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Lessons from the past

Étienne Lancereaux (1829–1910), clinician and neuropathologist

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INFO ARTICLE

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Étienne Lancereaux (1829–1910) best illustrates the clinician internist at the end of the 19th century, having the capacity to encompass on his own all the established medical knowledge—a dream or an illusion for the physician of the 21st century. While he was prolific in several areas, the time and effort he spent on the nascent field of neurology was extensive, which justifies remembering him.

1. Biographical overview

Étienne Lancereaux (Fig. 1) was born into modest means on 27 November 1829. His father, Henri Lancereaux (1800–1885), was a farmer around Crécy on the Aisne River, near the village of Brécy-Brières in the Ardennes region of northern France. His mother, Marie-Élisabeth Godart (1804–1879), was a spinner. He was the eldest of six children. The priest of Savigny-sur-Aisne parish taught him to read and count then sent him to the small Reims seminary for his secondary education [1]. Returning to work at his father's farm, at the age of around 20 he fell off a wagon and injured his head. The long, attentive treatment provided by his family physician inspired him to become a physician. After succeeding at his baccalaureate exams, he began his studies at the Medical School of Reims in November 1850 before leaving for Paris, where he passed the exam for non-resident students in 1854, then the resident exam in December 1857. His teachers were Augustin Gendrin (1796–1890), Stanislas Laugier (1799–1872), Charles Denonvilliers (1808–1872), Jules Béhier (1831–1876), Léon Rostan (1790–1866), Armand Trousseau (1801–1867), Augustin Grisolle (1811–1869), and Antoine-Joseph Jobert de Lamballe (1799–1867).

On 07 March 1862, with a jury presided by Grisolle, Lancereaux defended his thesis, *De la thrombose et de l'embolie cérébrales* (cerebral thrombosis and embolism) [2], then became the senior resident under Rostan at Hôtel-Dieu Hospital (1863–1864). He was assigned to the Central Bureau as a Hospital Physician, but in 1869, he failed the *agrégation*, the exam leading to academia. His thesis was entitled *De la polyurie, diabète insipide* (polyuria and diabetes insipidus), referring to a condition for which the cause was still unknown. He noted, ''Diabetics are exposed to wasting and pulmonary tuberculosis'' [3]. In 1872 he succeeded at the *agrégation* exam with a new thesis, *De la maladie expérimentale comparée à la maladie spontanée* (experimental disease compared to spontaneous disease) [4], the idea of which was to raise pathology to the rank of an exact science, like chemistry or physics, by experimentally seeking the aetiology of diseases. He also proposed a complete overall of nosography based on experimentation with animals and anatomopathology.

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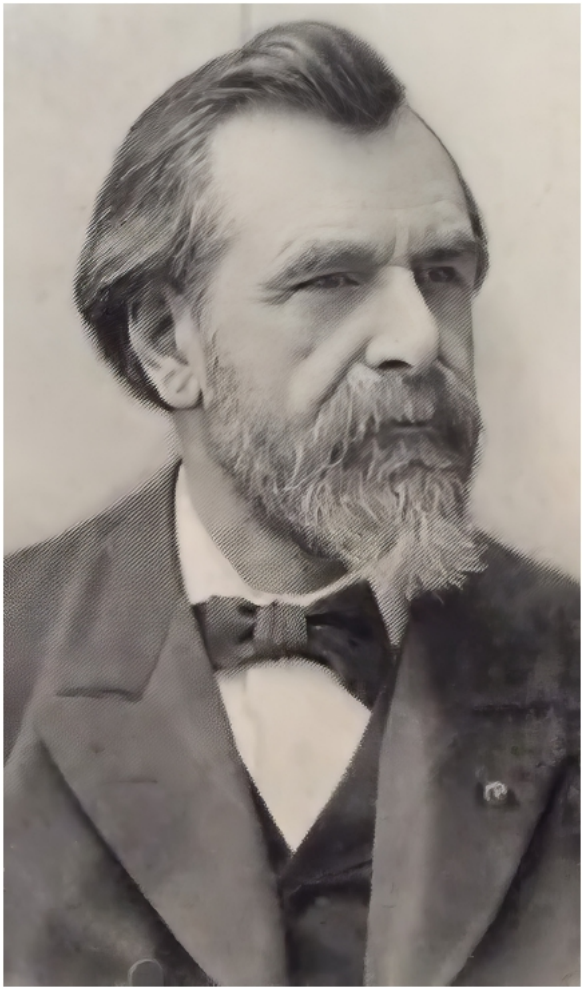

Fig. 1 – Étienne Lancereaux around 1880 (OW Collection).

