

Alzheimer 100

At the 37th Conference of the South-West German Psychiatrists in Tübingen on 3rd-4th November 1906, Dr Alois Alzheimer presented his clinical and neuropathological findings in the case of a patient, Auguste D, who suffered cognitive decline and behavioural changes in the presenium. The presentation, entitled 'On a peculiar disease process of the cerebral cortex', apparently prompted no comments or reaction from the audience. The first case of 'Alzheimer's disease' had been reported, although the condition was not to bear this eponym until Emil Kraepelin used it in the 8th edition of his psychiatry textbook published in 1910.¹²

Alzheimer's lecture was published in the following year in the *Allgemeine Zeitschrift für Psychiatrie und Psychisch-Gerichtlich Medizin*³ (English translations are available⁴⁻⁶). It detailed the clinical observations Alzheimer and his colleagues in Frankfurt had made on Auguste D from the time of her admission in 1901, aged 51, until her death in 1906, and also Alzheimer's neuropathological findings (by this time he had moved to Munich, via Heidelberg), including peculiar changes in the neuronal neurofibrils visualised with the Bielschowsky silver stain, later to be called neurofibrillary tangles, and miliary foci of extracellular material, corresponding to senile plaques. Both the case file⁷ and the pathological slides⁸ of Auguste D have been rediscovered



and re-reported, confirming that Auguste D did indeed have Alzheimer's disease as we now understand it.

In a later contribution⁹ (also available in English¹⁰), Alzheimer described a further personally examined case, Johann F, and three other pathological cases, and linked the neuropathological substrate of neurofibrillary pathology to the clinical correlate of dementia. The pathology of this second patient has also been re-examined:¹¹ apparently it showed numerous senile plaques but no neurofibrillary tangles in the cerebral cortex. More recently, the kindred of Johann F has been extensively investigated through the historical records, suggesting an autosomal dominant disorder with variable penetrance and with age of onset between the 30s and mid 60s.¹² The index case was negative for amyloid precursor protein (APP) gene mutations,¹¹ but was not investigated for presenilin-1 mutations.

The 100th anniversary of the first description of Alzheimer's disease has been marked by a publication documenting some of the clinical and scientific progress which has been made over the ensuing century, the vast majority of it within the last 40 years.¹³ Although much has been learned about disease aetiology and pathogenesis, the ultimate goal of disease-modifying treatment for AD remains elusive, although it does not seem unreasonable to hope for new therapeutic developments in the foreseeable future.



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References

- Hoff P. *Alzheimer and his time*. In: Berrios GE, Freeman HL (eds.) *Alzheimer and the dementias*. London: Royal Society of Medicine, 1991:29-55.
- Bick KL. *The early story of Alzheimer disease*. In: Terry RD, Katzman R, Bick KL (eds.) *Alzheimer disease*. New York: Raven, 1994:1-8.
- Alzheimer A. *Über eine eigenartige Erkrankung der Hirnrinde*. *Allgemeine Zeitschrift für Psychiatrie und Psychisch-Gerichtlich Medizin* 1907;64:146-8.
- Wilkins RH, Brody LA. *Alzheimer's disease*. *Arch Neurol* 1969;21:109-10.
- Jarvik L, Greenson H. *About a peculiar disease of the cerebral cortex*. *Alzheimer Dis Assoc Disord* 1987;1:7-8.
- Stelzmann RA, Schintzlein HN, Murtagh FR. *An English translation of Alzheimer's 1907 paper, Über eine eigenartige Erkrankung der Hirnrinde*. *Clin Anat* 1995;8:429-31.
- Maurer K, Volk S, Gerbaldo H. *Auguste D and Alzheimer's disease*. *Lancet* 1997;349:1546-9.
- Graeber MB, Kösel S, Grasbon-Frodl E, Möller HJ, Mehraein P. *Histopathology and APOE genotype of the first Alzheimer disease patient, Auguste D*. *Neurogenetics* 1998;1:223-8.
- Alzheimer A. *Über eigenartige Krankheitsfälle des späteren Alters*. *Zeitschrift für die gesamte Neurologie und Psychiatrie* 1911;4:356-85.
- Förstl H, Levy R. *On certain peculiar diseases of old age*. *History of Psychiatry* 1991;2:71-101.
- Graeber MB, Kösel S, Egensperger R et al. *Rediscovery of the case described by Alois Alzheimer in 1911: historical, histological and molecular genetic analysis*. *Neurogenetics* 1997;1:73-80.
- Klünemann HH, Fronhöfer W, Wurster H, Fischer W, Ibach B, Klein HE. *Alzheimer's second patient: Johann F. and his family*. *Ann Neurol* 2002;52:520-3.
- Perry G, Avila J, Kinoshita J, Smith MA (eds.). *Alzheimer's disease: a century of scientific and clinical research*. Amsterdam: IOS Press, 2006.

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