

A. Biemond 1902-1973

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Arie Biemond was born on May 1, 1902 in Amsterdam. He lived and worked his entire life in this city. He studied medicine at the Amsterdam University, and qualified as a physician in 1928.

In 1931 he became assistant to Prof. B. Brouwer (1878-1958) who initially had his department of neurology at the Binnengasthuis, later in the Wilhelmina Gasthuis (Pavilion 1) in Amsterdam. The subject of Biemond's M.D. thesis (Amsterdam, 1931) dealt with an experimental and anatomical study of the corticofugal optic connections in the monkey and the rabbit ('Experimenteel-anatomisch onderzoek omtrent de corticofugale optische verbindingen bij aap en konijn'; promotor: Prof. Dr B. Brouwer). In the same year, he became *chef-de-clinique*. During the years of World War II he lectured clandestinely. On May 10, 1940 he had asked, with a number of colleagues, for exemption from his teaching duties.

In 1945 he was appointed professor of neurology at the University of Amsterdam as the successor to Brouwer, a position originally held by J.K.A. Wertheim Salomonson (1878-1945). Biemond's inaugural oration in 1945 dealt with hereditary nervous system diseases ('Enige beschouwingen over erfelijke organische zenuwziekten'). Besides his regular work in the academic clinic, he established a private practice.

Biemond retired on December 31, 1968, because of poor health and impaired vision. In his valedictory lecture (January 1, 1969) he criticised the increasing costs of medicine at the time and gave an explanation of the subjective experience of certain neurological disorders (hemianopia, dysaesthesia). He died in Amsterdam, August 1, 1973, at the age of 71. Prof. Dr. W.A. den Hartog Jager (1908-1973) succeeded him.

Most of Biemond's ± 100 publications in Dutch and international journals are characterised by an explicit foundation of his conscientious clinical observations, usually bolstered by pertinent neuropathological findings. Moreover, he was the author of two unique major textbooks on neurology, based on personal experience. The words 'bedside neurology' run through the two volumes as a continuous thread. One book deals with brain diseases: it was published in 1958, and has been updated and reprinted several times, and translated into English (1973). The other book deals with diseases of the spinal cord and peripheral nervous system. The book on brain diseases is largely based on the author's observations of patients in his clinic and the



Figure 1.
Prof. Dr A. Biemond.

findings of some necropsy cases. Unfortunately, his work on an updated edition (and a translation into English) of his book *Spinal Cord and Peripheral Nervous Diseases* could not be completed. For decades both textbooks were standard reading for students at all Dutch universities.

Biemond's name has earned lasting fame through several publications of high quality. He was the first to describe the disturbance in the potassium metabolism (hypokalemia) in familial periodic paralysis. Well-known is his work on the hereditary degeneration of the posterior column. Other areas for which he had showed long-continued interest were (experimental) cervical position nystagmus, spinocerebellar degeneration, Guillain-Barré syndrome, ataxia telangiectasia, poliomyelitis anterior chronica, and contusio cervicalis posterior.

Several of his *princeps* papers won eponymic recognition:

- Biemond's disease (also called Biemond syndrome I, Biemond's ataxia, or posterior column ataxia) stands for hereditary posterior column ataxia. The ataxia is due to degeneration of the posterior column and large fibres of the dorsal roots, and loss of Purkinje cells. Transmission occurs as an autosomal dominant trait.
- Biemond's hypothalamic syndrome (also called Biemond syndrome II, Biemond-Van Bogaert syndrome) defines the clinical entity of the Bardel-Biedl syndrome combined with iris colobomas. The syndrome is characterised by mental retardation, coloboma of the iris, obesity, hypogonadism, and polydactyly. Hypospadias and hydrocephalus may occur. The syndrome is believed to be transmitted as an autosomal recessive trait.
- Congenital familial analgesia, Biemond type. This form of congenital insensitivity to pain is characterised by an absence of pain sensation, diminished touch and temperature senses, and absent tendon reflexes. The pathological findings showed defects in the posterior root ganglia, Gasserian ganglion, posterior roots, posterior horns, posterior columns, and the spinal grey matter. Transmission occurs as an autosomal recessive trait.
- Myopathia distalis juvenilis hereditaria. The relatively benign disorder is characterised by symmetrical paresis and atrophy of the distal muscles of the extremities. The onset is between the ages of 5 to 10 years, progression occurs up to the age of 20 years, when it becomes stationary. This familial syndrome is transmitted as an autosomal dominant trait.
- Brachydactyly-nystagmus-cerebellar ataxia syndrome. This syndrome consists of brachydactyly (shortening of the 5th metacarpal bone), cerebellar ataxia, nystagmus, strabismus, and mental retardation. The condition is believed to be transmitted as an autosomal dominant trait.

