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Babinski's parents were Polish exiles. His father, an engineer and an insurrectionist against the Russian occupants, feared repression and immigrated with his wife to Paris in 1848. Joseph became imbued with a sense of pride and patriotism towards Poland – his divided home-country – and gratefulness to France, his adopted country. Babinski remained connected to Paris throughout his life; he attended a Polish secondary school in Batignolles and graduated in medicine in 1879. As an intern, he studied pathology, physiology, histology and internal medicine. Edmé Félix Vulpian supervised his training in neurology. In 1885 he obtained a doctorate with a thesis on anatomico-clinical correlations in 'sclerose en plaques' [1, 2].

From 1885–1890 he was Jean-Martin Charcot's favorite assistant. In 1890, having passed a competitive examination, he became Chief Physician of the Paris hospitals. Unfortunately, he failed to surmount the subsequent hurdle in his career, an examination opening the path to associate and full professorship. Deceit in the Paris scientific society and the envy of Charcot's competitors prevented Babinski from pursuing an academic career. Paradoxically, this failure paved the road to future discoveries, since he gained the opportunity, unheard of in a university setting, to become immersed in clinical observations and research [3]. He joined the Academy of Medicine only in 1914. In 1893, he was nominated Physician-in-Chief in the Hôpitaux de la Pitié, where he would work until retirement in 1922. In his 100-bed ward most patients had internal diseases; these were entrusted to interns, whereas Babinski was mostly involved with neurology. Since he had no university chair, he gave only private courses and lectures. His talks combined with case consultations were extremely popular.

Babinski had a habit of pursuing a single problem until he found a solution. If he saw a new sign or symptom, he shut himself off with the patient and spent hours examining him. He would become taciturn and introverted. Only when sure of his discoveries would he share his results. He rarely spoke during the meetings of the Paris Neurological Society, but if he did his arguments were irrefutable, with iron logic and immense scientific significance, enrapturing the audience.

The discovery of the "toe phenomenon" (*phénomène des orteils*) is the pinnacle of Babinski's work in semiotics [4]. February 22, 1896, when the Paris Biological Society heard his communication on the plantar reflex, was a historical date in neurology [5]. Typical for Babinski, always being economical with words, the report was only 28 lines long.

He supplemented the semiology

of the reflex in 1903, describing toe abduction (the fan sign, *signe d'éventail*) [6]. A superb clinician, Babinski understood that neurological signs were fundamentally important in neurology. His early papers focused on reflexes in health and disease. In his famous paper "On tendon and periosteal reflexes" he demonstrated that hyperactivity, hypoactivity, absence or asymmetry of these reflexes were all abnormal. He also proved that conjunctival, corneal and gag reflexes may be absent in healthy subjects, but that asymmetry indicates organic disease.

Babinski developed the semiology of organic hemiplegia and transverse spinal cord lesions, described the majority of pyramidal signs and increased tendon and periosteal reflexes accompanied by the so-called *clonus verus* and toe sign as constant signs appearing in late-stage hemiplegias. Babinski's knowledge of 'réflexes de défense' (the flexion synergy) allowed determining the location of a spinal cord tumor. Recognizing the clinical characteristics of neurosyphilis is among Babinski's other successes; in 1899, he was the first to claim that an absent pupil reaction to light was pathognomonic. Together with Augustin Charpentier (1901), he proved the importance of the Argyll-Robertson pupil sign, on the same footing as Hutchinson's triad or Fournier's pleiade.

In 1900, one year before Alfred Fröhlich, Babinski described adiposogenital dystrophy in pituitary tumors. Today, this syndrome is named after both authors. In 1899–1913 Babinski concentrated on cerebellar symptomatology. The chief paper from that period is 'On cerebellar signs and their diagnostic importance', presented at an International Medical Congress in London and published with his pupil, August Tournay, in Polish in 1914. Here Babinski described the classical signs of hypermetria, asynergia, adiadochokinesis, intention tremor and catalepsy. Labyrinth testing by means of galvanic current introduced by Babinski (1901) allowed diagnosing unilateral damage. He also pointed out which clinical features were helpful in differentiating between cerebellar and peripheral or spinal ataxia. He believed an imbalance between agonist and synergist innervation was the basis of cerebellar disturbances.

In 1902, together with Jean Nageotte, Babinski distinguished a syndrome characteristic of vascular lesions in the medulla oblongata. Today this syndrome is recognized as a variant of lateral medullary syndrome, secondary to occlusion of the posterior inferior cerebellar artery [1]. Babinski contributed to the discovery of a syndrome where a blind person denies his blindness (the Anton-Babinski syndrome). In 1914 he introduced the term "anosognosia" (1914) for hemiplegic patients who were unaware of their condition [7].

Babinski studied the nature of hysteria, which he regarded an effect of suggestive influence, termed "pitiatism"; he believed it could be treated by persuasion. On the basis of his experiences in the war he described a reflexive variant, together with Jules Froment [8].

Babinski was the first in France and among the first worldwide to understand and advocate surgical treatment of brain and spinal tumors. A breakthrough was the successful removal of a spinal tumor (1911), thanks to a precise localization by Babinski [1, 9]. He also introduced X-ray irradiation in spinal compression (1906). He authored a total of 288 papers. The University of Warsaw offered him the Chair of Neurology when it was established in 1925, but Babinski, having retired, declined. He was elected honorary professor of the Vilnius University and honorary member of numerous scientific societies, including three in Poland [1]. In 1899 he co-founded the French Société de Neurologie and in 1907 he became its president. After his retirement he continued to see patients until 1931, when his brother Henri, a culinary master, died. Babinski's last years were plagued by parkinsonism, as had been the case with his father [4]. He died on October 29, 1932.

Babinski repeatedly emphasized his Polish origins. At a meeting with professors and physicians in Vilnius in 1922, he toasted his two home countries: "I am proud to have two countries – to one, I owe the knowledge, to the other, the country of my ancestors, the elements of my Polish soul. These two feelings have formed a unity in me…".

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