

Prosper Menière: the man who located vertigo in the inner ear

Prosper Menière: o homem que localizou a vertigem na orelha interna

Péricles MARANHÃO-FILHO¹, Eliana Teixeira MARANHÃO², Carolina Marques de OLIVEIRA³

ABSTRACT

Since the Greek Aellus Galenum (129 AD – c.200/c.216), vertigo was considered a problem attributed to a cerebral disorder, diagnosed as the manifestation of apoplectiform cerebral congestion. In the mid-19th century, the Frenchman Prosper Menière changed this concept by placing the origin of this symptom in the inner ear. The main objective of this historical note is to highlight who Menière was, his work, and some aspects of the disease that bears his name.

Keywords: Meniere Disease; Ear, Inner; Vertigo; History.

RESUMO

Desde o grego Aellus Galenum (129 d.C. – c.200/c.216), a vertigem era considerada um problema atribuído a um distúrbio cerebral, diagnosticado como a manifestação de uma 'congestão cerebral apoplectiforme'. Em meados do século 19, o francês Prosper Menière mudou esse conceito, colocando a origem desse sintoma na orelha interna. O principal objetivo desta nota histórica é ressaltar quem foi Menière, seu trabalho e alguns aspectos da doença que leva seu nome.

Palavras-chave: Doença de Meniere; Orelha Interna; Vertigem; História.

Until the mid-19th century, vertigo and epilepsy were considered conditions originating from apoplectiform cerebral congestion, and the treatment consisted of bleeding, leeching, cupping, and purging¹. In 1861, the physician Prosper Menière declared to the medical community that an inner ear lesion could cause symptoms as severe as vertigo, deafness, and vomiting when this matter was not even a debatable point. Menière's great merit was applying his understanding of Pierre Flourens's (1794–1867) work with pigeons to the human labyrinth.

Prosper Menière (Figure 1) was born on June 18, 1799, in Angers, western France, about 300 km southwest of Paris². He was the third of four children of a prosperous linen draper merchant. At the age of 10, the young Menière was already a great connoisseur of orchids and joined the Angers Botanic Society, reaching the post of vice president of the society¹.

When he was 13 years old, Menière entered the *Lycée Impérial d'Angers* and received 4 years of rigorous and excellent schooling in classical languages and humanities².




At 17, he entered the preparatory *École de Médecine d'Angers*, where he certainly had an outstanding education, not only in anatomy with Augustin Béclard (1785–1825) but also in Medicine and Botany with Pierre Guépin (1779–1858)³.

By the age of 20, he left Angers to continue his medical studies in Paris, where he became an external student at *Hôtel-Dieu*⁴, receiving the school award in the first two years and access to the 3rd year⁵. After these three years, he was appointed as an intern and became assistant of three men who were at the very top of their specialties: the obstetrician Paul Dubois (1795–1871), the internist François Chomel (1788–1858), and the leading surgeon of France Guillaume

¹Universidade Federal do Rio de Janeiro, Rio de Janeiro RJ, Brazil.

²Instituto Nacional do Câncer, Rio de Janeiro RJ, Brazil.

³Hospital Naval Marcílio Dias, Rio de Janeiro RJ, Brazil.

Péricles MARANHÃO-FILHO  <https://orcid.org/0000-0003-2030-547X>; Eliana Teixeira MARANHÃO  <https://orcid.org/0000-0001-6673-6940>; Carolina Marques de OLIVEIRA  <https://orcid.org/0000-0002-1811-1820>

Correspondence: Péricles Maranhão-Filho; E-mail: pmaranhaofilho@gmail.com

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Dupuytren (1777–1835). He received his doctoral degree in 1828 and became a member of the university in 1834⁴.

A year later, he was selected by the government to head a commission to combat a cholera outbreak in Southern France, and, as a result of his success on this mission, he was named *Chévalier* of the Legion of Honor⁵.

In 1838, a year after an unsuccessful request to assume the post of professor of Medicine and Hygiene, Menière accepted the position of director of the Imperial Institute for Deaf-Mutes in Paris, a position he held until his death⁶. That same year, he married the young Anne Pauline Becquerel (1816–1871), a relative of Henri Becquerel (1852–1908), Nobel Prize winner for the discovery of radioactivity. The following year, his only child was born. Émile Antoine also became an otologist and physician at the Imperial Institute for Deaf-Mutes³.

