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JAMES EWING

1866—1943

A Biographical Memoir by
JAMES B. MURPHY

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Biographical Memoir

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The name of James Ewing is inseparably connected with the development of two important institutions. As the Professor of Pathology at Cornell Medical College and the only full-time professor in the early period, it was said that the development of the College was a reflection of the principles and mannerisms of James Ewing. The other institution was the Memorial Hospital (New York) where he was pathologist for many years. To quote from a statement of an associate, "The relationship of Ewing to the Memorial Hospital can best be expressed in the words of Emerson, 'Every institution is but the lengthening shadow of some man.' Dr. Ewing is the Memorial Hospital"—(Adair). His very great influence was effected, in both instances, without a formal authoritative position, for he was neither Dean of the Cornell Medical College nor Director of Memorial Hospital during their formative years.

James Ewing was born in Pittsburgh on Christmas day 1866. His father, Thomas, came from a staunch Scotch, Scotch-Irish, Presbyterian family, of whom it was said "had produced men whose intellect and energy had helped mold the institutions of wherever they settled." Thomas Ewing, after graduation from Jefferson College, became a teacher, and continued in this profession until he was 36 years of age. He then studied law and became a judge in the Court of Common Pleas in Pittsburgh, a position he held until his death at 69 years of age. He was considered a leading citizen of that city, was an elder of the Presbyterian Church and a director of the Theological Seminary. In characterizing his father, James Ewing wrote, "If I had any hereditary bents they were intensified by the example of my father of whom I may only say he was a man of tireless energy, pure intellect and complete self effacement."

Dr. Ewing's mother, Julia Hufnagel, of Stockbridge, Massachusetts, was of German ancestry. She graduated in the first class from Mt. Holyoke College, and she also became a teacher. Her favorite pursuits outside her educational activities were music and social work.

Thus, James Ewing grew up in a rather stern, intellectual and religious environment. He was known as a sensitive boy, mentally alert, inquisitive, and adventurous. He was physically

active, intensely interested in sports, an interest he retained throughout life. It was said of him that everything he attempted he did with furious attention. When he was 12 years old he collected and mounted butterflies and his collection was of such excellence that it became a permanent exhibition in a Pittsburgh museum. It was at about the same period that he acquired a microscope and became deeply immersed in the study of insects, thus early starting microscopy, which was destined to be his major life work. At 14 he developed osteomyelitis of the femur from which he was bedridden for two years, and this was followed by a longer period of intense suffering and invalidism, that left him a permanent cripple.

During this bedridden period his instruction was continued by a tutor, and he was developing an outstanding quality that was prominent through his educational period, namely receptiveness to mental training. Ewing attributed his no small talent in the use of language to the influence of his tutor, who had "a marvelous way in which he balanced delicate shades of meaning in Latin and Greek phrases." Exercise of this facility was considered by Ewing as a lesson in close thinking and it made a permanent impression on his own mental processes. By the time he entered Amherst College in 1884, he was able to read both Latin and Greek poetry at sight.

At Amherst he was fortunate to come under the influence of Charles Edward Garman, Professor of Philosophy, who did much to help Ewing free himself of self-consciousness and a feeling of inferiority from his infirmity. He developed an ardent interest in sports, and in spite of his lameness became a good tennis player. He graduated from Amherst in 1888 and was elected to Phi Beta Kappa the same year.

In the fall of 1888 he entered the College of Physicians and Surgeons of New York and was in the first class to graduate after this institution had become affiliated with Columbia University. Little is recorded of his medical school period except his remark that "I ran headlong into that rare personality, T. Mitchell Prudden, and to him I owe my main tendencies and conceptions as a physician and as a pathologist. At the time I was wearing a Phi Beta Kappa key that seemed as large as a cow bell and at the same time a certain weight of self esteem. I soon lost both of them." It is certain that during these years he developed a keen interest in pathology, evidenced by his

expressed belief that the pursuit of problems in a pathological laboratory is the choicest field in medicine. He spent much time in the hospital laboratory during his clinical internship at Roosevelt Hospital and produced his paper entitled "A Study of the Leucocytosis of Lobar Pneumonia." It was also during this period that his interest in the blood developed, which eventually led to his first book, *Clinical Pathology of the Blood* (1901).

