

Walter G. J. Putschar (1904–1987)

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WALTER G. J. PUTSCHAR (figure 12.1) was on the staff of the Department of Pathology of Massachusetts General Hospital (MGH) from 1959 to 1984. His unique attributes left an indelible impression on all who worked with him. He lived his life with purpose, insatiable curiosity, and personal sacrifice and fulfillment. His many qualities and diverse interests made him a remarkable physician and an extraordinarily gifted pathologist.

Walter Putschar was the son of a civil engineer who helped construct bridges and buildings. Born on January 9, 1904, in Graz, Austria, he was raised during much of his adolescence by his much-loved uncle, Dr. Arnold Wittek, after his father died in 1917. Dr. Wittek was an accomplished orthopedic surgeon at the University of Graz who founded the first orthopedic hospital in that city (1914) for the rehabilitation of those wounded in war and industrial accidents, and he also created therapeutic centers for crippled children and patients suffering from musculoskeletal tuberculosis (1). His papers covered many areas of orthopedic surgery, and he was the first to coin the term “Ollier’s disease” for the disorder of enchondromatosis. His hard work led to his being named an Honoured Citizen of the City of Graz; his portrait adorns the city hall alongside those of other legendary leaders of the town. He had a lifelong influence in shaping the character, interests, and pursuits of his nephew.

In high school the young Walter Putschar

concentrated in zoology and developed a special interest in planktons, and he hoped to become a zoology teacher. His curriculum included eight years of Latin and six of Greek. During this period he was awarded a two-year scholarship at Kremsmünster, a Benedictine abbey founded in the eighth century, to which a school was added in the sixteenth century. The school possessed collections of rocks, crystals, preserved animals, botanical specimens, and bones, as well as an astronomical observatory. Walter excelled as a student and advanced through his coursework a year ahead of his peers.

Upon graduation, he matriculated at the University of Graz to begin his medical training, which he later completed at the University of Vienna. During his medical education he requested advanced studies in histology and received instruction at Josef Schaffer’s Institute of Histology, where he learned the principles of scientific investigation and the art and science of accurate and precise observation. His peers at the institute included two other Austrians who later became leaders of German pathology: Herwig Hamperl, who became recognized for his research on the oncoocyte, a word he coined, and Friedrich Feyrter, who discovered the argentaffin cell system. The next year he studied pathology at Wieden Hospital, part of the Vienna hospital system, where he studied under Professor Carl Sternberg, a privilege granted only to outstanding students. There he published three articles on

the complications of arsenic in the treatment of syphilis and the significance of cartilage within vertebral bodies (3–5); he received his medical degree at the end of 1927.

He then completed a practical year at the University Hospital Vienna, including six months in ophthalmology. In 1928 he was appointed an Assistant in Pathology by Professor Georg Gruber, Chief of Pathology at the University of Göttingen, one of the finest German universities, and home of many Nobel Prize laureates. Putschar taught anatomic pathology there for seven years, and was the first to describe glycogenosis (Joannes C. Pompe described it the same year), a genetic enzyme deficiency that results in heart failure (7). In 1931 he was promoted to the equivalent of an American assistant professor. During his tenure his department chairman