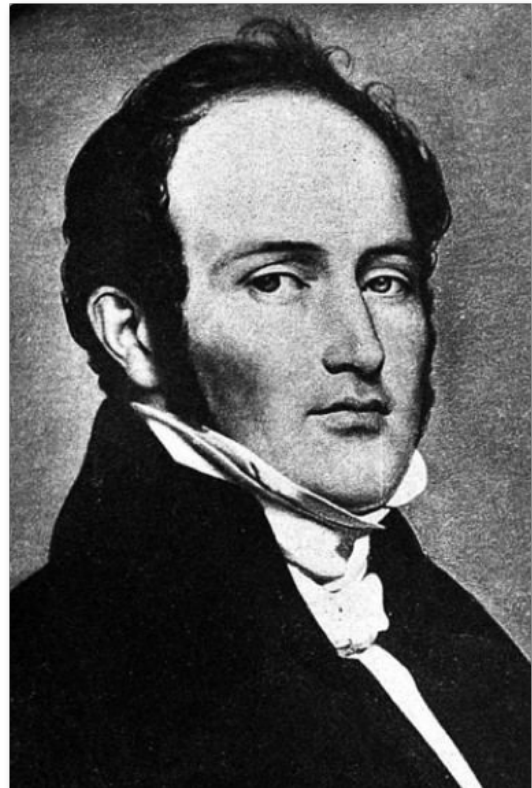
Menière, was a man of many talents: physician, botanist, historian, archeologist, and an eclectic writer⁵. He published about peritonitis (1826), pregnancy (1826, 1828), congenital deformity (1828), iliac fossa tumors (1828), uterine disease (1828), pulse in diagnosis (1832), as well as *Medical Studies of Some Poets, Ancient and Modern* (1837) and *Medical Students and Latin Poets* (1838)^{4,6}. In his last 10 years of life, he devoted himself to writing books on *Audiology: Examination of the Hearing Aid* (1841), *Treatment of the Deaf and Mute* (1853), *Marriage Between Relatives and Deafness* (1856), and *Manuscripts on Labyrinthine Vertigo* (1861).

He liked theatrical premieres and tried not to miss them, besides loving Italian opera, which he watched regularly¹. Menière was *persona grata* in many of the most select salons in Paris. He frequented the social circles, and among his political, literary, and scientific friends was Victor Hugo (1802–1885), Honoré de Balzac (1799–1850), Franz List (1811–1886), in addition to other artists, poets, literary critics, and writers². The two things he was most afraid of were colds and migraine headaches¹.

The spelling of his name has a curiosity. In his lifetime, Prosper Menière spelled his name stressing only the second “é”. He used this spelling in his original publications and letters (Figure 1).

His son, Émile Antoine Ménière, stressed the first two “és”, doing the same in all posthumous books he edited about his father and even on his gravestone⁷ (Figure 2), generating a conflict for those who quote his father’s name.

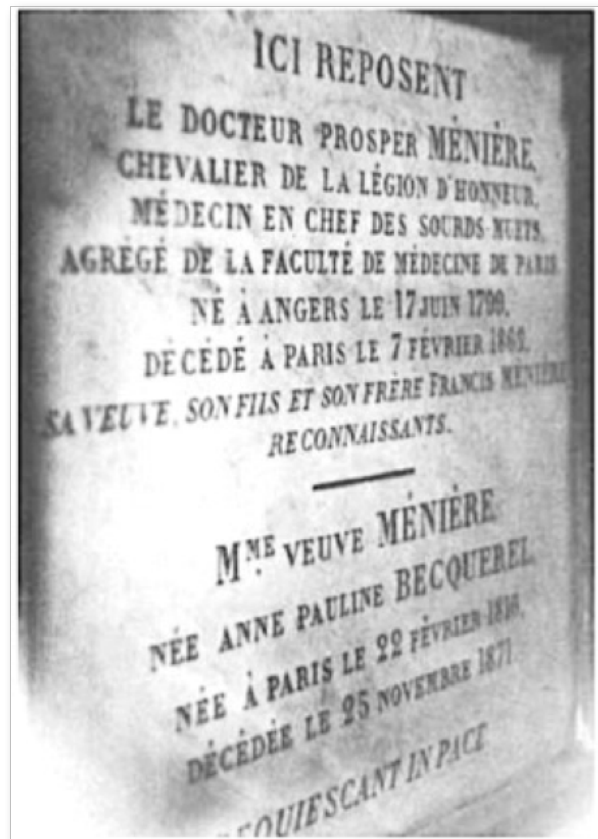
On January 3, 1861, Menière, then 61 years old, read his work “*Sur une forme de surdit  grave d pendant d’une l sion de l’oreille interne*” at the Imperial Academy of Medicine⁴. It was a cold, rainy Tuesday, which probably justified the small and inattentive audience¹. Menière was not, and never came to be, a member of the Academy. For this reason, he was not allowed to discuss his lecture with the audience. No importance was given to his reading. However, everything changed when, eight days later, Armand Trousseau (1801–1867), in that same place, demystified cerebral congestion and praised Meni re’s recent communication. The first reference to