During the Franco-Prussian War, Lancereaux was an ambulance physician in the *II^e^ arrondissement* (2nd district) of Paris, then chief physician of the military support corps of Penthièvre Hospital, and finally a physician at the hospital for incurable patients (future Laënnec Hospital), where he was in charge of patients with smallpox and the wounded from the Vanves and Issy forts [5]. After the war, he was a hospital physician at Lourcine Hospital in 1874, at Saint-Antoine Hospital in 1876, and at La Pitié Hospital in 1878. In 1875, he replaced Jean-Baptiste Bouillaud (1796–1881) and taught the internal pathology course at La Charité Hospital, then replaced Ambroise Tardieu (1818–1879) at the Medical School of Paris in 1876. He taught pathological anatomy there from 1879 to 1880.

''With a mass of very black hair flecked with silver; an impressive, mid-length beard that was thick and hirsute; violent, hollowed-out features; and under enormous, bushy eyebrows, two deep-set, sombre eyes, terrifying and benevolent in turn, tender and ferocious, but assuredly much more tender than ferocious'' [6] (Fig. 1). He married Julie Véron-Clozier (1838–1878) on 30 October 1867 and they had one son, Henri (1868–1936), who went on to become an industrialist. After his first wife died, he married Pierrette Saint-Elme Petit (1851–1927) on 09 December 1878, with whom he had five daughters [7,8].

Lancereaux entered the French Academy of Medicine in 1877 and became its president in 1903. He was made Chevalier de la Légion d'Honneur on 16 March 1872, then raised to the rank of Officer on 25 January 1896.

It turns out that Lancereaux had nothing against portraits. The painter Jean-Antoine Vergeaud, known as Armand Vergeaud (1876–1949), presented at the 1903 Salon des Artistes Français a portrait of Lancereaux (number 1726), which is now held by the French Academy of Medicine [9]. The painting is large at 2.15 × 1.40 meters and was initially intended to decorate Lancereaux's private mansion. A photographic plate of another Vergeaud painting is held by the Museum of Angoulême (Fig. 2). Around 1894, Lancereaux also had his bust sculpted by Aristide Croisy (1840–1899), who was from the same area as Lancereaux. The sculpture is held by the Hôpital du Perpétuel Secours in Levallois-Perret. Clementine Paulier also depicted him in an etching at the 1898 Salon des Artistes Français under the number 4888.

Speaking to an audience of academicians in 1910, Sigismond Jaccoud (1830–1913) used these words to conclude his high praise of Lancereaux: ''Given his tall stature and his powerful impact, his hair only slightly grey despite his being 80 years old, as one watched him walk down the steps of the lecture hall with an ease and suppleness that would make the youngest in our company envious, I often asked myself how this old oak would never be uprooted'' [10]. Nonetheless, Lancereaux died after a few days of pneumonia complicated by septicaemia on 26 October 1910, in his home at 44 rue de la bienfaisance in the *VIII^e^ arrondissement* of Paris, a street extending from the street that is now named after him. He was buried in the Montmartre Cemetery, in the mausoleum of the Delaborde-Guillaume family (sector 16).

2. Prolific medical output

Jaccoud gave an apt description of Lancereaux's rich and diverse oeuvre: ''A tireless worker who tenaciously defended his ideas, a first-rate anatomopathologist, a militant hygienist, and a renowned clinician, M. Lancereaux leaves behind a substantial oeuvre''. We should take a moment to survey his non-neurological work. In 1880, Lancereaux introduced the term ''pancreatic diabetes'', thereby distinguishing between *diabète gras* (type 2 diabetes mellitus) and *diabète maigre* (insulin-dependent diabetes mellitus) [11]. Together with his student Jules-Alexandre Thiroloix (1861–1932), in 1890 he published the results of vivisection experiments in dogs consisting of the ablation of the pancreas, which triggered experimental diabetes [12]. These experiments thus showed that the pancreas had an internal secretion whose suppression caused diabetes [13], as proposed shortly before by Oskar Minkowski (1858–1931) and Joseph von Mering (1849–1908) at the Medical School of Strasbourg [14]. The Romanian Nicolas Paulesco (1869–1931), Lancereaux's resident then his assistant, continued his work on diabetes once he had become a professor of physiology at the Medical School of Bucharest. He discovered the ''hypoglycaemic hormone'' (glucose-lowering hormone) in the pancreas, which he named ''*pancréine*'',

