

In Memoriam

PAUL KIMMELSTIEL, M.D.

1900-1970

Dr. Paul Kimmelstiel died in Oklahoma City on October 7, 1970, in the 71st year of his life.

Born on March 21, 1900, into a family of Hanseatic merchants in Hamburg, Germany, where he attended elementary and secondary school, he studied medicine at the universities of Kiel, Munich, Hamburg, Bonn, and Tübingen, and obtained his M.D. degree at Tübingen in December 1923. One year earlier, while still a student, he published his first scientific paper (*Zbl. Bakt.* 89:113, 1922), in which he reported on "peculiar bactericidal properties of the root bacillus," properties mediated by the "diffusion of a bacteriolytic agent" that proved lethal for staphylococci and other microorganisms. This unequivocally clear description of an antibiotic principle anticipated Sir Alexander Fleming's discovery of penicillin by six or seven years but, unfortunately, its potential significance for the alleviation of human suffering was destined to remain unrecognized by Kimmelstiel's contemporaries.

Paul Kimmelstiel's internship and residency years (1924-1928) included training in bacteriology and serology (at the University Hospital of Hamburg-Eppendorf under Hans Much), in pathology under Friedrich Wohlwill at the St. Georgs-Krankenhaus of Hamburg, and biochemistry at the University of Breslau under Professors Winterstein and Schmitz. Upon entering Theodor Fahr's Department of Pathology in Hamburg-Eppendorf, where he became Privatdozent on July 23, 1930, he was thus well prepared for his early scientific career, which centered upon biochemi-



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cal, methodologic, and morphologic investigations in the field of lipid metabolism and lipid storage disorders. Yet, this promising development came to an abrupt end with the ascendancy of National Socialism in 1933, so that Kimmelstiel, who was Jewish, his wife Lotte, and his two small daughters were forced to emigrate to America.

Here, almost four decades ago, the memories and economic consequences of the Great Depression still dominated everyone's life, and the scientists fleeing Europe in droves found it hard to secure positions commensurate with their skills and expectations. Paul Kimmelstiel was fortunate in having worked with G. Kenneth Mallory

while still in Hamburg, and the latter was instrumental in obtaining an instructorship for Kimmelstiel at Harvard University in February 1934. His fellow instructors, all tutored by S. Burt Wolbach, included Granville A. Bennett, Sidney Farber, Arthur T. Hertig, Tracy Mallory, and Shields Warren—to name but a few.

Having spent almost five years in Fahr's department, it was only natural for Paul Kimmelstiel to acquire a deep and abiding interest in renal pathology; after all, it had been Theodor Fahr, the pathologist, and Franz Volhard, the clinician, who had laid the foundations of modern nephrology with the publication of their treatise on Bright's disease in 1914. In Hamburg, Kimmelstiel had already attempted to elucidate the relationship between nephrosclerosis and arterial hypertension, and the 18 months he spent at Harvard were dedicated to research along similar lines. It was here that he and Clifford Wilson, who now lives in London as a Professor of Medicine, first described nodular intercapillary glomerulosclerosis, which has remained the only known morphologic alteration specific, or almost so, for diabetes mellitus (published in *Amer. J. Path.* 12:83, 1936).

From 1935 to 1940, Paul Kimmelstiel served as Associate in and, later, as Associate Professor of, Pathology at the Medical College of Virginia. In 1936 he was also appointed coroner of the City of Richmond. Thereafter, he became Director of Laboratories at Charlotte Memorial Hospital in Charlotte, North Carolina, and stayed on in this post for 18 years. In Charlotte, where I first met him during my residency training, he was the hub of a regional circle of pathologists who gathered regularly to discuss problem cases. Although the possibilities for research were limited during this period, several remarkable papers were published, including one in which a peculiar bone lesion, the subperiosteal cortical defect, could be estab-

lished as an entity *sui generis* (*Bull. Hosp. Joint Dis.* 12:286, 1951). Of great significance for the health of the community was Kimmelstiel's early interest in exfoliative cytology. He was one of the first to open a school for cytology technicians, and in 1958, when he left Charlotte, no fewer than 30% of the entire white female population of the city were enrolled in regular cytology screening programs sustained in close cooperation with practicing physicians but without any reliance upon public financial support.

