

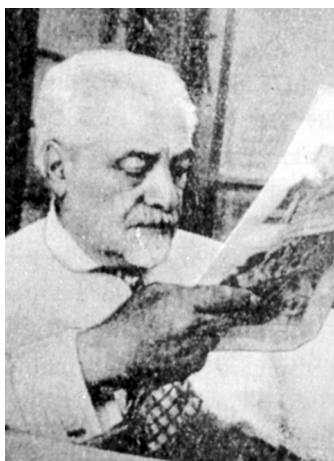
## Samuel Goldflam

Teofan M. Domżał

Neurology Department of the Military Institute of Health Services in Warsaw

Samuel Goldflam was an eminent physician and social activist, an internationally recognised neurologist and internist, one of the pillars of Polish neurology who made a great contribution to the development of neurological semiology. Goldflam's name is related to many symptoms and diseases, both in internal medicine and in neurology. It is encountered in present-day textbooks and routinely entered in the context of kidney percussion in patients' medical records.

Samuel Goldflam was born in Warsaw on 15 February 1852. His father Wolf was a merchant. After qualifying as a physician in 1875, he began working in the department of internal diseases at the Holy Spirit Hospital under Prof. Vilem Dusan Lambl, renowned for his description of the enteric parasite *Lambliia intestinalis*. It was a time of the emergence of neurology, a new medical specialty heralded by Thomas Willis in the 17<sup>th</sup> century. The new discipline aroused Goldflam's interest. He left his work under Lambl and went to Berlin's Charité Hospital to study neurology with Carl Friedrich Westphal, an already renowned physician and founder of the German school of neurology, whose disciple and successor was another well-known neurologist Hermann Oppenheim. After a period in Berlin, Goldflam went to Paris where the world's first Chair and Department of Neurology was established at the Salpêtrière Hospital, headed by Jean Martin Charcot, the first professor in the history of neurology, known as the "Napoleon of neurology" (the title of father of neurology is commonly reserved for the London-based doctor Thomas Willis, 1621-1675). This is where he met Joseph Jules François Félix Babinski (1857-1932), a department head, Charcot's deputy and his right hand. On return to Warsaw, which was then under Russian domination, Goldflam resumed working under Lambl. Afterwards, he established his



private practice in his apartment at 10 Graniczna Street, receiving patients as an internist and neurologist, at the same time expanding his practical knowledge in various Warsaw hospitals which he visited during his free time to examine patients.

Professor Eufemiusz Herman, my teacher and unsurpassed master in the art of neurological examination and reasoning, was personally fascinated with Samuel Goldflam. He repeatedly mentioned him during hospital rounds and on many other occasions. In his book *Neurologrzy Polscy* (published by

PZWL in 1958), Herman described Goldflam on no fewer than 17 pages, i.e. as extensively as his teacher and master Edward Flatau. Herman got to know Goldflam in person in 1918 and they met nearly every day for 10 years.

Referring to Herman's notes, Goldflam was 66 years old at the time of their first meeting. He was tall and carried himself in a dignified manner. He had a handsome face framed by white hair and a small white beard. Goldflam would travel by tram line 5 to the Jewish Hospital in Czyste almost every day to visit the neurology department headed by Edward Flatau, who was 16 years his junior. Goldflam examined patients in a very meticulous manner. His method was masterly – so Herman writes – and “when he threw the duvet off the patient's bed, it seemed he wanted to wrench every secret from the disease... and no detail ever escaped his attention”. He would note down his observations and opinions on pieces of paper or his white shirt cuffs and then considered them carefully, analyzed, synthesized and drew scientific conclusions. “There is no such thing as an interesting case”, he said. “There are only patients and each patient is an interesting case”. Goldflam shared his observations in discussions with younger physicians and Flatau, and verified them microscopically. As any

other neurologist living at the time, he participated in post-mortem examinations of dead patients. He took samples for microscopic tests and made microscopic slides which he then examined with others. Together with Flatau, he would often sit in front of the microscope in the neurology laboratory of the Marcei Nencki Institute at 8 Śniadeckich Street, analysing microscopic preparations and engaging in scientific discourse. Goldflam belonged to the group of so-called “wandering neurologists”, a term coined by Herman to refer to prominent Warsaw neurologists who did not have their own departments. “Goldflam”, Herman writes, “was an extraordinary person, a brilliant intellectual and scientist, one of the classics of international neurology (with a huge contribution to Polish neurology), a social activist and a sincere democrat”.

Goldflam’s **scientific accomplishments** are well-known to neurologists and internal medicine specialists. The kidney percussion sign described by Goldflam was associated with his name (as Goldflam’s sign) and secured itself a permanent place in international medical literature. Working under Lambl at the internal medicine department, Goldflam studied hernias, analyzing and describing their anatomical and clinical features in detail. He was also interested in the role of iodine in Jod-Basedow syndrome, to which he devoted a publication. Treating the poor, he documented bone lesions resulting from malnourishment, under the name of *osteoarthritis dysalimentaria*.

In neurology, he is best known for works on deep and skin reflexes, and descriptions of newly discovered diseases. One of the diseases documented by Goldflam in detail is myasthenia gravis. Even though the author of the first description of the disease was Thomas Willis in the 17<sup>th</sup> century and it was also investigated by Wilhelm Erb, the apocamnosis symptom and histological picture of the disease are Goldflam’s accomplishments, hence the eponym of “Erb-Goldflam syndrome”. Goldflam also proved that familial periodic paralysis described by Westphal was not a neurosis, demonstrating the absence of deep reflexes during the attack and lack of muscle response to electrical stimulation.