His superior knowledge of neurology (rooted in a vast knowledge of the literature and vast personal clinical experience), combined with his tact to guide his staff, his great zest for work, and his constant, enthusiastic dealing with neurological problems, made him a unique and gifted teacher. He liked to examine and demonstrate a patient and to walk the wards. His scrupulously careful way of examining every

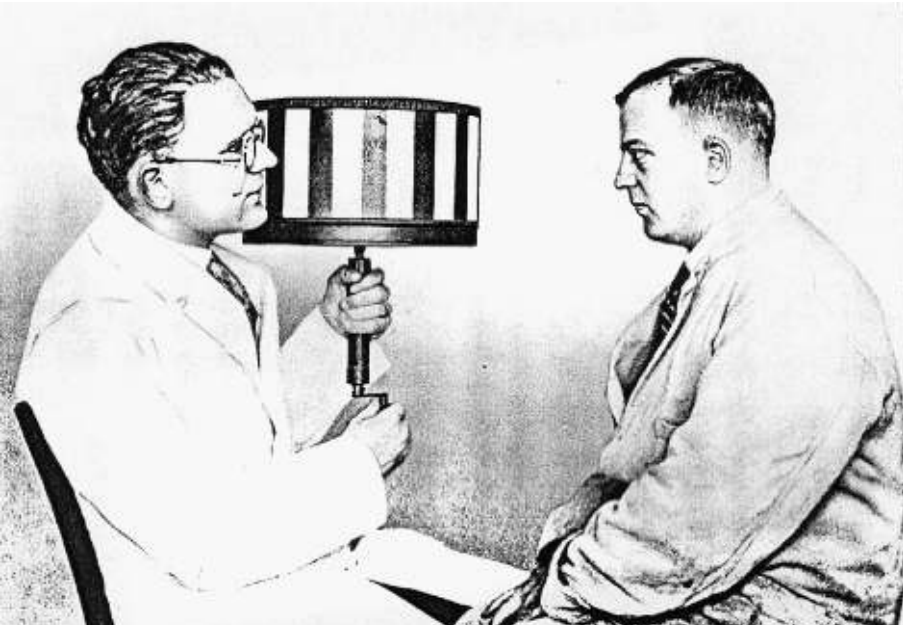


Figure .
Examination of the optokinetic nystagmus.

patient was legendary in students and staff circles. He enjoyed teaching at the bedside and in the lecture hall. Many of the students judged his lectures as the best in the medical faculty in Amsterdam. Biemond prepared them meticulously. The present authors, both trainees of Biemond, can only testify to the veracity of these statements.

Biemond repeatedly pointed out to his disciples the overriding significance of clinical symptoms and signs. In diagnostic considerations, he said, they always have to come first in any relation with laboratory findings and other diagnostic technical tests. In the preface to the book *Brain Diseases* this fundamental clinical attitude is unequivocally formulated: "We are living in an era in which the, admittedly indispensable, 'mechanical' diagnosis of brain diseases by means of pneumoencephalography, arteriography, electroencephalography, echoencephalography, scintigraphy, etc., threatens to undermine the importance of clinical investigation." In the opinion of the present authors, this warning in principle still holds true.

Biemond supervised the doctorate theses of disciples, among whom one of the present authors (JF) graduated on the body scheme and its disorders.