Menière, Prosper

Source: Google Images.

Figure 1. Prosper Menière and his signature.



Source: Google Images.

Figure 2. Gravestone of the Menière family at Montparnasse Cemetery.

Menière's disease was an abstract made by Menière himself in *Bulletin de l'Académie Impériale de Médecine* on January 31, 1861^{4,8}. Menière never suggested that the disease should be named after him, nor that it should be called a new disease. This was the result of comments of those who came after him.

A great boost was given to the intimate knowledge of Menière's disease when, in 1938, Charles Hallpike and H. Cairns described for the first time the pathological changes (hydrops) in temporal bones of two cases of Menière's disease⁹.

The current International Classification of Vestibular Disorders from Bárány Society¹⁰ shows that little has changed

from what was defined by Menière himself: a) two or more episodes of vertigo lasting from 20 minutes to 12 hours; b) a documented sensorineural hearing loss in the affected ear; and c) fluctuating auditory symptoms (hearing loss, tinnitus, or fullness) in the affected ear⁸.

On February 6, 1862, after a brief period of acute lung disease, he died in his apartment at the Institute for Deaf-Mutes in Paris, 13 months after his communication at the Academy of Medicine³. He and his wife were buried at the Montparnasse Cemetery (Figure 2). Unfortunately, the full value of his work was only recognized after his death.

References

1. Baloh RW. Vertigo. New York (NY): Oxford University Press; 2017. p. 5-20.
2. Caballero LT. Prosper Mèniere, el personaje y su entorno científico y social. In: Garriguez HP, et al. Enfermidade de Menière: desde las ciencias básicas hacia la medicina clínica. Barcelona (CT): Ediciones Médicas, S.L.; 2009. p. 99-105.
3. Legent F. Refères Chronologiques Concernant Prosper Menière (1799–1862). In: Legent F, editor. Prosper Menière Auriste et Érudit. Paris (FR): Flammarion Médecine-Science; 1999. p. 101-2.
4. Wells WA. Prosper Mèniere; a historical sketch. *Laryngoscope*. 1947 Apr;57(4):275-93.
5. Hawkins JE. Sketches of otohistory: part 5: Prosper Mèniere: physician, botanist, classicist, diarist and historian. *Audiol Neurootol*. 2005 Jan-Feb;10(1):1-5. <https://doi.org/10.1159/000082305>
6. Gourevitvh D. Prosper Menière et la Culture Classique. In: Legent F, editor. Prosper Menière Auriste et Érudit. Paris (FR): Flammarion Médecine-Science; 1999. p. 15-29.
7. Rauchfuss A. Correct spelling of Prosper Menière's name and some comments on his life and work. *Laryngol Rhinol Otol (Stuttg)*. 1984 Aug;63(8):381-5.
8. Legent F. Prosper Menière et les vertiges. In: Legent F, editor. Prosper Menière Auriste et Érudit. Paris (FR): Flammarion Médecine-Science; 1999. p. 57-90.
9. Hallpike CS, Cairns H. Observations on the Pathology of Menière Syndrome. *The Journal of Laryngology and Otology*. 1938 Oct;53(10):625-55. <https://doi.org/10.1017/S0022215100003947>
10. Lopez-Escamez JA, Carey J, Chung W-H, Goebel JA, Magnusson M, Mandalà M, et al. Diagnostic criteria for Menière's disease. *J Vestib Res*. 2015;25(1):1-7. <https://www.doi.org/10.3233/VES-150549>