The years immediately following the completion of Ewing's internship (1893-98) were restless ones. As there were few academic or research positions that paid a living wage, Ewing felt forced to enter private practice, but he continued his interest in the scientific side of medicine. He held such positions as Tutor in Histology—Columbia University, 1893-97; Clark Fellow—Columbia University, 1896-99; Instructor of Clinical Pathology, 1897-98; and spent a period in the study of pathology in Europe. It soon became evident that the practice of medicine was not his forte, and this effort was abandoned in 1898 when, during the Spanish-American War, he became a Contract Surgeon in the Army and was assigned to Camp Wikoff. Here his thirst for knowledge soon led him into an investigation of malaria, and he published several papers on this subject.

In 1899 he was appointed Professor of Pathology in the newly organized Cornell University Medical College, where, as the only full-time professor, as already noted, he exerted considerable influence on the development of this institution. He proved to be a prodigious worker and a forceful, stimulating teacher. He was profoundly affected by the death of his young wife, after less than three years of marriage, from a complication of pregnancy. Following this he became even more absorbed in work, and his interest in the pathogenesis of the group of conditions related to the toxemias of pregnancy became almost an obsession.

The focussing of his interest upon cancer may be traced to the establishment by Mrs. Collis P. Huntington of the C. P. Huntington Fund for Cancer Research in 1902. It was stipulated that the income from this Fund be expended for cancer research in the Loomis Laboratory, associated with Cornell Medical College, under the direction of Dr. Ewing. One of his few investigations based on animal experimentation was published during the early years of administration of this Fund. However, he gave much time and attention to the direction of the work, which served to enhance his reputation as an authority

on cancer, and he soon became known as the outstanding cancer pathologist in New York.

By 1910 some 50 papers had been published from the Loomis Laboratory on cancer, under the support of the Huntington Fund. By this time Ewing had arrived at the conviction that the best hope for advancing knowledge in cancer was to study the disease in man, a conviction that he held throughout his life. He proposed a plan to the New York Hospital by which a commission was to be set up to carry out clinical cancer study in a general hospital. The first contact with Dr. James Douglas, who was destined to play a leading role in Ewing's future, was made through this Cancer Commission. The development of the New York Hospital plan evidently ran into difficulties for soon Ewing recommended that the project be suspended until larger facilities and more complete organization could be provided. With the financial backing of Dr. Douglas, Ewing approached the Memorial Hospital with a proposal for the assignment of a certain number of beds for the clinical study of cancer. This institution, organized in 1884 as a cancer hospital, had found difficulty in maintaining its status as such. By 1912 Dr. Douglas had given \$100,000 for the endowment of 20 beds for clinical research work, and equipment for an X-ray plant and clinical laboratory. Dr. Douglas, a mineralogist and mining engineer, was an enthusiast with definite convictions and was considered by many as the most gifted and many sided man of his time. He undoubtedly had considerable influence on Ewing in the development of the Memorial Hospital and was certainly responsible for the interest in radio therapy developed by this institution. In 1913 he took Ewing on a tour of Europe to investigate the use of radium as a therapeutic agent in cancer, and later, with Dr. Howard Kelley, financed the production of radium in this country. Dr. Douglas's share of the output was donated to the Memorial Hospital.

When Ewing took up his work as pathologist to the Memorial, he held several strong opinions: first, as already noted, he believed that cancer research should be centered around the cancer patient. He did not believe that surgery was the final answer to the problem but that other methods of treatment must be assiduously pursued. He espoused the idea of special cancer hospitals and the concept of the disease as a medical specialty. Needless to say, his point of view was bitterly criti-

cized by a section of the medical profession. Nevertheless he did bring the Memorial Hospital back from being simply another general hospital to the original intentions of its founders and he succeeded in attracting able men into the field as cancer specialists. His determination to establish the possibilities and limitations of X-ray and radium therapy was also criticized by some leaders in the profession as unjustified human experimentation. But Ewing pursued his course unperturbed, and today, while there is not universal acceptance, the idea of special cancer hospitals and of cancer as a medical specialty has been widely adopted.