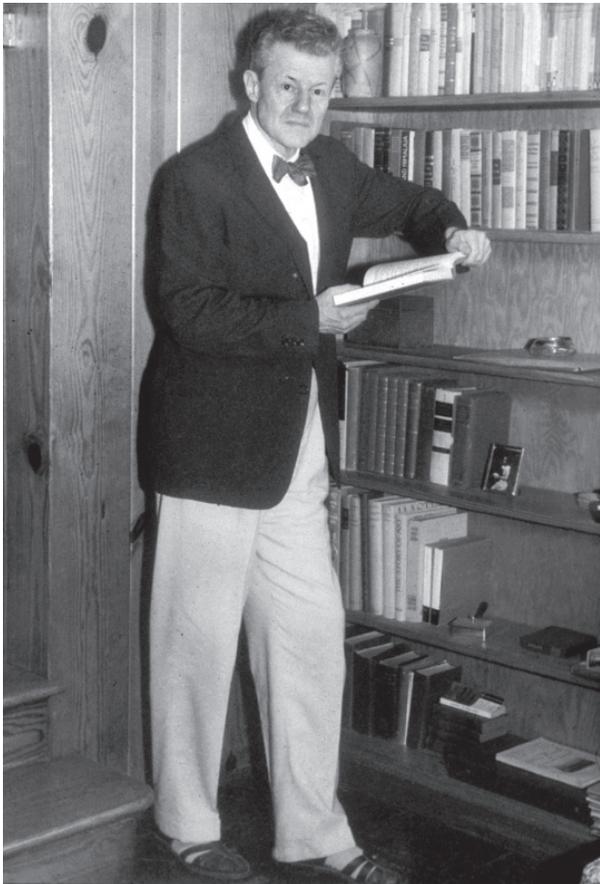


Figure 12.1 Walter G. J. Putschar as a young man

requested that each staff member choose a subspecialty to focus on. When asked, “Do you want lung, kidney, what?” Walter interrupted, “Put on my desk that which no one else wants.” The next day bones and eyes covered his desk and became his main purview. His interest in these organs, particularly the skeletal system, had already been stimulated no doubt by his well-known uncle, and this opportunity helped foster its becoming one of his lifelong passions.

During this time Dr. Putschar married a woman named Eva, who was from a Hungarian Jewish family. They had two daughters, Elga and Eva, and the family bonds were strong. As the political scene of Germany changed and Nazism grew, Dr. Putschar became an outspoken critic of its philosophic tenets. On more than one occasion he commented that Germany was not big enough for both himself and Hitler. Not long thereafter, he became concerned about the safety of his family, so in 1935 he decided to forfeit his promising career, and he and his family overcame difficult bureaucratic obstacles in Germany and immigrated to the United States.

In the 1930s the United States provided expedited entry and permanent resident status to immigrant professionals and their families if they were qualified for teaching posts at American institutions of higher learning. By the time Dr. Putschar arrived in the United States, many academic positions in pathology had been filled by central European pathologists, and in 1935 he accepted a temporary position as Assistant Professor of Pathology on the faculty of the University of Buffalo medical school. The offer had been extended by the chairman, Dr. Kornel Terplan, who had known Dr. Putschar in Vienna in the 1920s.

Dr. Putschar remained at the University of Buffalo for one year, until a disagreement between Dr. Terplan and a senior hospital administrator ended the arrangement. In 1937, Dr. Putschar accepted an offer to become the Director of Laboratories at the General Hospital in Charleston,

West Virginia. Beginning with only a small room in the basement at Charleston General Hospital, Dr. Putschar single-handedly created and staffed a new pathology laboratory that became an important center for the training of both pathologists and laboratory technicians. The program included a two-position pathology residency in combined anatomic and clinical pathology and an outstanding 18-month school for laboratory technicians. Dr. Putschar ran a “tight ship” and, according to Dr. Arturo Michelena, one of his residents from that period, autopsies were performed promptly upon arrival of the deceased, under his supervision, even if that happened to be midnight.

Life in Appalachia during the Great Depression was dramatically different from that in the intellectual milieu of Göttingen, but Dr. Putschar had the motivation and self-discipline to build his own academic and cultural environment. During his tenure at Charleston he did not collaborate with his former German colleagues who had acquiesced to Hitler’s regime and who by then had become leaders of German pathology. Instead, he transformed the pathology program at the hospital and helped bring culture to the city. He loved classical music and founded a chamber music society.

Dr. Putschar remained at Charleston General Hospital for 21 years, until 1958. Only near the end of his time there did he hire an associate pathologist, Dr. Willis Garrar, who was primarily a clinical pathologist. In the late 1950s Dr. Putschar’s wife died suddenly of complications from giant cell myocarditis while traveling in Europe. Eva, the younger of his two daughters, had died from leukemia, and these two losses were devastating for him. When Dr. Putschar resigned from his position at Charleston General Hospital in 1958, he was depressed, although he had accomplished all he had set out to do at the hospital. He was financially secure and ready for a new personal challenge.

