



Elexious T. Bell

1880 - 1963

Arnold Lazarow, M.D., Ph.D., Minneapolis

The unexpected death of Dr. Elexious T. Bell on Sept. 16, 1963, brought to a close the career of a brilliant scientist, an outstanding teacher and a fine man. Killed in an automobile accident which also seriously injured his wife and daughter, he showed at death one of his most outstanding characteristics—his concern for others. Arriving at the hospital in critical condition, "Tommy," as his friends called him, directed the attending physician to treat his family first. He made his own terminal diagnosis, saying, "I am going into shock," and died, thus closing a significant chapter in the story of diabetes research and medical education.

Dr. Bell was born in Hatch, Missouri, on Aug. 30, 1880, the son of a country doctor. He was graduated at the top of his class from Monroe City High School in Missouri and entered the University of Missouri where he received a B.S. degree in 1901 and was elected to Phi Beta Kappa. Two years later he received his M.D. degree from the University of Missouri and began his scientific career there, serving as an instructor and as an assistant professor in anatomy until 1910. In that year he came to the Department of Anatomy at the University of Minnesota. In 1912 he was promoted to assistant professor of pathology and in 1920 he was appointed head

of the Department of Pathology. He served in that capacity for twenty-nine years. Although he formally retired in 1949, Dr. Bell continued his research and teaching with undiminished vigor until his death.

Dr. Bell was one of the most beloved teachers in the University of Minnesota Medical School, admired by medical students and by all whose training he molded. He treated medical students and Fellows as his colleagues and he was unselfish with his time and sympathetic to the problems of youth. He gave counsel and courage to the troubled and, by his example, he influenced many to devote their lives to teaching and research. His door was always open and he welcomed with kindness and consideration visitors who interrupted his full schedule.

Dr. Bell received many honors. He was given the Distinguished Service Award of the Minnesota Sigma Xi Chapter in 1956. In 1959 he received the honorary Doctor of Science degree from the University of Missouri and in 1961 the Banting Medal given by the American Diabetes Association.

Although Dr. Bell is probably more widely known among medical graduates for his textbooks on pathology, which went through eight editions, he also contributed several monographs on diabetes mellitus and on renal disease. He was the author of more than 100 scientific publications.

It is noteworthy that his first paper, "The Development of the Thymus," published in 1905, stands at the forefront of current studies of antibody production and the role of the thymus. In this paper, Dr. Bell gave a clear account of the conversion of the thymus epithelial components to a cellular reticulum which directly differentiates into cells of the lymphoblast type. He stated, "The lymphoblasts gradually break loose from the syncytium, passing into its spaces and becoming lymphocytes. . . . Lymphocytes are constantly being formed at the expense of the growing syncytium." This exposition in 1905 has great significance in current studies dealing with the origin of the lymphocyte and the differentiation of the antibody-producing systems.

Dr. Bell's articles dealing with the pathology of diabetes mellitus clearly demonstrate the importance of beta cell granulation. In 1947 he wrote:

"In seventy-six diabetic pancreases stained by Gomori's method which I have studied, 25 per cent showed no beta granules and 38 per cent showed a very marked reduction of beta granules. In 63 per cent of this small series a diagnosis of diabetes could be made on the basis of the deficient beta granulation. However, in 37

per cent the beta granulation was either normal or only moderately reduced. The degree of degranulation of the beta cells could not be correlated with the severity or any other feature of the diabetic state. The alpha cells are unaffected."

These beta cell granulation studies were later extended to include a group of 995 cases of diabetics and these results were reported in *DIABETES* in 1953.

Dr. Bell made many important contributions to our understanding of the complications of diabetes. In an extensive study of 1,214 diabetics studied postmortem between 1910 and 1948, he reported that coronary disease was about twice as frequent in the diabetic as in the nondiabetic male and three times as frequent in the diabetic as in the nondiabetic female. Gangrene in the lower extremities as a consequence of arteriosclerosis was about forty times as frequent in the diabetic as in the nondiabetic. He concluded that, although the frequency of severe vascular lesions increases with the duration of the diabetes (in individuals who die before the age of sixty), the development of complications appears to be independent of the severity of the diabetes.