After World War II, Biemond stimulated several of his staff members to specialise in sub-specialities, such as neuropathology and muscle diseases (J. Bethlem), paediatric neurology (P. Fleury), neurological intensive care (L. van Trotsenburg), neuroradiology (H.W. Stenvers, Jr), electromyography and electroencephalography (W.J.M. Hootsmans) and experimental neurology (W.A. den Hartog Jager). Neurosurgery, introduced in the Netherlands by Brouwer (), also had its residence in Pavilion II

of the Wilhelmina Gasthuis (Prof. Dr W. Noordenbos). This continued the close collaboration of the two clinics, established by Brouwer in 1882.

In short, Biemond set up the best neurological academic clinic in the Netherlands, which also had an excellent reputation abroad: "Amsterdam is not only the capital of the country, it has from the very beginning been the centre of Netherlands neurological science" (Biemond 1937). He would have been pleased to read some years later (had he lived long enough): "Most of the neurologists now practising in the Netherlands are scientific descendants in the first, second, or even third generation of the Amsterdam neurological school" (Schulte and Endtz 1967).

Like most neurologists of his generation, Biemond did his own neuropathological work-up and diagnosis. He was one of the early members of the Section of Neuropathology, founded within the Netherlands Society of Psychiatry and Neurology.

Biemond was active in, and twice president of, the Society of Amsterdam Neurologists. This Society played a leading role in Dutch neurology for many years; it was founded in 1882 by fourteen Amsterdam neurologists among whom figured internationally renowned names such as Ariëns Kappers, Bolk, Van Valkenburg, E. de Vries, Wertheim Salomonson and Winkler. In 1967, on the occasion of the 85th anniversary of the Society of Amsterdam Neurologists, Biemond edited the memorial volume: 'Recent Neurological Research'.

Biemond was scientific supervisor of the Alexander van der Leeuwkliniek in Amsterdam, a hospice for epilepsy, during the 1930s. Later, this clinic became associated with his neurological clinic at the Wilhelmina Gasthuis, and thus lost its categorical character.

Biemond was Chief Editor of the Psychiatric and Neurological Papers (*Psychiatrische en Neurologische Bladen*) from 1937 until 1967. From the beginning in 1937, he was a member of the editorial board of the multivolume *Handbook of Clinical Neurology*, edited by P.J. Vinken en G.W. Bruyn, and acted as editor of Volume 1, 'Localisation in Clinical Neurology' (1967).

It is no sinecure to sketch Biemond's personality. In any situation he left the indelible impression of a man with a strong and honourable character. The subject of his conversations usually concerned neurological problems, which he invariably discussed with great enthusiasm. In fact, he considered neurology as "the queen of specialities" (Biemond 1937). More than once, he surprised his pupils with a vast command of the neurological literature. Every day, at the customary 'morning statement', he gave his disciples a selection of the literature he had read the evening before ("I have read for you...").

As an individual he was hardly known, even to his staff members. He was punctual in his manners and dress, was even tempered, and rarely divulged things of his private life. Occasionally, he showed his inclination to history and French literature. It was for this reason, therefore, that he was greatly pleased when one of the present authors (AB) as a young pupil, used the term 'sclérose en plaques' instead of the common term 'multiple sclerosis' in one of his first case histories. Equally occasionally, he let on that he was interested in Amsterdam's football club Ajax. See also Voorhoeve (in press).

In 1911, the Ramaer Medal of the Netherlands Society of Psychiatry and Neurology was awarded to him. J.N. Ramaer (1844-1911) was one of the founders of The Netherlands Society Psychiatry and Neurology. On that occasion, the usual laudation emphasised Biemond's exactitude in research and his talent in combining clinical-neurological data with neuroanatomical and neuropathological findings.

Biemond was honorary member of the 'Société Française de Neurologie', the 'American Neurological Association', the 'Society of Amsterdam Neurologists', and the 'Netherlands Society of Psychiatry and Neurology'. In 1911, he was honoured by the high royal distinction of 'Knight in the order of the Dutch Lion'.

On the occasion of his retirement on January 1, 1911, a bust of Biemond was unveiled in the auditorium of the University of Amsterdam, and on the site of the former Wilhelmina Gasthuis, one of the new streets has been named 'Arie Biemond straat'.

The refresher courses of the Netherlands Society of Neurology for its members have been called 'Biemond courses' since 1911. Biemond's name will continue to be a living example for present and future generations of Dutch neurologists.

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