Dr. Putschar developed an association with the

Armed Forces Institute of Pathology (AFIP) in Washington, D.C., during his Charleston years, and this affiliation played an important role for the rest of his career. Colonel James E. Ash, the director of the AFIP, had trained in Vienna before World War I, and he appreciated the expertise of European pathologists. Accordingly, he recruited Dr. Hans Smetana as Chief of the AFIP. Dr. Smetana had known Dr. Putschar in Vienna, and he invited him to become a Civilian Resident Consultant for the AFIP in 1949. There Dr. Putschar began a productive, 30-year-long collaboration with Dr. Lent C. Johnson, Chief of the Orthopedic Pathology Department. Dr. Putschar also arranged for Dr. Erwin Uehlinger, a distinguished pathologist from Zurich who had a special interest in orthopedic pathology, to become a consultant at the AFIP. Subsequently, Uehlinger, Editor of *Virchows Archiv*, dedicated one of its issues to the centenary celebration of the AFIP, to which Putschar contributed. Putschar in turn dedicated his last major work (on gross skeletal paleopathology) to Uehlinger, whom he recognized as the dean of European pathologists.

Dr. Putschar’s recruitment to the MGH was initiated by Dr. H. Robert Dudley Jr. Dr. Dudley was a young MGH pathologist who was interested in bone pathology; he often visited Dr. Johnson at the AFIP to strengthen his diagnostic skills. It was there that Dr. Dudley met Dr. Putschar and was impressed by his breadth of knowledge and expertise. Dr. Dudley arranged for Dr. Putschar to meet Dr. Benjamin Castleman, the Chief of Pathology at MGH (figure 12.2). At the “interview,” Castleman was impressed with Dr. Putschar and in 1959 hired him as a consultant pathologist. Dr. Putschar accepted the position without discussing salary, but the agreement gave him the opportunity to have six months off each year for consulting and working at other institutions. This arrangement made his position different from those of the other faculty; nonetheless, during his time at the hospital he had responsibilities of routine sign-out of both surgical and



Figure 12.2 Walter Putschar (left) and Benjamin Castleman, conferring at the microscope

autopsy pathology, and he was present in the laboratory throughout most of the day.

Soon after he joined the staff at the MGH, Dr. Putschar met Florence Freestone, his future second wife, on a bus during a travel tour of the Near East. He was immediately taken by her and after several months they married. The two became inseparable—her nickname for him was “Pappy”—and she often accompanied him to work, where she helped with his projects. Florence felt at home in the department and developed close friendships with many staff members and residents. Years later, when the Putschar Conference Room was dedicated (figure 12.3), the most prominent photograph placed on the wall in his honor was a picture of him and Florence sitting face to face at a partners desk, working on a manuscript (the picture remains there today).

At the MGH Dr. Putschar helped with the Orthopaedic Pathology Service, supervised many of the daily autopsy conferences, and regularly

attended the daily surgical pathology “outs” conferences. In addition, he was routinely consulted on difficult cases regarding matters of biology, anatomy, embryology, and pathophysiology, as well as challenging diagnostic interpretations. He was an endless source of information on specimens from the simplest to the most complex, and he was approachable—as long as the requesting resident was prepared with the details of the case.

Dr. Putschar’s background in zoology, embryology, and developmental biology, combined with his interpretive skills, made him legendary as an MGH pathologist. At slide sessions and gross pathology reviews, while others discussed statistical probabilities and diagnostic criteria on a difficult case, he would harvest the overlooked details and then give a crisp, concise evaluation that went directly to the core of the problem. His opinions were given in a refreshingly direct manner, without ifs, ands, or buts. He was not, however, reluctant to admit, “I don’t know, let’s look it up.” He emphasized a strong foundation



Figure 12.3 Walter Putschar (left) shakes hands with Robert McCluskey at the dedication of the Putschar Conference Room, Warren Building, 1984

in normal anatomy, histology, and physiology as a requirement for the understanding of pathology. On one occasion, a patient with a testicular mass and brain tumor was undergoing surgery to remove both lesions; the clinical diagnosis was of a testicular malignancy that had metastasized to the brain. The testis was removed first and its dissection in the lab revealed a circumscribed tomato-red mass. When it was shown to Dr. Putschar, he declared: "This has nothing to do with his brain tumor. It is merely splenogonadal fusion. A piece or strand of spleen may descend with the testis in the embryo and enlarge as a conjoined component." The resident didn't know it at the time, but Dr. Putschar had in fact authored a paper detailing a series of cases of splenogonadal fusion in which he recognized that the continuous type could be associated with micrognathia and the partial or complete failure of limb formation; excellent drawings of the abnormalities are included in the publication (13). Not surprisingly, the slides confirmed his intraoperative gross diagnosis.