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Fig. 2 – Photographic plate based on a painting by A. Vergeaud (© Musée d'Angoulême).

described in an article published in 31 August 1921. Frederick G. Banting (1891–1941) and Charles H. Best (1899–1978) would present their discovery of ''insulin'', used to treat diabetic deficiency, to the American Society of Physiology on 12 December 1921. In 1923, they were awarded the Nobel Prize for this work, but the names of Paulesco and Lancereaux were never mentioned [15].

During a typhoid fever epidemic in 1875 and 1876, Lancereaux demonstrated that air had no role in the contagion, but that infected water from the Canal de l'Ourcq and the Seine River, in and around Paris, was the main vector of the disease's transmission [16]. He suggested a microbe should be sought in these waters, which Carl J. Eberth (1835–1926) identified in 1880 [17].

Lancereaux recognised the need to study the ravages of alcoholism and tuberculosis. He was part of a group of pioneers in the area of anti-alcoholism and rigorous observance of hygiene in France. This group was very poorly received and understood at the time [18]. Lancereaux wrote the ''alcoholism'' entry, around one hundred pages, in the *Dictionnaire encyclopédique des Sciences médicales*, edited by Dechambre in 1865 [19]. Then in 1909, he wrote a chapter of some 150 pages in a volume on intoxications, part of the *Nouveau Traité de Médecine* edited by Paul Brouardel (1837–1906), Augustin Gilbert (1858–1927), and Léon-Henri Thoinot (1858–1915) [20]. At the session held on 25 June 1878 by the French Academy of Medicine, Lancereaux re-presented a dissertation that he had first presented at the International Congress of Geography in 1875: *Distribution géographique de la tuberculose pulmonaire* (geographical distribution of pulmonary tuberculosis). He established a link between unfit lodgings and tuberculosis and proposed passing ''laws governing the construction and elevation of houses in cities and the width of roads, and requiring a sufficient quantity of air'' [21].

3. Cerebral thrombosis and embolism

In his thesis (Fig. 3), after recalling that Léon Rostan (1796–1866) was the first to distinguish between cerebral haemorrhage and softening in 1820 [22] and that Rudolf Virchow (1821–1902) had demonstrated the physiopathology of embolism in 1856 [23], Lancereaux distinguished between thrombosis on a plaque of ulcerated atheroma and thrombosis with healthy arterial endothelium but secondary to embolism. The Scottish Robert Carswell (1793–1857) had already noted thrombosis as a factor in softening in 1835 [24]. For Lancereaux, all cerebral arteries could be thrombosed by a variable, sanguine, or calcareous embolus, coming from a heart valve. He developed the macroscopic description of various forms of softening—red, yellow, and white—thereby rejecting previous interpretations of different aetiologies and concluding that it was not a matter of ''distinct lesions but different degrees and more or less advanced stages of the same pathological process''. He thus preceded by three years the pathophysiological experiments of Jules Cotard (1840–1889) and Jean-Louis Prévost (1838–1927) in 1865 [25]. For Lancereaux, and ten years before Henry Duret (1849–1921) demonstrated as much [26], each thrombosed artery corresponded to a specific localisation of softening. He noted a

