ALOIS ALZHEIMER (1864–1915)

ALZHEIMER will always be remembered for having demonstrated the unequivocal changes that occur in the brain in certain organic mental diseases. The leading psychiatrists of the late nineteenth century seriously doubted the value of histological study in such diseases, as psychological investigation of the "centers of thinking" dominated all else. Emil Kraepelin (1856–1926), "the Linnaeus of Psychiatry," was an exception, for in planning the institutes of psychiatry of which he was to be the Director, he provided unparalleled facilities for the study of pathological anatomy. To pursue this aspect he appointed the most promising men of the day, among them Alzheimer.

Kraepelin’s conversion to patho-anatomical research occurred rather late in his career, after the turn of the century. Before that it was different. Oskar Vogt relates that he visited Kraepelin at Heidelberg in 1894, bringing him greetings from Forel. Kraepelin asked what he planned to do in the future. "Brain anatomy of the psychoses," replied Vogt. "Then I must give you a bad prognosis," said Kraepelin, "for anatomy can contribute nothing to psychiatry." Kraepelin had in mind certain studies which had contributed nothing to the understanding of psychic behavior: those by Forel on the subthalamic region in man and the experiments carried out by his teacher, von Gudden, on rabbits. In 1905 it was Kraepelin’s turn to visit Oskar Vogt in Berlin. He had read Vogt’s and Brodmann’s papers on cortical cytoarchitectonics and now carefully studied the preparations. As a consequence, he became convinced of the importance of investigation of the brain in the psychoses. Nissl had all along been enthusiastic, but not Alzheimer, who felt that such studies had their limitations.

The characteristic of Alzheimer’s work was to combine the clinical and pathological approach to brain disease. Having been a clinician before embarking on pathology, he saw with clarity the determining factors responsible for the clinical ensemble. Patiently, he observed the most characteristic cases of each disease group,
waiting sometimes for years before reporting his combined clinical and pathological findings. Thus emerged his classical descriptions of general paresis, arteriosclerosis, senility, and acute delirium.

Alzheimer established his reputation with a standard work on
the histopathology of general paresis, typical and atypical. In arteriosclerosis he stressed the frequency of intracortical changes, which were inconspicuous, and he made the astute observation that arteriosclerotic and senile processes are unrelated. Finally, he described the pathological changes underlying senile dementia and its variants, among which he classified that form which Kraepelin called "Alzheimer's disease." In other conditions, reactive changes in glia in the cortex in the absence of other pathological alterations were to him a particularly sensitive indicator of a disease process. His term, "Amöboidose," signifying disintegration of astrocytes, was later called "clasmatodendrosis" by Cajal.

The twenty seats in his laboratory in Munich were always filled by students from all over the world. None of them could forget the many hours which Alzheimer spent with each individually, his large head bent over the microscope, his pince-nez dangling on a long string. The indispensable cigar he forgot as soon as he sat down, only to light another as he moved to the next student; by the end of the day some twenty big stumps were found around the laboratory. He had little to beckon him home on time, as his wife had died.

Alzheimer was born in Markt breit-am-Main (a small town in Bavaria), the son of a notary. He went to school in Aschaffenburg, and attended the medical schools of the Universities of Berlin, Würzburg and Tübingen from 1882 to 1887. He considered himself a pupil of von Kölliker, under whom he had worked as a young student in Würzburg. The atmosphere of this city he found congenial; he was no ascetic during his student days. Following an internship, he took a position at the Städtische Irrenanstalt in Frankfurt-am-Main (1888), where Nissl joined him one year later. Here began the close cooperation which lasted a lifetime. It was so perfect a companionship that it is impossible to decide which of the two owed more to the other. Nissl obtained his perspective from the laboratory bench, sitting there theorizing; Alzheimer's came from the clinic. Having known both of them, I would guess that the flood of startling ideas was Nissl's, but that it was Alzheimer who demonstrated their correctness histologically. Alzheimer had such a gift for describing what both had seen under the microscope, that the importance of their findings became immediately evident.
When Alzheimer's application for the position of director of a state institution had been turned down, Kraepelin, who had called Nissl to Heidelberg by 1895, added Alzheimer as well to his staff in 1902. In 1903 Alzheimer followed Kraepelin to Munich, where he worked in the Anatomisches Laboratorium der Psychiatrischen und Nervenklinik. Alzheimer habilitated himself as Privatdozent in 1904 and became Extraordinarius in 1908. These years—from 1908 to 1912—were Alzheimer's finest.

In Heidelberg, Alzheimer was also a close friend of Wilhelm Erb. The story goes that Erb, an authority on syphilis, was consulted by a banker who had contracted the disease. At the termination of the treatment (such as it was), the banker, to demonstrate his gratitude, offered to finance a scientific expedition to North Africa, provided that he and his wife could go along. Erb saw no contraindication. The expedition had hardly gotten underway when Erb received a frantic telegram from Algeria that the banker had had another mental breakdown. Erb prevailed upon Alzheimer to go to Algeria and bring home the banker and his party. The banker died, and Alzheimer married the widow.

In 1912 Alzheimer was appointed to the chair of psychiatry at the University of Breslau. He fell ill from a heart condition while on the train to Breslau. On arrival he was taken to a hospital and had to remain there for a time before taking on his responsibilities at the University. Onset of World War I left him without assistants. Years of strenuous work, day and night, and never a vacation, had sapped so much of his strength that little resistance was left, they say, when his rheumatic endocarditis recurred. He died at the age of fifty-two.

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References


ALOIS ALZHEIMER


MAX BIELSCHOWSKY (1869–1940)

BIELSCHOWSKY was born in Breslau, the son of a merchant. He received his medical education at the Universities of Breslau, Berlin and Munich, and the M.D. was conferred on him at Munich in 1893. Three years later, at the invitation of Ludwig Edinger, he joined the staff of the Senckenberg Pathologisches Institut at Frankfurt-am-Main. Here Weigert influenced him the most. It was not until after he had gone to Berlin in 1896 to head Kurt Mendel’s laboratory that he began to contribute to neurological literature. In that year his first work with Paul Schuster on the histopathology of disseminated sclerosis appeared (additional publications in 1903, 1927 and 1932), and it was at about this time that he commenced his fundamental studies on the silver impregnation of nerve fibers, published in 1902, and 1903, modified in 1908, and applied in intravital staining with Stanley Cobb in 1924. His monograph on myelitis and inflammation of the optic nerves was published in 1901, and in the same year appeared his initial study on brain tumors, which he continued in collaboration with Ernst Unger, Henneberg, Simons, and Bruno Valentin.

A new period in his scientific work began when in 1904 he joined Oskar Vogt at the Neurobiologisches Universitäts-Laboratorium in Berlin. Many publications in the Journal für Psychologie und Neurologie resulted from the stimulating partnership with both the director and Cécile Vogt. After the Institute had been moved to new quarters at Berlin-Buch (1931), Bie尔斯chowsky’s work as Abteilungsleiter of the Institute continued unabated, but unfortunately his friendship with Vogt became strained.

In the old laboratory originated the studies on the cytoarchitecture of the cerebral cortex and the striate body, in which he partic-