Dr. Putschar's talents and persona were displayed daily at the MGH morning autopsy conference, where organs from the previous day's cases were passed around on small metal trays with a pair of forceps. By the time a tray came to Dr. Putschar, several speculations or shrugged shoulders about findings were swept aside by a brief, confident pronouncement that left everyone thinking, "Why didn't I see that?" This often included the staff and resident on the case. Dr. Putschar had very high standards, and he was known to express his discontent and disappointment when they were not met. (Some noted that he was more politic with the opposite gender.) He was once participating in an autopsy and was dissecting a knee joint with a resident when a prominent internist-rheumatologist with his entourage of residents came to the autopsy table. The clinician gave a short lecture on the description of the knee as it appears in the Henke-Lubarsch reference textbook, and then asked Dr. Putschar if he had ever read that description. Putschar looked up from his dissection for a moment and replied, "I wrote it."

Residents assisted Dr. Putschar in his preparation for MGH orthopedic conferences, especially the one held for the skeletal radiologists. Preparation entailed gathering X-rays, glass slides, and specimen photographs. Dr. Putschar would present the material in great detail, always carefully correlating the radiographic manifestations with the gross and microscopic findings, and identifying changes that gave clues to the time course of the disease. Although Dr. Putschar was skilled in diagnosing bone neoplasms, he was most interested in evaluating inherited, metabolic, developmental, and infectious disease of the skeletal system. One time a case was sent in to him to evaluate tissue that came from the mandible of a middle-aged male. A panorex film showed “floating” molars associated with widening of the mandibular canal, and endosteal resorption of the



Figure 12.4 Walter Putschar in his later years, engaged in paleopathology

alveolar bone that was most prominent on one side. The biopsy specimen was suboptimal, but it revealed squeezed mononuclear cells with abundant cytoplasm. After review, Dr. Putschar indicated that it must be Gaucher’s disease because of the clinicopathological findings and then ordered special histochemical stains and a clinical evaluation that confirmed his diagnostic impression

The collaboration between Dr. Walter Putschar and Dr. Donald Ortner, a biological anthropologist at the Smithsonian Institution, began in 1970 when Ortner was planning a special course on human skeletal paleopathology (figure 12.4). It was to be offered at the Smithsonian and based on the human skeletal collection of the National Museum of Natural History. Dr. Ortner consulted with Dr. Lent Johnson about the course, and Johnson suggested that Dr. Putschar participate and give a series of lectures on bone pathology. Dr. Putschar was invited and accepted the opportunity, and in 1971 he was appointed a Research Associate of the Smithsonian Institution. The course was highly successful and offered yearly between 1971 and 1974, and once more in 1985. Together, Drs. Putschar and Ortner continued to study the institution’s large collection of archaeological human skeletal remains during Putschar’s many visits to the Smithsonian, and this helped cement a productive scholarly association, leading ultimately to a pioneering and comprehensive book on the topic that was published in 1981 (2).

In addition to his regular institutional appointments at the AFIP, Smithsonian, and MGH, Dr. Putschar worked as a consultant pathologist for the World Health Organization, Fulbright Exchange, and the U.S. Department of State. Under their aegises he traveled to help improve health care, and he benefited as well because he was always as eager to learn as to teach. He completed seven “ambassadorships” in Taiwan, Thailand, Egypt, India, Iran, Indonesia, and Iceland, and during these trips he often had to improvise: he once built a microtome from razor blades and

old pieces of machinery and personally cut and stained routine histologic sections, as he had in Schaffer's institute. Additionally, he built an optical bench to prepare gross and microscopic photographs to document untreated disorders rarely encountered in Western medical practice. Some of these images are still being used in lectures and published in medical reference textbooks.