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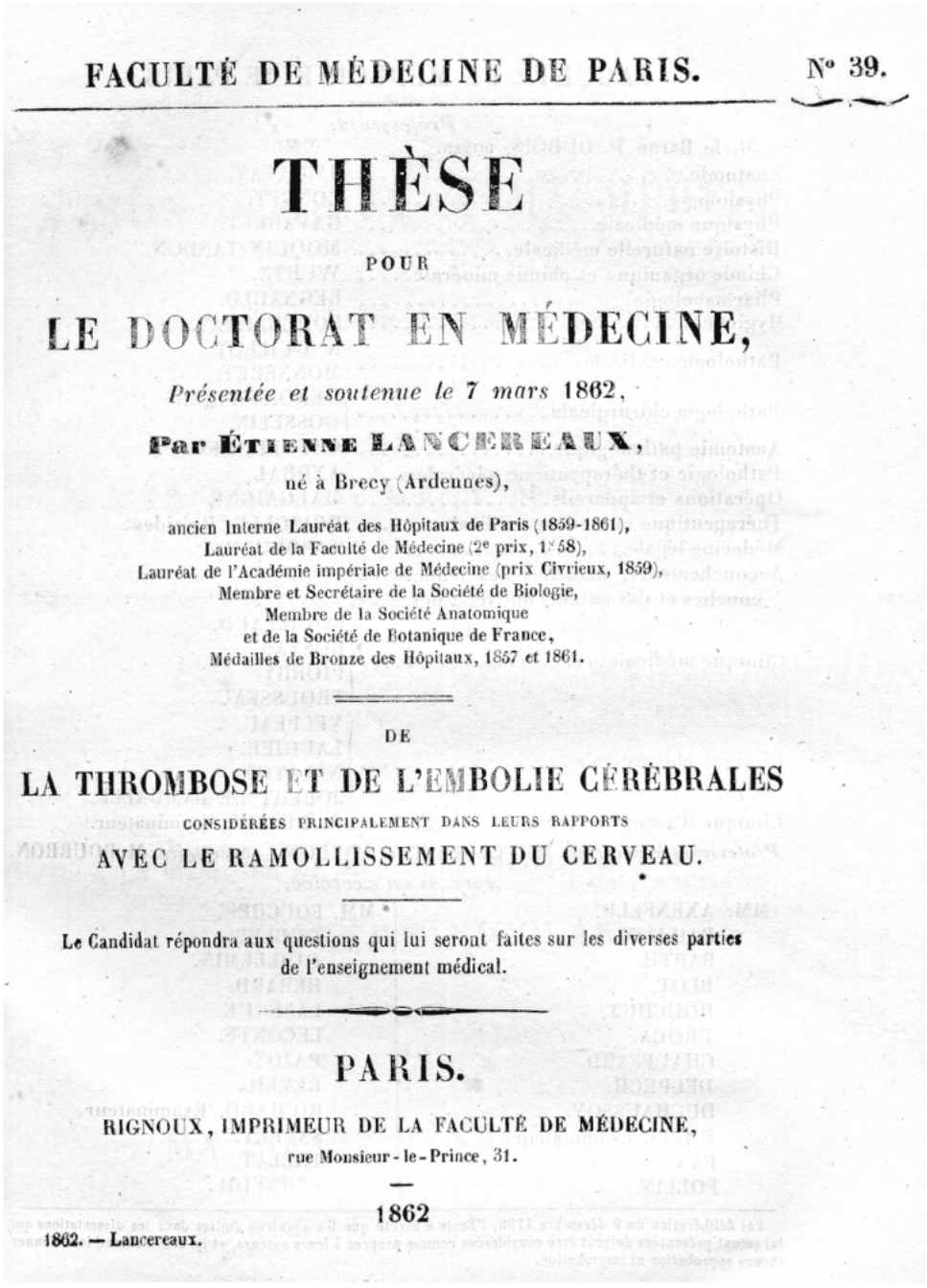

FACULTÉ DE MÉDECINE DE PARIS. N° 39.

THÈSE

POUR

LE DOCTORAT EN MÉDECINE,

Présentée et soutenue le 7 mars 1862,

Par ÉTIENNE LANCEREAUX,

né à Brecy (Ardennes),

ancien Interne Lauréat des Hôpitaux de Paris (1859-1861),
Lauréat de la Faculté de Médecine (2e prix, 1858),
Lauréat de l'Académie impériale de Médecine (prix Civrieux, 1859),
Membre et Secrétaire de la Société de Biologie,
Membre de la Société Anatomique
et de la Société de Botanique de France,
Médailles de Bronze des Hôpitaux, 1857 et 1861.

DE

LA THROMBOSE ET DE L'EMBOLIE CÉRÉBRALES

CONSIDÉRÉES PRINCIPALEMENT DANS LEURS RAPPORTS

AVEC LE RAMOLLISSEMENT DU CERVEAU.

Le Candidat répondra aux questions qui lui seront faites sur les diverses parties de l'enseignement médical.

PARIS.

RIGNOUX, IMPRIMEUR DE LA FACULTÉ DE MÉDECINE,
rue Monsieur-le-Prince, 31.

1862

1862. — Lancereaux.

