



***SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS KALVI NAGAR, COIMBATORE-35
AFFILIATED TO Dr MGR UNIVERSITY, CHENNAI***

***DEPARTMENT OF OPERATION THEATRE AND
ANAESTHESIA TECHNOLOGY***

1st YEAR

SUBJECT: PATHOLOGY

TOPIC: INTRODUCTION TO PATHOLOGY



INTRODUCTION TO PATHOLOGY:

WHAT IS PATHOLOGY:

- Pathology is the study of disease by scientific methods
- The word pathology came from latin words pathos & logos
- Pathos means disease and logos means study, therefore pathology is scientific study of disease
- It focuses on the structural, biochemical and functional changes in cells, tissues and organs in disease.



BRANCHES OF PATHOLOGY:

- General Pathology
- Systemic Pathology
- General Pathology is concerned with the basic reactions of cells and tissues to abnormal stimuli that underlie all diseases. Eg:Necrosis,Neoplasma,Inflammation.
- Systemic Pathology examines the specific responses of specialized organs and tissues to more or less well defined stimuli Eg: Breast,Kidney,Heart.



Anatomic Pathology:

- Studies the effect of disease on the structure of body organs, both as whole (grossly) and microscopically
- Surgical specimens, autopsies, microscopic slides of tissue.

Forensic Pathology:

- Involves application of pathological methods in investigations of a crime and of sudden suspicious or unexplained deaths.
- Autopsies, microscopic slides of tissue samples, toxicology



Cytopathology:

- Examines cells from various body sites to determine the cause or the nature of disease
- Exfoliative cytology and fine needle aspiration cytology

Haematology:

- Deals with the disease of blood and blood related components

Microbiology:

- The study of disease causing micro organisms
- Micro organisms include virus, bacteria, fungi, parasites.



Chemical Pathology:

- Involves the biochemical investigations of bodily fluids such as blood,urine,csf.

Immunology:

- Study of immune responses associated with disease
- Includes immunosuppressive disorders,hypersensitivity disease & autoimmune disorders.



Molecular Pathology:

- It is an emerging discipline within pathology which is focused in the study and diagnosis of disease through the examination of molecules within organs

DISEASE PROCESS:

Etiology - pathogenesis - Molecular & Morphological changes - Clinical Manifestations .



Etiology:

- Etiology of a disease means the cause of the disease
- There are 2 major classes of etiologic factors
.Genetic(Primary) & Acquired(Secondary)
- When the cause of a particular disease is not known it is referred to as being idiopathic.

Pathogenesis:

- Pathogenesis means the mechanism through which the cause operates to produce the pathological and clinical manifestations or structural and functional abnormalities.
- The incubation period is the time between exposure to an infectious agent and onset of symptoms.



Morphological Changes:

- The morphological changes refers to the structural alterations in cells or tissues that occur following the pathogenetic mechanisms.
- The structural changes in the organ can be seen with the naked eye or they may only be seen under the microscope.

Clinical Manifestations:

- The morphologic changes in the organ influence the normal function of the organ
- By doing so they determine the clinical features course and prognosis of the disease.



THANK YOU