He devoted a lot of time and attention to observing and investigating reflexes. He examined the reflex behaviour during general anaesthesia, during fever, in children, in various diseases and during sleep. He noted that deep tendon reflexes might be asymmetrical in

tabes dorsalis; however their loss was not permanent and they recurred after pyramidal tract damage in post-stroke paralysis. Also of significance are Achilles tendon reflexes, whose absence in healthy individuals is extremely rare. Goldflam also found that skin reflexes could either be symmetrical or unilaterally absent, which suggested a pathology.

Another area of his scientific interest was spasticity. Investigating Babinski’s and Rossolimo’s signs, he compared their diagnostic value in various diseases and for different sites of pyramidal tract damage. Based on his research, he came to the conclusion that Babinski’s reflex had its spinal cord centre in segments L5 and S1. He attached a great importance to Rossolimo’s sign to which he dedicated an entire monograph published in the German language in 1930. He found that Babinski’s sign occurred more often than Rossolimo’s sign in capsular hemiplegia, while Rossolimo’s sign was more prominent in multiple sclerosis. Goldflam proved that Gordon’s sign (where squeezing the calf muscle elicits an extensor plantar reflex) was a defensive reflex not indicating spinal pathologies. In Goldflam’s time, researchers were also keenly interested in lethargic encephalitis, an epidemic of which swept through Europe. Goldflam himself thoroughly analysed each symptom of the disease, searching for its origin and site of damage.

As the information given above shows, Goldflam was a physician with a wide area of interests, a very perceptive observer and a persistent researcher. He published more than 100 scientific works, review papers and articles dealing with social topics. His contribution to explorations into the semiology of the nervous system is comparable with that of outstanding neurologists of the time when only well gathered medical history of the patient, clinical signs and correct interpretation determined the accuracy of diagnosis and, consequently, the patient’s future. By now, most of these achievements have become obsolete and no longer have a high diagnostic value. Intricate diagnoses preceded by deliberations taking many hours have now been superseded by computer diagnostics, electrophysiology and molecular biology. In some special cases, however, it is still clinical signs that make it possible to establish the patient’s diagnosis, e.g. in Parkinson’s disease, dystonias or epilepsy, while certain signs, e.g. Babinski’s or Rossolimo’s reflexes, have not lost their topicality and in everyday practice they are sometimes more significant than sophisticated auxiliary tests.

Goldflam's **social activity** is particularly noteworthy, since – in addition to his medical and research pursuits – it marked a beautiful chapter in his life and was the best testimony to his remarkable personality. Goldflam was a friend of Janusz Korczak, Ludwik Zamenhof (the inventor of Esperanto) and many other social activists working for the Jewish community. He was involved in the initiative to build a psychiatric institution in Otwock, and the Bersohns and Baumans' children's hospital. Together with Flatau, he created the Scientific Pathological Institute at the Czyste hospital and established the *Warsaw Medical Journal* and Warsaw Neurological Society, of which he became chairman. He was the co-founder of the Orphans' Home together with Janusz Korczak. In Otwock, he was acknowledged as a social activist, with one of the town's streets named after him. In recognition of his merits, Friends of the Hebrew University in Jerusalem, published a memorial publication *To the Memory of Dr Samuel Goldflam (1852-1932)* in Warsaw in 1933.

Goldflam was a great music lover and was particularly fascinated by Beethoven's works. He helped young talented musicians in developing their careers. One of them was Artur Rubinstein, who later became an internationally acclaimed pianist. He was also an enthusiast, connoisseur and collector of art, who especially enjoyed painting and sculpture.

He died in 1932 at the age of 80, due to mediastinal cancer, and was buried at the Jewish Cemetery in Okopowa Street in Warsaw. The year 1932 was exceptionally sad for Polish neurology which lost some of its distinguished representatives. Three of the most eminent world-class neurologists passed away within a period of just four months: Edward Flatau on 7 June, Samuel Goldflam on 26 August and Joseph Babinski on 29 October.

Some of Goldflam's best-known works selected from his extensive output are listed below:

1. Über einen scheinbar heilbaren bulbärpralytischen Symptomen-complex mit Beteiligung der Extremitäten. *Deutsche Zeitschrift für Nervenheilkunde* 1893; 4: 312-352.
2. O porażeniach rodzinnych okresowych. *Medycyna* 1895; 23: 229.
3. O wstrząsaniu nerek. *Medycyna* 1900; 28: 578-580.
4. Z semiotyki odruchów brzusznych. *Gazeta Lekarska* 1920; 55: 157-177.
5. O znaczeniu odruchu Rossolimo. Doniesienie tymczasowe. *Warszawskie Czasopismo Lekarskie* 1928; 5: 389-392.

6. Die diagnostische Bedeutung des Rossolimoschen Reflexes bei Erkrankungen des Zentralnervensystems. Eine klinisch-anatomische Studie. *Karger*, Berlin 1930.

## References

1. Herman E. W setną rocznicę urodzin doktora Samuela Goldflama. *Pol Tyg Lek* 1952; 7: 493-496.
2. Herman E. *Neurologzy polscy. PZWL*, Warszawa 1958.
3. Herman E. *Historia neurologii polskiej. PAN*, Wrocław 1975.
4. Samuel Wulfowicz Goldflam – Wikipedia; available at: [http://pl.wikipedia.org/wiki/Samuel\\_Goldflam](http://pl.wikipedia.org/wiki/Samuel_Goldflam).
5. Herman E., ustny przekaz w latach 1952-1970.
6. Stein W., ustny przekaz w latach 1954-1965.