Fig. 3 – Cover of Lancereaux's thesis (OW Collection).

difference when ''softening coexists with thrombosis of the sinuses''. In this case, the softening, instead of being deep, remained only at the surface of the cortex in a diffuse manner, without systematisation. Lancereaux underscored the need to understand the condition of the heart valves, to look for embolic thrombi in other arteries of the body, as Jean-Martin Charcot had observed, as early as 1851, in a case of acute rheumatoid arthritis [27]. Among the aetiological factors, Lancereaux highlighted, along with age, the role of valve damage due to acute rheumatoid arthritis, syphilis, and alcoholism. The rest of the thesis goes into clinical detail on the various types of softening according to their localisation, without failing to note the possibility of brief transient accidents and ''speech troubles''—warning signs of the imminent crisis. This thesis by Lancereaux is a treatise on cerebral vascular pathology, showing the real extent of knowledge already acquired in this area in 1862. Adrien Proust (1834–1903) would draw on it significantly for his own *agrégation* thesis in 1866, which merely compiled the work of others. It was entitled *Des différentes formes de ramollissement du cerveau* (various forms of brain softening) [28].

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In 1863, Lancereaux agreed with the theory proposed in 1860 by Charcot and Alfred Vulpian (1826–1887) on the origin of meningeal haemorrhage [29], proposing fourteen observations of meningeal haemorrhage with autopsies. In the existence of pseudomembranes, he saw ''pachymeningitis'', which he considered to pre-exist the haemorrhaging, the origin of the bleeding [30]. The condition of the vessels is never described, whereas Étienne Serres (1786–1868) [31] linked this haemorrhaging to aneurysmal rupture as early as 1826 [32].

In 1865, Lancereaux attempted to show that the sudden onset of aphasia associated with right hemiplegia favoured left frontal softening rather than haemorrhage, especially in case of irregular heartbeat and mitral stenosis [33].

Twenty years later, in 1885, Lancereaux gave a lesson at La Pitié Hospital drafted by his resident, Marc Öttinger (1856–1926), on what he called ''herpetitis''. Based on four observations of flaccid hemiplegia with sudden onset in obese patients with hardened, ''very atheromatous'' arteries, he discussed ''the same morbid process shown by various localisations'', associating obesity, deformative rheumatism, and varices, all related to heredity. He suggested prescribing prolonged treatment with potassium iodide to ensure prophylaxis in family members not yet affected. Here we see the premises of treating vascular risks based on a personalised complexus [34].

4. Lead palsy

In 1863, Lancereaux read before the French Society of Biology an observation of lead poisoning. A 37-year-old woman, ''who had worked as a decorative painter since the age of 12, and who had developed the regrettable habit of sucking on her paintbrush'', died after a dreadful struggle: severe colic, progressive amaurosis, repeated convulsions, paralysis with progressive onset in all four limbs, accompanied by anaesthesia and profound cachexia. At the time, the data on neurological damage were scattered and not very accurate. Louis Tanquerel des Planches (1810–1862) wrote his thesis on this subject in 1834 [35], which five years later he developed into the voluminous *Traité des maladies de plomb ou saturnines* (treatise on lead or saturnine diseases), based on 1200 clinical observations and animal experimentation and describing, notably, encephalopathy due to lead poisoning [36]. Ferdinand de Bernard de Montessus (1817–1899) presented the clinical picture of saturnine epilepsy in his thesis in 1845. As for Guillaume-Benjamin Duchenne de Boulogne (1806–1875), he was the first to carry out galvanic exploration in 1850 [37]. Lancereaux proposed the first anatomopathological analysis of the muscular system and the peripheral nervous system, before Albert Gombault (1844–1904) in 1873 [38] and Augusta Dejerine-Klumpke (1859–1927) in her thesis in 1889 [39]: ''The autopsy reveals a very marked atrophy in the paralysed muscles, a slight reduction in the volume of the corresponding nerve cords, a clear lesion in a number of nerve tubes of these same cords, and the alteration or destruction of most elementary fibres of the affected muscles''. He concluded that the muscular atrophy was secondary to the neurological damage and not to immobility caused by the paralysis. What is missing is a description of the condition of the anterior horns of the spinal cord.