Dr. Putschar's published investigations were generally focused on the fields of congenital and metabolic disorders and the pathology of the skeletal system and bone tissue. His interests in skeletal pathology were broad and included metabolic disorders (vitamin D deficiency), infectious diseases such as leprosy, syphilis, yaws, and tuberculosis, as well as developmental and degenerative disorders. His first publications were related to spine disorders, and are dated 1927, the year he completed his medical degree at the University of Vienna (3, 5). At a major meeting the German pathologist Christian Georg Schmorl presented the original gross description of the vertebral body "node" (herniation of the annulus fibrosus through the hyaline cartilage endplate) for which he is known. Following Schmorl on the same program was none other than Putschar, his topic being the histopathology of herniated disc material through a fractured vertebral body endplate. In 1931 he published a major work on the development of the pelvis with a particular emphasis on the changes that occur during pregnancy and childbirth (6). In a collection of celebratory writings honoring T. Dale Stewart, a distinguished biological anthropologist at the National Museum of Natural History and the Smithsonian Institution, he published an updated version, and it remains an important reference (12).

His chapters on bone and urologic pathology in the handbooks for special and general pathology, known by pathologists as the "Henke-Lubarsch," have stood the test of time and are still considered to be classic references. These were published in 1934 and 1937 and therefore must have been prepared during very turbulent

and challenging times in his personal and professional life (8, 9).

In 1960, Dr. Putschar published a substantial chapter in English on the general pathology of the musculoskeletal system (10). His study of orthopedic pathology provided a foundation of knowledge that would enhance his understanding of and contributions to human skeletal paleopathology. His first publication on this topic was a chapter entitled "Problems in Pathology and Paleopathology of Bone" in a book on the subject edited by Saul Jarcho, a physician and medical historian (11). His next-to-last publication was a brief summary of the paleopathology of developmental disorders and dysplasias that affect the skeleton (14).

Dr. Putschar's experience at the Smithsonian highlighted the need for a major reference work on the subject of human skeletal paleopathology. With the support of Ortner's grant from the Smithsonian Institution, the two began to write a manuscript in the summer of 1974 based on a careful review of skeletal remains housed in European medical museums. They meticulously examined collections from England, Scotland, Czechoslovakia, Austria, France, and Switzerland to document the range of skeletal manifestations of various diseases. During this research tour, they studied and carefully photographed hundreds of cases, and in some cases it was possible to obtain plain-film radiographs of the affected bones. None of the museums had radiographic facilities, and therefore the roentgenograms had to be squeezed in between patient exams at radiology units of local hospitals. This research, along with that performed on materials from the National Museum of Natural History, provided the gross and radiographic materials for what would become the classic text of skeletal paleopathology that Drs. Putschar and Ortner coauthored (2).

Dr. Putschar was always active and remained sharp, but he became aware of his increasing fragility as he entered his late seventies. While

attending professional meetings in Edinburgh in late 1984, he slipped and fell during a walk with Florence on a stony path en route to a medieval castle. Weeks later he diagnosed himself as having a chronic subdural hematoma, which was confirmed by a subsequent CAT scan. Despite the complications from this injury, he insisted on giving the lectures he had scheduled for the special course in human skeletal paleopathology held at the Smithsonian Institution in 1985. Florence developed pancreatic cancer and passed away soon thereafter, which was a terrible burden for Dr. Putschar to bear. In 1986 he was preparing the keynote lecture for the International Academy of Pathology congress in Vienna on the past, present, and future of pathology, and he planned to use an analogy of white light dissected into its multitude of colors by a prism, but he had to cancel his presentation because of medical complications that led to his death in April 1987.

His professional peers regard him as one of the world's outstanding pathologists, possessing a breadth of knowledge that very few, if any, could match. Those who were fortunate to socialize with him outside the hospital knew him as a renaissance man of diverse interests and avocations. Walter Putschar is firmly entrenched in the memories of those whom he mentored and who became his colleagues. He will forever be a part of MGH Pathology: every day medical students, residents, and staff walk in to the conference room named in his honor; every year the department celebrates his achievements in an annual lectureship; and every time we learn, we celebrate his spirit.

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