With the Douglas backing, Ewing gained a foothold in Memorial Hospital which he developed through the force of his personality to a point where it was said in 1912 that he had assumed full responsibility for the direction of its policies, though his official position was only that of pathologist to the institution. Under his guidance the Memorial Hospital attained a worldwide recognition. The department of pathology had a long and distinguished record of leadership in the clinical classification and the diagnostic histology of tumors. It became an outstanding educational center to which surgeons and pathologists were drawn from many parts of the world to acquire concentrated experience and instruction in the diagnosis and classification of the many forms of cancer.

In 1931, on Ewing's retirement as Professor of Pathology at Cornell Medical College, he was made full-time director of Memorial Hospital, thus acquiring the title for a position he had held through his personality for many years. In 1939, at 73 years of age, he retired as Director and became Consulting Pathologist.

Ewing's influence was by no means confined to the two institutions he served so handsomely. Through his interest in research he was one of the organizers of the American Association for Cancer Research and served many terms as officer and council member. Through his discussions and constructive criticisms of the papers presented at the meetings he contributed in no small way to the raising of the standard of cancer research in this country. He was also one of the founders of the American Society for the Control of Cancer (now American Cancer Society) in 1913, served in various offices, and was on the governing board for more than 30 years. During his long years of association, he prepared or edited a large part of

the popular educational material distributed by the Society. His prestige did much to secure the acceptance by the medical profession of the idea of lay education for the recognition of early signs and symptoms of cancer. His passion for truth and integrity led him to oppose bitterly the inclusion in the publications or slogans of the Society any statement or figures that could be construed as misleading by a hair's breadth.

Few men have endured as much physical suffering as Ewing did during his life: first, as noted above, from osteomyelitis that left him a permanent cripple at 14 years of age, for years intense suffering from trifacial neuralgia, later in life urinary calculus, and finally cancer of the bladder. The loss of his young wife after less than three years of marriage had a profoundly saddening effect upon his life. It was said of him that adversity, suffering, disappointment, and sorrow left their mark on him not in the form of bitterness or disillusionment but in increasing sensitiveness for the misfortune of others. "His sympathy and kindness became almost legendary during his lifetime and the very legend of his benignity impressed itself on his character"—(Stewart). That this benignity was not of the mere sentimental variety was shown by his intolerance of sham, hypocrisy, and mental laziness, which led him to be an unsparing critic.

Perhaps his most important contribution was his book, *Neoplastic Diseases*, first published in 1919. In regard to this publication, an associate records that "for ten years Ewing worked with zealous ardor, holidays, nights, week ends, stopping for minutes only to fight the paroxysms of *tic douloureux*." This book immediately became the standard reference and textbook of the world and has continued to hold this position, through its several editions, for the 30 years since its first publication. His discrimination in estimating scientific contributions and his ability to coordinate new facts gave high value to his occasional publications or lectures. Those in which he placed current contributions in proper perspective were masterpieces of clarity and critical analysis.

While Ewing is known best as a cancer pathologist, Dr. William H. Welch called attention to the fact that there was scarcely a domain in pathology which he did not cultivate, were it morphological, chemical, clinical or experimental. He referred to Ewing as an eminent scholar, an eminent trainer

of scholars, an international leader in pathology. Among the chief fields of investigation may be mentioned the following: leucocytosis in disease, 1895; ganglion cells, 1896; status lymphaticus, 1895, 1918; malaria, 1897-99; diseases of the blood, 1899-1902; variola, 1901-03; toxemia of pregnancy, 1904-07; cancer, 1895-1939.

Ewing was an outspoken opponent of the idea that there could be an all-embracing cause or cure for cancer, maintaining that cancer does not represent a single disease but is a generic term covering a broad department of biology and a universal potentiality of tissue cells. He was an experimenter, not in the narrow sense of the pure laboratory worker, but in the field of human experiment. In the early days every patient subjected to treatment by X-rays, radium or by various biologic products constituted an experiment. These were by no means always encouraging but they nevertheless yielded new data, piling up references for future modifications, with possibly larger promise towards success. To him are attributed three of the most important developments in the cancer field: the modern cancer hospital, cancer clinic, and public health cancer program.

