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Babinski's Sign

Amongst the founders of the celebrated Société de Neurologie de Paris were, Pierre Marie, Dejerine, Brissaud and Babinski. Born on 17 November 1857 in the Boulevard Montparnasse, Josef Francois Babinski graduated in Paris, was an intern to Vulpian and became chef de clinique under Charcot in 1885. He failed to secure Charcot's post (largely as the result of an internecine dispute between Charcot and Bouchard), but from 1880 to 1927 he headed the neurological, strictly male clinic at the Hôpital de la Pitié where both Charcot and Vulpian had previously worked.

Babinski was a bachelor who shared an elegant flat with Henri his brother, a distinguished engineer and like Josef a devotee of opera and gastronomy. He was a loner, a rather dignified, statuesque figure, taciturn in manner and prone to rituals of austere silence.¹ Like Gordon Holmes, his history taking was brief, but examination was detailed, painstaking and repetitive. He persuaded Clovis Vincent to train with Cushing and later he sent de Martel to Victor Horsley; they were to become the principal French exponents of neurosurgery.

Cutaneous reflexes had been described by Gowers in 1888,² and Remak³ claims some priority by describing extension of the great toe in response to plantar stimulation in transverse myelitis in 1893. But it was Babinski who earns credit for systematically investigating the phenomenon. His report was to the Société de Biologie on 22 February 1896, entitled "le réflexe cutané plantaire dans certaines affections organiques de système nerveux central".⁴ His principal purpose was to find a sign with which to discriminate organic from hysterical paralysis. His description was both clear and concise:

"In a certain number of cases of hemiplegia or crural monoplegia secondary to organic involvement of the central nervous system I have observed an alteration of the cutaneous plantar reflex which I shall describe briefly. Pricking of the sole of the foot on the unaffected side causes flexion of the thigh on the pelvis, of the leg on the thigh, of the foot on the leg, and of the toes on the metatarsus. This is the ... normal state. A similar stimulus on the paralysed side also causes flexion of the thigh on the pelvis, of the leg on the thigh, and of the foot on the leg, but the toes show a movement of extension on the metatarsus instead of the usual flexion. I have had the opportunity to observe this phenomenon in cases of hemiplegia of only a few days duration as well as in cases of spastic hemiplegia of several months duration. I have verified its occurrence in patients who were incapable of voluntary motion of the toes and also in those who were still capable of performing such motion. I must add, however, that this phenomenon is not constant.

In many cases of paraplegia ... I have seen extension of the toes following pricking of the sole of the foot ... In summary, the reflex movement resulting from pricking the sole of the foot undergoes not only a modification of its intensity, as is well known, but also an alteration of its form in those cases of paralysis of the lower extremities resulting from an organic lesion of the central nervous system."

Many tried to jump onto the bandwagon of Babinski's clinical shibboleth: Chaddock, Gordon, Oppenheimer and Yoshimura each tendered their modifications, but in this context at least, they were "deuxième cru" in comparison to Babinski's discovery.

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