

## Chapter 4

# SURGICAL PATHOLOGY AT THE COLLEGE OF PHYSICIANS AND SURGEONS OF COLUMBIA UNIVERSITY

Raffaele Lattes, M.D.

### INTRODUCTION

To establish the chronology of the onset and evolution of the specialty that we now call surgical pathology, it is necessary to remember that the same term was used in Europe, beginning in the second half of the 19th century, to refer to the systematic teaching by university surgeons of the nature, diagnosis, and treatment of surgical diseases (figs. 4-1, 4-2). There were clinical departments, institutes, and chairs of surgical pathology. Some departments of surgery at universities had their own laboratories equipped for histology, blood counts, and bacteriology. These were used by young surgeons to conduct projects in experimental surgery, and were also often employed for the histological diagnosis of routine human surgical specimens. This was a result of the need felt by the surgery chairman to assert the complete independence of his department from faculty members of other departments, and the well-known lack of interest on the part of the then professors of pathology (referred to by Dr. George Humphreys as the followers of "the stiff necked Germanic Pathology of Virchow" [10]) to do anything less than a complete autopsy. These small research and diagnostic laboratories, incorporated in clinical departments of surgery, were the seeds around which the modern specialty of surgical pathology would later crystallize.

The beginning of the 20th century had witnessed the rapid development of what was to become the era of modern surgery. This was triggered by the discoveries of Pasteur and Lister, which led to the understanding of the nature and mechanism of infections and the possible methods of preventing and controlling them (asepsis and antisepsis). This, together with the progress of anesthesia and the beginning of the understanding of the physiological changes in the surgical patient, made it possible for the surgeon to start undertaking elective operations rather than limiting surgery to emergencies (trauma, perforations of viscera, abscesses, etc.). It was in

this atmosphere that, out of necessity, the specialty that we now call surgical pathology was born. The surgeons wanted to know the nature of the lesions (tumors, granulomas, etc.) that they removed or biopsied in their patients but the pathologists of the old school, influenced by the famous European professors from Germany and Austria, showed little

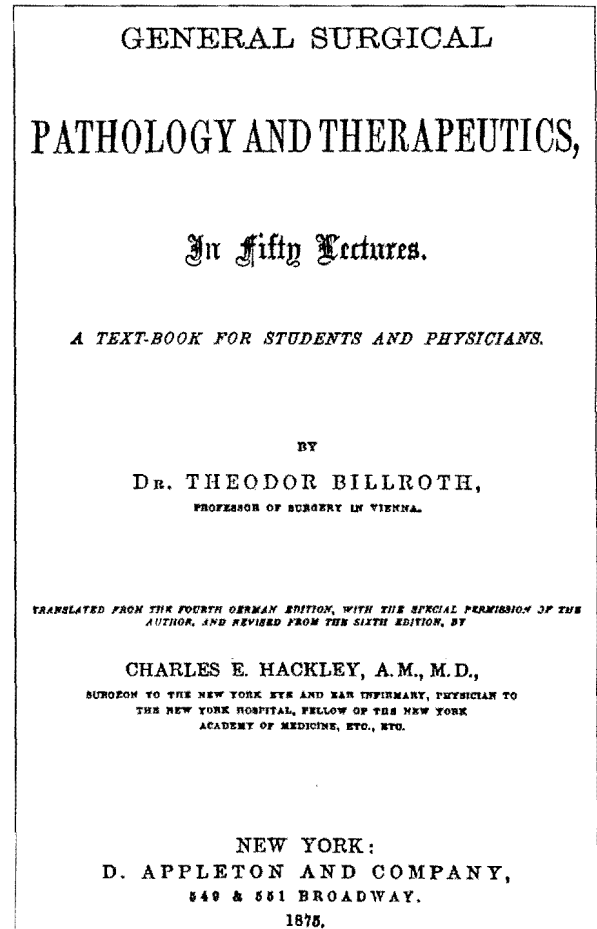


Figure 4-1  
EARLY SURGICAL PATHOLOGY TEXTBOOK  
1875 English translation of *General Surgical Pathology and Therapeutics*, by Theodor Billroth, Professor of Surgery in Vienna.

† Prof. OTTORINO UFFREDUZZI  
Direttore della Clinica chirurgica generale dell'Università di Torino  
(1932-1943)

**TRATTATO DI  
PATOLOGIA CHIRURGICA  
GENERALE E SPECIALE**

QUARTA EDIZIONE, RIVEDUTA ED AGGIORNATA

a cura del  
Prof. ANTONIO BOBBIO  
della Clinica Chirurgica di Torino

Figure 4-2  
EARLY SURGICAL  
PATHOLOGY TEXTBOOK  
1948 (4th) edition of *Treatise of  
General and Special Surgical Pa-  
thology*, by Ottorino Uffreduzzi,  
Chairman of the Surgical Depart-  
ment of the University of Torino, Italy.



Figure 4-3  
COLLEGE OF PHYSICIANS  
& SURGEONS AT WEST  
59th STREET (1887-1928).

or no interest in studying surgical specimens. In particular, German pathologists disdained what they called "Stückchen-Pathologie," i.e., the pathology of small fragments or piecemeal pathology. It was because of this need that young surgeons (and a few young pathologists) became interested in the study of surgical specimens for the purpose of establishing the diagnoses of lesions removed by the surgeons and helping them to formulate a prognosis and appropriate treatment.

