Histopathology

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Lecture1 Histopathology Khamael Al-Abrahemi

alterations The study of the anatomical ,chemical , and physiological alterations in an organ as organ as the result of diseases.

Pathology is subdivided in to several fields. 1-General pathology 2- Special pathology 3- Experimental pathology 4- post –mortem pathology(Morbid anatomy) 5- Microscopic pathology (cellular pathology or photo pathology) 6- Ultra structure pathology 7-physiology pathology 8- chemical pathology 9- Macroscopic or gross pathology 10- clinical pathology 11- Necropsy,post –mortem examination or, autopsy.

Necropsy= for animal Autopsy= for Humen

What is the disease?

It is the "State in which an individual exhibits an anatomical ,physiological or biochemical deviation from the normal"

Disease may be defined as:-

An abnormal alteration of structure or function in any part of the body.

Classification of diseases:-

1-Developmental- genetic , congenital. 2-Acquired 3- Inflammatory – Trauma , infections . 4- Neoplastic – tumers, cancer 5- Degeneration – ageing 6- Metabolic 7- Iatrogenic : Drug induced.

The scope of pathology 1- the core of pathology:- the four aspects of adisease process that process that form the core of pathology :- 1- Etiology :causes of the disease 2- pathogenesis : the mechanisms of its development 3- Morphologic changes :- the structural alteration induced in the cells and organs of the body. 4- Clinical significance:the functional consequences of morphologic changes.

Branches of pathology :- 1- General patgology 2- systematic pathology 3- Gross pathology 4- cellular pathology 5- Surgical pathology 6- clinical pathology 7- Immunopathology

Techniques of pathology

1-Human pathology a- Autopsy :- forensic pathology b- Biobsy :- surgical or diagnostic pathology 2- cytology: smear , fine needle aspiration. 3- Experimental pathology a Animal experiment : animal model b- tissue and cell culture .

Etiology

What is the cause? 1- Environmental agents 2-physical 3- chemical 4- Nutritional 5- Infection 6- Immunological7- psychological.

Morphological :-structural changes

Tumer in acancer, ulcer in an infection, Atrophy in dementia.

**Observation and new technique of morphology**

Size ,shape, weight, color ,consistency, surface, edge, section.

Stain used in pathology

1-Haematoxylin and eosin stain :-Haematoxylin affinity for nuclear chromatin blue discoloration while eosin for protien in cytoplasm pink discoloration.

2-periodic acid scift (PAS) glycogen, basement membrane, fungi, parasites 3- stain for micro organisms : Gram stain and zeihl – neelsson stain. 4- Amyloid stain : congo red amyloid 5- Reticulin stain …… reticular fiber( type 111collagen in the connective tissue ) and basment membrane (type 1v collagen and laminin) used in tumer pathology 6- Giemasa stain…. Lymph or reticular elements.