One of his most significant observations was his recognition of the importance of diffuse intercapillary glomerulosclerosis as a complication of diabetes. He noted that the diffuse lesion was about as frequent as the nodular and that the two forms were often found in the same kidney. He found no examples of intercapillary glomerulosclerosis in diabetics prior to the age of twenty, but unlike arteriosclerosis, there was little increase in lesion incidence with age after the third decade. Intercapillary glomerulosclerosis occurred with the same frequency in both sexes, but lesions were more severe in females. He noted that the frequency of intercapillary glomerulosclerosis increased progressively with the duration of diabetes and that after more than fifteen years of the disease, there was a 55 per cent incidence of intercapillary glomerulosclerosis.

Of great etiological significance is his finding that the development of intercapillary glomerulosclerosis appeared to be independent of the severity of the diabetic state. Although in the group as a whole he reported that vascular lesions were somewhat less frequent in moderate than in severe diabetics, this apparent relationship was explained by the fact that young diabetics rarely fall into the mild group. If the severity of the diabetic state has no appreciable influence on the development of vascular lesions, Dr. Bell reasoned that insulin deficiency (and the consequent disturbance of

metabolism in the diabetic state) may not be responsible for accelerating vascular complications.

These studies on the complications of diabetes were summarized and presented at the Annual Meeting of the American Diabetes Association in 1950 and published in the *Proceedings of the American Diabetes Association*. This paper is so full of meaningful observations that it should be required reading for all sophomore medical students.

Dr. Bell's many contributions to pathology and to diabetes have been important milestones during the past half century. His deep concern for medical students, residents, associates and colleagues will assure that his influence will be equally strong in the last half of this century.

In passing, it is a pleasure to note that Dr. Bell lived a long and full life which was productive and exemplary until his death.

F. Gorham Brigham

1882 - 1964

Alexander Marble, M.D., Boston

Dr. F. Gorham Brigham of Brookline, Massachusetts, died at his home on March 10, 1964, in his eighty-second year. Until the illness which forced his retirement in 1955, Dr. Brigham had been an extraordinarily busy and active clinician whose practice over the years included many hundreds of patients with diabetes.

Dr. Brigham was born on Sept. 27, 1882, at Flushing, New York. He was graduated from Colgate University in 1905, where he was class president, president of his college fraternity, captain of the basketball team for two years, and captain of the football team. Thereafter he was prominent in alumni affairs and was honored by being elected an honorary member of Phi Beta Kappa, by being presented the alumni distinguished service medal and by the award of an Honorary Doctor of Science degree. He continued his active interest in football and was a charter member of the National Football Hall of Fame.

Dr. Brigham was graduated from Harvard Medical School in 1909, where he had been president of his class. Following his hospital training he began practice in Boston and as one of his activities worked from 1911 to 1925 in the Out-Patient Department of the Massachusetts General Hospital where he established the Diabetes Clinic. Dr. Brigham developed his special interest in diabetes early in his career and for three years was as-

sociated with Dr. Elliott P. Joslin. During most of his professional life his major association was with the New England Deaconess Hospital where he took an active part in teaching both in the classes for diabetic patients and in the School of Nursing. He was Physician-in-Chief at the Deaconess from 1935 to 1946 and was a member of the Board of Trustees. Over many years, young physicians in succession served as his assistants and received invaluable training and experience from him.

Dr. Brigham joined the Medical Corps of the Army in World War I, saw service overseas in France and rose to the grade of Major. He was a member of the American Diabetes Association, Honorary President of the New England Diabetes Association and a Fellow of the American College of Physicians.

Dr. Brigham is survived by his wife; a son, F. Gorham Brigham, Jr.; a daughter, Mrs. Harriet Dickson; and eight grandchildren.

Dr. Brigham was meticulous as to details of treatment and was a prodigious letter-writer. During forty-two years of medical practice he brought health and happiness to a vast number of patients with diabetes and will be long remembered by them and their families as well as by his friends and associates in the medical profession.