

Albert Gombault (1844–1904)

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Albert Gombault, born in Orleans, received his medical training in Paris, as *Externe des Hopitaux* in 1866 and *Interne* in 1869 [3]. In 1870 he became a student of Jean-Martin Charcot (1825–1893), who had just published the first description of amyotrophic lateral sclerosis (ALS), with Joffroy. Gombault continued their work and analyzed the case of Elisabeth P., who had a labio-glosso-laryngeal paralysis and died from respiratory asphyxia. He described severe alterations in the anterior pyramids and in the cellular bodies of the hypoglossal nucleus [5].

His thesis, also on ALS, was presented in August 1877 to a jury with Charcot, Gubler, Duguet and Fernet [6]. It described nine cases in detail, three from Charcot, two were his own patients, two patients from Dumenil in Rouen, one from Woillez in La Charité and one from the English neurologist Jacob Augustus Lockhart-Clarke (1817–1880). His description of the pathology was largely accepted by the medical community, although the German neurologist Ernst Viktor von Leyden (1832–1910) was not convinced and considered ALS as being similar to progressive muscular atrophy. With G.M. Debove (1845–1920), Gombault [4] explained on the basis of another case that the origin of ALS is central and starts in the cervical portion of the pyramids.

Gombault became “*médecin des hopitaux*” in 1882 and “*chef de service*” in 1887 at the Ivry hospital with professor Victor Cornil (1837–1908), where he would stay until his death. In 1887 he conducted a private class of pathological histology that was a great success. He became conservator at the Musée Dupuytren. Gombault was a very modest man; nevertheless he is represented in the famous painting “*A clinical lesson at the Salpêtrière*” by André Brouillet (1857–1914). Gombault is in the last row but one, near Paul Arène (1840–1913) and in front of Cornil.

As a scientist, Gombault was an astute clinician as well as an experimentalist. He studied saturnism in guinea pigs that had been fed food containing lead for 6 months [2]. If there were no clear behavioral disturbances, most nervous fibers showed marked defects of myelin. Using the teasing method, he dissociated the nervous trunks of the brachial plexus and of the sciatic nerve. The axons always stayed intact but the Schwann cell sheaths were severely affected. These lesions might recover to some extent if lead ingestion was discontinued. Subsequently he demonstrated similar lesions in humans with lead poisoning. His pictures

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were reproduced in ‘Greenfield’s Neuropathology’, up to the 1976 edition [1].

Among the variety of neurological topics on which Gombault published reviews, two are particularly important: one with Rendu on cerebral localization [10] and the other on aphasia, with his assistant Philippe [7]. The first paper was published just after violent quarrels between Charcot and Charles Edouard Brown-Séquard (1817–1894) at the “*Société de Biologie*” in Paris, in December 1875 and January 1876. Localization as well as unitary views of brain function are presented and discussed in depth. In the end, Gombault and Rendu followed Charcot’s opinion and supported the notion of localization.

In the review with Philippe, he offered an extensive analysis of the different hypotheses on cortical ‘language centers’ [7]. The essay started with the work of Jean-Baptiste Bouillaud (1796–1881), Paul Broca (1824–1880) and Marc Dax (1771–1837) and continued with an analysis of the work of Carl Wernicke (1848–1904) and Ludwig Lichtheim (1845–1928). They mentioned Theodor Meynert (1833–1892), Adolf Kusmaul (1822–1902) and also Sigmund Freud (1856–1939). Again in their conclusion they sided with Charcot and his famous ‘bell’ diagram representing sensory inputs to define cortical areas for speaking and for writing.

Cornil, who wrote a third edition of the “*Textbook of Pathologic Histology*” (1902) with Louis Antoine Ranvier (1835–1922), the man who discovered the nodes in nerve fibers, asked Gombault to write a chapter on the “*Histological Pathology of the Central Nervous System*”, in which he was again assisted by Philippe [8]. They discussed the new notion of neurons presented in 1891 by Heinrich Wilhelm G. von Waldeyer (1836–1921) and Santiago Ramon y Cajal (1852–1934). The first part described the histology of normal tissues, with the aid of techniques developed by Camillo Golgi (1843–1926), Franz Nissl (1860–1919) and the invertebrate histologists Stephan Apathy (1863–1922) and Albrecht Bethe (1872–1954). They explained different methods for preservation and hardening of the brain. The second part focused on general pathological histology and analyzed lesions in cellular bodies, nerve fibers and neuroglia.

Gombault had a difficult end. His health declined and he became debilitated by abdominal cancer. Nevertheless he continued to work regularly, maintaining his teaching and research. He died on the 23rd of September, 1904. Dr. E. Mosny in ‘La Tribune Médicale’ wrote [9]: “This excessive modesty, which was one of the more remarkable features of his character and that prevented him from being estimated at his true value, Gombault included in all his actions: his entire life was modest; his existence had its course without noise, in his family as well as in the midst of his pupils.” It is certain that he would be quite astonished to find that one century later, a short review had been written about him!

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