"He himself succumbed to the disease toward the solution and early diagnosis of which the major portion of his life had been devoted. Signs of a benign disease from which he had suffered for years, yet which had disappeared after appropriate treatment, recurred with but little change and hence failed to announce the onset of a totally new disease until the latter was far advanced and hopeless"—(Stewart).

As an indication of the respect in which Ewing was held, the following memorials have been established in the short time since his death: the Ewing Professorship in Neoplastic Diseases, at Cornell Medical College; the Ewing Memorial Fund, which supports two annual lectureships and undergraduate student training in tumor pathology; the James Ewing Hospital, a 300-bed City hospital for cancer patients.

Dr. Ewing was elected to the National Academy of Sciences in 1935. He died on May 16, 1943.

Much of the material in regard to Dr. Ewing's background and early life was obtained from an extensive file of information collected by Dr. Hayes Martin. The author gratefully acknowledges his indebtedness to Dr. Martin for the use of this valuable material.

KEY TO ABBREVIATIONS USED IN BIBLIOGRAPHY

- Am. J. Med. Sci. = American Journal of the Medical Sciences
 Am. J. Obst. = American Journal of Obstetrics
 Am. J. Path. = American Journal of Pathology
 Am. J. Roent. = American Journal of Roentgenology
 Am. J. Surg. = American Journal of Surgery
 Am. Soc. Cont. Cancer = American Society for the Control of Cancer
 Ann. Surg. = Annals of Surgery
 Arch. Int. Med. = Archives of Internal Medicine
 Arch. Neurol. Psychopath. = Archives of Neurology and Psychopathology
 Arch. Path. = Archives of Pathology
 Arch. Surg. = Archives of Surgery
 Brit. Med. J. = British Medical Journal
 Bull. Internatl. Assn. Med. Mus. = Bulletin of the International Association of Medical Museums
 Bull. N. Y. Acad. Med. = Bulletin of the New York Academy of Medicine
 Canad. J. Med. Surg. = Canadian Journal of Medicine and Surgery
 Canad. Lancet Pract. = Canadian Lancet and Practitioner
 Canad. Med. Assn. J. = Canadian Medical Association Journal
 Canad. Pract. = Canadian Practitioner
 J. Am. Med. Assn. = Journal of the American Medical Association
 J. Cancer Res. = Journal of Cancer Research
 J. Exp. Med. = Journal of Experimental Medicine
 J. Infect. Dis. = Journal of Infectious Diseases
 J. Med. = Journal of Medicine
 J. Med. Res. = Journal of Medical Research
 J. Nerv. Ment. Dis. = Journal of Nervous and Mental Disease
 Med. News = Medical News
 Med. Officer = Medical Officer
 Med. Rec. = Medical Record
 Mil. Surg. = Military Surgeon
 Mo. Bull. N. Y. State Dept. Health = Monthly Bulletin of the New York State Department of Health
 N. Y. Med. J. = New York Medical Journal
 N. Y. State J. Med. = New York State Journal of Medicine
 Pittsburgh Med. Rev. = Pittsburgh Medical Review
 Proc. Ann. Cong. Med. Ed. = Proceedings of the Annual Congress on Medical Education
 Proc. Assn. Am. Med. Coll. = Proceedings of the Association of American Medical Colleges
 Proc. N. Y. Path. Soc. = Proceedings of the New York Pathological Society
 Proc. Path. Soc. Phila. = Proceedings of the Pathological Society of Philadelphia
 Pub. Health Rep., U. S. P. H. S. = Public Health Report of the United States Public Health Service
 Rev. Gastroenterol. = Review of Gastroenterology
 Surg., Gynec. Obst. = Surgery, Gynecology and Obstetrics

JAMES EWING—MURPHY

Trans. Assn. Am. Physn. = Transactions of the Association of American Physicians
Trans. Coll. Physn. Phila. = Transactions of the College of Physicians of Philadelphia
Virchow's Arch. = Virchow's Archiv für pathologische anatomie und physiologie und klinische medicin

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JAMES EWING—MURPHY

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JAMES EWING—MURPHY

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