

➢ By the end of this lecture, you should be able to:

1. Define the scope of general medicine.
2. Recognize the role of the physician and anesthesia technologist.
3. Understand diagnosis and treatment principles.

Medical Approach

1. History taking
2. Physical examination
3. Investigations
4. Diagnosis
5. Management and follow-up.

History Taking

➤ Key components include:

1. Chief complaint

2. Present illness

3. Past medical and surgical history

4. Drug and allergy history

5. Family and social history

Physical Examination

➢ **A systematic assessment includes:**

1. **General appearance**

2. **Vital signs:** BP, pulse, temperature, respiratory rate

3. **System examination:** CVS, respiratory, abdomen, CNS

Vital Signs

1. **Blood pressure:** 120/80 mmHg (normal)

2. **Pulse:** 60–100 bpm

3. **Respiratory rate:** 12–20 breaths/min

4. **Temperature:** 36.5–37.5 °C

Investigations

➢ **Types:**

• **Laboratory tests:**

• CBC, renal and liver function, electrolytes

• **Imaging:**

• X-ray, CT, MRI, ultrasound

• **Special tests:**

• ECG, echocardiography, endoscopy

Diagnosis

● Diagnosis is based on correlation between clinical findings and investigations.

Types:

1. *Provisional diagnosis*

2. *Differential diagnosis*

3. *Final diagnosis*

Treatment Principles

➢ Treatment involves:

1. Medical therapy

2. Surgical intervention

3. Lifestyle modification

4. Rehabilitation and patient education

Common Medical Emergencies

1. **Shock** (hypovolemic, septic, anaphylactic)

2. **Myocardial infarction (MI)**

3. **Stroke (CVA)**

4. **Respiratory failure (RF)**

5. **Diabetic ketoacidosis (DKA)**

Shock Overview

- A state of inadequate tissue perfusion.

Main types:

1. Hypovolemic

2. Cardiogenic

3. Distributive (Septic, Anaphylactic, Neurogenic)

4. Obstructive

Cardiovascular Diseases

➤ **Common examples:**

1. Hypertension

2. Ischemic heart disease

3. Heart failure

   Basic management:

oxygen, monitoring, fluid balance, medications.

Respiratory Diseases

1. **Asthma**
2. **COPD**
3. **Pneumonia**

- **Management:**

oxygen, bronchodilators, antibiotics.

Neurological Disorders

1. **Stroke**

2. **Epilepsy**

3. **Meningitis**

   Focus on airway safety, consciousness level (GCS), and monitoring.

Endocrine Disorders

1. **Diabetes mellitus**

2. **Thyroid disorders**

   Monitor glucose, fluid balance, and signs of hypoglycemia or ketoacidosis.

Renal and Electrolyte Disorders

1. **Acute kidney injury (AKI)**

2. **Chronic renal failure (CKD)**

3. **Electrolyte imbalances (Na^+, K^+, Ca^{2+})**

➤ *Anesthesia staff should monitor urine output and fluid therapy carefully.*

Infectious Diseases

➢ **Principles:**

1. Prevention

2. Early diagnosis

3. Isolation, and

4. Antimicrobial therapy.

Examples: sepsis, hepatitis, tuberculosis.

Patient Safety Principles

1. Accurate identification and documentation

2. Infection control

3. Safe drug administration

4. Equipment checks before use

Ethical & Professional Conduct

1. Respect patient confidentiality

2. Obtain informed consent

3. Communicate effectively

4. Work collaboratively in healthcare teams

Role of the Anesthesia Technologist

1. Assist in patient assessment

2. Prepare and maintain equipment

3. Monitor vital signs during and after anesthesia

4. Support in emergency response

<u>Summary</u>

1.   General Medicine provides the foundation for clinical decision-making.

2.   Anesthesia technologists must understand disease mechanisms to ensure patient safety and effective perioperative care.