

HISTOPATHOLOGY

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HISTORY OF PATHOLOGY



Sawa University

College of health and medical techniques

Department of Medical Laboratories

Third Stage

جامعة ساوة الاهلية

كلية التقنيات الصحية والطبية

قسم تقنيات المختبرات الطبية

المرحلة الثالثة

محاضرة رقم 2

Lecture No. 2

الجانب النظري

Theoretical

تدريسي المادة : م.د. قاسم عباس محمد

OBJECTIVE

- ☐ **Learn about the historical origins and development of pathology.**
- ☐ **Learn about some of the scientists who founded pathology.**

HISTORICAL ASPECTS OF PATHOLOGY

- ❑ The roots of pathology can be traced back to the earliest use of the scientific method in medicine, which first emerged during the Islamic Golden Age in the Middle East and later in the Italian Renaissance of Western Europe

- The Greek culture had a profound effect on the scientific approach to medicine.
- Greek physicians elucidate/explain; show/ the principles of exact and careful clinical observations.
- However, they did not deal with the nature or the changes that occurred subsequent to disease.

Hippocrates (460 – 375)

- A Greek physician introduced the **humoral theory** of disease. He
 - recognized 4 humors or fluids in the body
 1. Blood which came from the heart;
 2. Phlegm which came from the brain;
 3. Yellow bile which came from the liver; and
 4. Black bile which came from the spleen.
- Hippocrates is considered to be the father of medicine.

Aristotle (384 – 323)

- A Greek philosopher was the originator of modern anatomy and physiology. Also, he is considered to be the father of Zoology.
- Aristotle dissected many animals, carried out experiments in physiology, and studied the growth and development of animal life (human autopsy examinations were forbidden during this period).

ANTONY VAN LEEUWENHOEK

(1632 -1723)

- He received no higher education or university degrees and knew no language other than his native Dutch.
- He was the first to show that the microscope had practical importance in the study of tissues and other small objects.
- He is not credited with discovering the microscope.

GIOVANNI MORGAGNI

(1682-1771)

- An Italian recognized as one of the earliest pathologists and **the originator of modern pathology**.
- He was the first to correlate pathologic changes in the dead individual with clinical signs and symptoms shown by the individual during life.

MARIE FRANCOIS XAVIER BICHAT

(1771-1801)

- A Frenchman, is credited with establishing the foundation for the study of histology, even though most of his work was done by physical and chemical methods (he did not possess a microscope).
- Bichat presented a new concept of anatomy and showed that the body was composed of twenty-one tissues (vascular, osseous, muscular, etc).
- He is considered to be the Father of Histology

RUDOLPH VIRCHOW

(1821- 1902)

- A known as the Father of cellular Pathology.
- He invented and explained many of the terms and concepts used today in pathology.(amyloidosis, fatty degeneration, etc.)
- In addition, he started publication of “virchow’s Archives,” a journal that has been in continuous publication since 1847.
- This is considered to be one of the most complete works of pathology in existence

Julius Cohnheim (1839–1884)

- Applied histology to study inflammation.
- Introduced **frozen section technique** (still used today).

Modern experimental pathology

- ❑ As new research techniques, such as electron microscopy, immunohistochemistry, and molecular biology have expanded the means by which biomedical scientists can study disease.
- ❑ The definition and boundaries of investigative pathology have become less distinct.
- ❑ In the broadest sense, nearly all research which links manifestations of disease to identifiable processes in cells, tissues, or organs can be considered experimental pathology

References

1. Von Staden, H (1992). ["The discovery of the body: human dissection and its cultural contexts in ancient Greece"](#). The Yale Journal of Biology and Medicine. **65** (3): 223–41. [PMC 2589595](#). [PMID 1285450](#).
2. Toby E. Huff (2003), The Rise of Early Modern Science: Islam, China, and the West, p. 54, 246-247, 216-218. [Cambridge University Press, ISBN 0-521-52994-8](#).

Any questions?

*Thank
You*