



Jean-Martin Charcot (1825–1893) and the first classification of multiple sclerosis in the medical literature

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Received: 26 June 2023 / Accepted: 2 July 2023
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Keywords Charcot, Jean Martin · Classification · History of neurology · Multiple sclerosis · Symptoms

Several Italian physicians studied under Charcot at La Salpêtrière and were the first to transcribe, translate, and publish some of his lessons, contributing to the dissemination of Charcot's theories in Italy [1, 2]. Some of these transcriptions are invaluable, as they provide information that cannot be found elsewhere in Charcot's oeuvre. Sometimes they had not been personally revised or edited by Charcot himself, and their accuracy cannot be confirmed by independent sources [1].

The Italian physician Gaetano Rummo (1853–1917) was a leading figure of his time. He was born in Benevento on July 6, 1853, and graduated from the University of Naples in 1879 [3]. In 1881, he moved to Paris after failing to be appointed as a medical assistant at the “Ospedale degli Incurabili” in Naples [AAVV, 1918]. At the Salpêtrière, Rummo attended the lectures delivered by Jean-Martin Charcot (1825–1893), and in 1884, he published the Italian translation of all the lectures on aphasia delivered by Charcot in the summer of 1883 [4]. In 1884, Rummo returned to Italy and published a biographical sketch of Charcot, which—although adding little information to what is already known about his career—provides an unusually intimate portrait of the French master [5].

When still in Paris, Rummo wrote a series of scientific correspondences reporting details of his clinical and scientific experiences. In one of these papers, published in 1883 in the Italian medical journal “Rivista clinica e terapeutica,”

he reported a series of lectures given by Charcot on multiple sclerosis [6]. The information described by Rummo does not show a clear correspondence with the texts of the lectures collected in the “Complete Works of J. M. Charcot,” although some images had already been published in other articles. In the transcription of this lesson, not found elsewhere in Charcot's body of work, the French neurologist proposes a clinical classification scheme for multiple sclerosis, which is the first of its kind in the medical literature (Table 1; Supplementary materials). Although acknowledged as somewhat artificial, such classification was intended to be useful for clinical activities. It was restricted to the cerebrospinal type of multiple sclerosis, which represented the classic form of this disease and was the easiest to observe in clinical practice. According to Charcot, “*sclerosis plaques occupying all parts of the cerebro-spinal axis must necessarily give rise to complex symptomatic manifestations, reflecting the altered function of the various parts that are affected. It can therefore be foreseen that the symptomatology of multiple sclerosis cannot have precise limits. Despite the multiplicity of the sites of the lesion, however, this may be predominant in a special nervous system. In fact, there may be multiple sclerosis with spinal, bulbar, and cerebral predominance. This anatomical division is confirmed in the clinic, and, actually, there are cases of multiple sclerosis with a predominance of encephalic symptoms, and there are others with a predominance of spinal symptoms.*” The practice-oriented classification provided by Charcot was based on the main anatomical location of symptoms (spinal, encephalic, and atypical). A further subdivision relied on specific symptoms (such as intentional tremor, dysarthria, or nystagmus), on features of walking, and on frequent symptom remissions.

Interestingly, the same symptoms appear in a book by Domenico Miliotti (1851–1888), where he transcribed and

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Table 1 Clinical classification of multiple sclerosis, cerebrospinal (classic) type. Translated in English and adapted from: CHARCOT. – Sclerosi a placche disseminate. Riassunto di lezioni pel dott. G. RUMMO, col consenso dell'autore. Rivista clinica e terapeutica 1883;198-200

Spinal symptoms	A. General or focal tremor in intentional movements (upper limbs, head, etc.) B. (Head) titubation C. Paresis of limbs (spasmodic) D. Contracture - Exaggerated tendon reflexes - Spinal trepidation (i.e., clonus) A. Absent or mild sensitivity disturbances B. Absent or mild bladder disturbances
Encephalic symptoms	A. Dysarthria - Slowness of speech - Slurring of speech B. Nystagmus—wandering gaze C. Accesses of vertigo D. Amblyopia—white atrophy of the papilla E. Diplopia—paralysis of the eye muscles F. Intellectual weakening (stupid facies) G. Stroke-like, epileptiform, or congestive attacks H. Swallowing disorders
Unusual symptoms	A. Trophic disorders - Amyotrophy - Eschar B. Tabetic symptoms - Shooting pains - Romberg sign - Anesthetic plaques - Bladder or anal paresis - Gastric crises

A: walking peculiarities in the patient

B: frequent symptom remissions

translated the lessons held by Charcot between 1883 and 1884 [7]. It is, therefore, extremely likely that both Miliotti and Rummo attended the same lesson in which Charcot discussed the clinical picture of multiple sclerosis. The presence of the same symptoms in two independent sources confirms the accuracy of the information provided, suggesting that they were really mentioned as such by the French master in his lessons [1].

However, whereas in the text by Miliotti, the symptoms are simply listed, the article by Rummo arranges them into a classification framework, which should thus be regarded as the very first classification of multiple sclerosis in the medical literature reported as a table. Of note, this classification focuses exclusively on signs and symptoms that can occur in MS, trying to correlate them with their anatomical location. In prior lessons, Charcot had already extensively discussed the various MS types and their symptoms [8], but without summarizing them into a comprehensive classification.

The table reporting the classification of MS symptoms provided by Rummo suggests that this was the result of an

assemblage work, somewhat original, done by someone who had personally attended Charcot's lessons and had personal exchanges with him.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10072-023-06941-3>.

Acknowledgements Contributors: Paolo Benna: Dipartimento di Neuroscienze, Università di Torino, Turin, Italy; Sara Gasparini: Department of Medical and Surgical Sciences, Magna Graecia University of Catanzaro, Catanzaro, Italy; Ugo Nocentini: Department of Clinical Sciences and Translational Medicine, University of Rome "Tor Vergata", Rome, Italy; Giorgio Zanchin: Padua University, Padua, Italy

Author contribution Francesco Brigo conceived and wrote the article; the other authors revised it critically for important intellectual content.

Data availability Not applicable.

Declarations

Ethics approval Not required.

Informed consent Not required.

Conflict of interest The authors declare no competing interests.

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