5. Alcoholism and neuropsychiatry

Lancereaux (Fig. 4) estimated that 20% of patients who died in the hospital did so from the consequences of chronic alcoholism. In 1865, in his ''alcoholism'' entry in the *Dictionnaire encyclopédique des Sciences médicales*, he distinguished between acute and chronic alcoholism [19]. The acute form, called ''alcohol poisoning'', caused convulsions and clastic agitation followed by coma. According to Lancereaux, this was the primary cause of meningeal haemorrhage. He wrote more on the chronic form, describing in detail alcoholic polyneuritis without naming it. Disorders of sensitivity start in the lower limbs, ''a few moments after the patient lies down, as soon as the unfortunate drinker feels the warmth of the bed, he starts to feel, mainly in the lower limbs, discomfort, pins and needles, pulling and straining, and strange sensations, with stubborn insomnia accompanied by real tactile hallucinations''. He distinguished painful hyperaesthesia preceding complete anaesthesia and mentioned changes in sight, memory, and intelligence that could lead to dementia. His description of ''*la folie alcoolique*'', or delirium tremens, with its visual hallucinations, trembling in the lips and hands, epileptic seizures, etc., inspired Émile Zola (1840–1902) in the writing of his novel *L'assommoir* (*The Drinking Den*) in 1878. Lancereaux completed this clinical picture with some macroscopic anatomopathological data. He observed a case of ''pachymeningitis'' accompanying cerebral atrophy that he called atrophic diffuse periencephalitis, with fatty degeneration of the arterial walls. The peripheral damage was not well documented at the time, from a histological point of view, but Lancereaux believed that galvanisation was the only effective treatment. In the 1909 version [20] of the *Nouveau Traité de Médecine*, he added a special chapter on ''chronic absinthism'' with an anatomopathological description of the nerves of the lower limbs: ''First, the myelin grows hard and breaks into segments, then it becomes granular and forms into balls with variable dimensions. These balls gradually transform into fatty granules that are then reabsorbed, giving way to Schwann cells that are absolutely empty''. He believed that complete withdrawal from alcohol allowed functional recovery, even at this stage.

6. Nervous disturbances in uraemia

In a lesson drafted in 1887 by Émile Besançon (1862–1952), Lancereaux presented the progression of Bright's disease; that is, terminal kidney failure [40]. He attributed this disorder to the toxic accumulation of ''products of disassimilation [catabolism]'', such as urea. For him, the toxic symptoms revealed their deleterious action on the medulla oblongata, causing dyspnoea, which, as he noted, was described by John Cheyne (1777–1836) in 1816 and William Stokes (1804–1878) in 1854; the dyspnoea was accompanied by increasing tachycardia. Then sensory disturbances appeared, involving swelling, pins and needles, and tingling in the extremities accompanied by pruritis, all symptoms gradually becoming generalised. The continuous headaches, like a helmet, and the increasing intensity of the cries from the patients preceded

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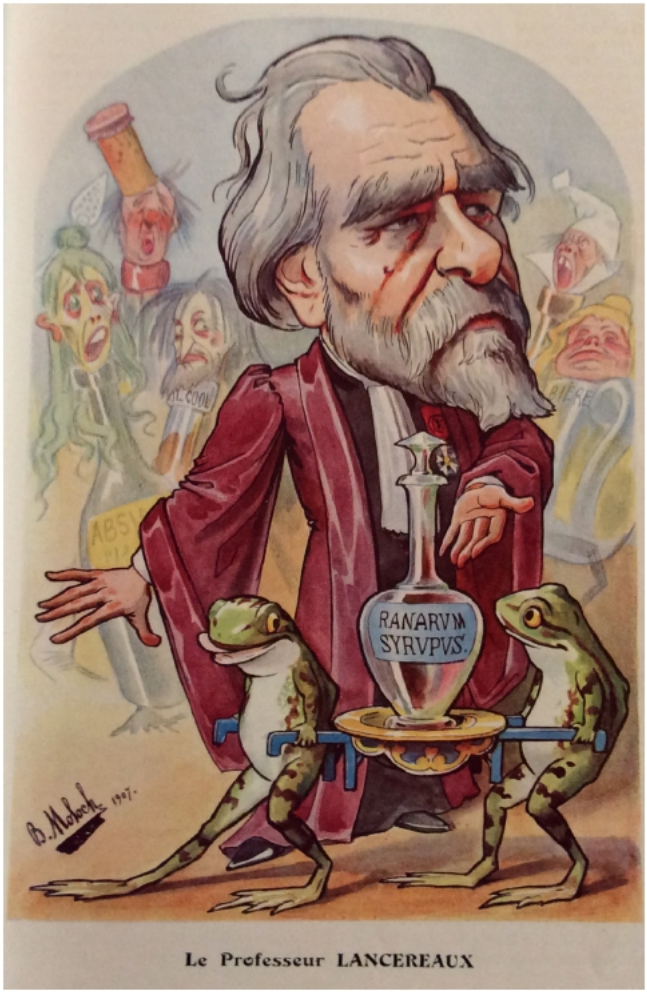