Because it was the surgeons who needed the information, it was natural that this budding specialty should be initiated and sponsored by departments of surgery rather than by pathologists. This is, by and large, what happened in the College of Physi-

cians and Surgeons of Columbia University (henceforth referred to as P & S) in New York City.

#### THE ESTABLISHMENT OF SURGICAL PATHOLOGY AT P & S

The original P & S building was located on 59th Street, between Ninth and Tenth Avenues (fig. 4-3) (6,9,12). Construction, completed in 1887, was made possible through the generosity of George W. Vanderbilt.

In about 1903, at the suggestion of William T. Bull, professor of surgery, a laboratory of surgical research was instituted at this site by Dr. Joseph A. Blake, professor of surgery from 1903 to 1913, and

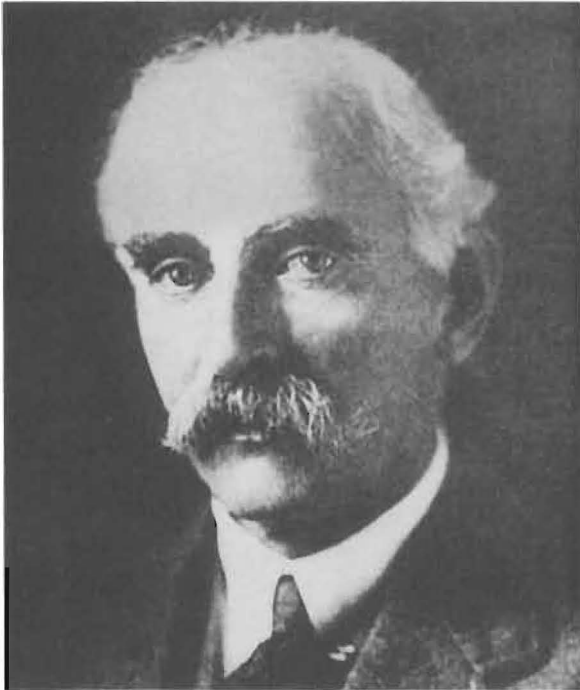


Figure 4-4

JOSEPH A. BLAKE

Joseph A. Blake, Professor of Surgery at College of Physicians & Surgeons, 1904-1913.

described by Dr. Arthur P. Stout (who was a medical student at P & S from 1908 to 1912) as a brilliant, handsome, elegant, and successful surgeon (fig. 4-4) (5,8). This laboratory was originally intended for the study and practice of surgical techniques and for the evaluation of wound healing in animals (fig. 4-5). During the early years, research on surgical techniques (use of fascial graft to repair defects in hollow viscera, vascular anastomoses, techniques of gastric surgery) went hand in hand with pathophysiologic studies such as the role of osteoblasts in bone repair, as carried out by Dr. Fred Bancroft (2-4).

In 1905, the need was felt for a Laboratory of Surgical Pathology, in which studies on human tissues could be made. This started with a desk in the Laboratory of Pathology, courtesy of Dr. Prudden, head of the Pathology Department, where workers would have the opportunity of confirming (with the aid of the microscope) many of their gross observations.

Dr. Blake assigned the organization and direction of that laboratory to Dr. William Cogswell Clarke, one of the young surgeons on his staff (figs. 4-6, 4-7). The Laboratory of Surgical Pathology was expanded in

#### PREFACE

The laboratory of Surgical Research of the College of Physicians and Surgeons was organized at the suggestion of Dr. William T. Bull in 1903. At that time the facilities were few and the scope in research was necessarily narrow.

From 1903 to 1913 while Dr. Joseph A. Blake was professor of surgery, many improvements were instituted in the construction and equipment of laboratories for the department of Surgery.

About 1905 the need was felt for a laboratory of Surgical Pathology in which studies upon the tissues could be made. To fill this want a desk was provided for a time in the Laboratory of Pathology. On Lincoln's birthday, 1910, a Laboratory of Surgical Pathology was opened, and in 1911 a new and spacious laboratory devoted to Surgical Research was completed. Much time has been required to organize and to develop the work of these two laboratories, now a unit in the Department of Surgery.

At first, chiefly methods of technique were studied. With the addition of the laboratory of Surgical Pathology and the cooperation of its staff, studies in microscopical morphology were commenced. As a result, research workers have the opportunity of confirming with the aid of the microscope many of their gross observations of structural and functional changes which are the result of experiment. In this way more accurate observations are possible and more careful work results. There are conducted also, studies of the tissues in inflammation, in injury and infection; similarly the many and varied tumors are examined and classified always with the one end in view of increasing the scope of investigation. Particularly, research through the use of an incubator in which tissue cultures have been grown, has widened the fields of investigation in surgery.

In order to make real progress in the study of surgery, knowledge of medicine is required, as well as a knowledge of biology, of chemistry and of physics. On account of this extension in the science of surgery, workers in these several branches are necessary and some of them at present are on the laboratory staff. With these increases in personnel, there is a constant demand for additional apparatus and the necessary room for its installation.

Figure 4-5

#### LABORATORY OF SURGICAL PATHOLOGY

Page one of Preface to Volume II of Studies from the Laboratories of the Department of Surgery (1910-1917), signed by Dr. George E. Brewer, a member of the surgical staff. It gives the date (1905) when the Laboratory of Surgical Pathology was started.



Figure 4-6

WILLIAM C. CLARKE

William C. Clarke was the first Director of the Laboratory of Surgical Pathology.