Soon after he had moved to Milwaukee, Wisconsin, where he served as Director of Laboratories of the Milwaukee County Hospital from 1958 to 1964 and as Professor of Pathology at Marquette University from 1958 to 1966, Paul Kimmelstiel began a decade of renewed and vigorous scientific activity devoted exclusively to renal pathology, and that at a time when others of his age might have been content to relax and to prepare for retirement. He redefined "nephrosis" in an attempt to bridge the communications gap between pathologist and clinician, resumed his deliberations on the pathogenesis of acute tubular nephrosis (shock kidney), investigated chronic pyelonephritis, and continued his study of diabetic glomerulosclerosis at the ultrastructural level. In 1962, he and his co-workers—together with, but independent of, H. Z. Movat and his colleagues—described the "hump," that is, a characteristic if not specific deposition of electron-dense material, probably representing immune complexes, on the glomerular capillary basement membrane in acute glomerulonephritis (*Amer. J. Clin. Path.* 38:280, 1962). These years also saw the last of the extended controversies around the renal glomerular mesangium; nobody now denies its existence, and thus it appears that the topographic term "intercapillary," as employed by Kimmelstiel and Wilson in 1936, was a fitting designation after all.

For the last four years of his life, Paul Kimmelstiel was Distinguished Professor of Pathology at the University of Oklahoma Medical Center in Oklahoma City. Here, he and his team continued their meticulous quantitative analyses, already initiated in Milwaukee, of the intact as well as the diseased human glomerulus and found means to investigate other timely topics in renal pathology as well.

Paul Kimmelstiel was the author, or co-author, of more than a hundred scientific papers covering many branches of clinical and morphologic pathology; a complete list of his publications may be found in the forthcoming (55th) volume of *Verh. Dtsch. Ges. Path.* (1971). Among the awards and honors that he received were the Elliott Proctor Joslin Medal of the New England Diabetes Association, in 1966, and the election, in 1968, to permanent honorary membership in the Japanese Society of Nephrology; the latter's plaque bears the names of Bright, Volhard, and Masugi.

"P.K.," as he was affectionately known, was an inspiring teacher. Although some of those not sufficiently familiar with his ways thought that they could detect strands of dogmatism in the fabric of his personality, his assertion of leadership was well earned; for at the most, he demanded of others only as much as he demanded of himself, and often, it was considerably less. He strove for, and insisted upon, the greatest possible precision of expression, and he was the last not to admit his own shortcomings and mistakes, few as these were. I always thought that, on the whole, his attitudes reflected a remarkably successful amalgamation of the more nearly authori-

tarian heritage of his German scientific past and the comparatively greater degree of tolerance and understatement that are considered traditional aspects of the American way of life.

In March 1970, in an editorial that all of us would do well to read (*Arch. Path.* 89:193, 1970), Paul Kimmelstiel published his thoughts on the changing image of the clinical pathologist. In a letter written a few days before his death, he defended the points he made after his views had been called a "form of archaism" (*Arch. Path.* 90:287, 1970). He concluded with these words: "(It is correct to state) that my personal experience has taught me the limitations of keeping apace in modern pathology. My training—in contrast to many of my contemporaries—included one year in biochemistry and one year in microbiology, in addition to morphology. Later in life I functioned for almost 20 years as so-called clinical pathologist. If (it is now stated) that such experience is not sufficient reason to recommend what I did, one can only conclude that the humble and modest self assessment is no longer desirable or practiced in our modern world." There is nothing that one could add to these sentences.

Paul Kimmelstiel leaves his wife, Dr. Lotte Kimmelstiel, and two married daughters.

I am indebted to Miss Clelia Johnson, Oklahoma City, Dr. Kimmelstiel's close associate for three decades, for her invaluable help in securing pertinent bio- and bibliographical data.

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