Fig. 4 – Caricature by Alphonse H. Colomb, known as B. Moloch or Molock (1849–1909), published in 1908 in *Chanteclair*. (OW Collection).

convulsions, amaurosis, cophosis, and various forms of paralysis and delirium that led to coma and death.

7. Treatment of rabies

In 1889, Lancereaux published the observation of a young boy who died in his department on 14 July 1889, after a deep dog bite on 29 May. The dog still had time to bite two other children, more superficially, before being killed. The inoculation from the dog's medulla oblongata into a guinea pig confirmed the diagnosis of rabies. The three children were treated three days after the bites ''according to the method of our illustrious master, M. Pasteur'', a method initiated for the first in 1885. The first child died but not the two others. Lancereaux reflected on the reasons for this failure. He suggested that the depth of the wound enabled direct contact between the dog's saliva and the boy's tibial nerve, and that the absence of initial cauterisation of the wound could possibly explain the failure. He concluded that continuing to cauterise the bites with a hot iron as early as possible was useful, before administering the rabies vaccine according to Pasteur's method [41].

8. Treatment of sudden death

After recalling the vivisection experiments that showed the importance of the brainstem structures in the control of heart activity and breathing, in 1894 Lancereaux explained sudden deaths by excessive stimulation of the vagus nerve, leading to excessive bradycardia: ''The excitation of the cervical and thoracic portions of the vagus nerve are generally due to lesions in the surrounding areas that are transmitted to the divisions of this nerve or to the nerve plexus that they make up'' [42]; and also leading to cardiac syncope, aortic aneurysm, and neoplasms in the neck or the mediastinum, for example. Sudden death during abortions when the cervix is catheterised had, for him, the same explanation. Finally, he described the medullary causes of respiratory arrest and proposed using chloral, potassium bromide, and morphine to resuscitate those facing sudden death all while performing rhythmical tractions of the tongue, a technique proposed by Baptiste Vincent Laborde (1830–1903) in 1892 [43]. The final goal of this presentation was to offer physicians, through pathophysiological explanations based on animal experimentation, a therapeutic attitude that was more rational than non-

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demonstrated ancestral methods, which were still in use at the time. He was thereby providing physicians with the premises of resuscitation.

9. Syphilitic nervous conditions

Syphilis is undoubtedly the pathology that has benefited the most from Lancereaux's publications throughout his career. All forms and all localisations were of interest to him, notably syphilitic hepatitis and brain damage.

In 1858, Lancereaux and Léon Gros (1824–1875) of Strasbourg were honoured with the Civrieux Prize, awarded by the French Academy of Medicine, for their work *Des affections nerveuses syphilitiques* (syphilitic nervous conditions), published in book form in 1861 [44]. In nearly 500 pages, they presented multiple observations of syphilis cases to show that ''nervous conditions can develop at all stages of the disease''. They explained that objective lesions of the nervous system become apparent during the anatomopathological examination. The clinical picture brought together headache, various forms of neuralgia, paralysis, generalised or partial convulsions, ''neurosis of the intelligence'', insomnia, and ''paralysis in the sensory organs''. The diagnosis was essentially established by an interview seeking to find antecedents of chancres and dermatological lesions in the secondary stage. Treatment was based on the use of mercury and iodide preparations.

In 1866, Lancereaux published a *Traité historique et pratique de la syphilis* (historical and practical treatise on syphilis) [45], written ''in the manner of a nosographer who finds here merely a chapter taken from the great history of diseases''. It was a voluminous work, rather confusing, that covered the history of epidemics as well as all its localisations. Reading it is soporific, but it did sell well since a second enlarged edition was published in 1873. The various works of Alfred Fournier (1832–1914) would take its place, notably in 1879, with *Syphilis du cerveau* (syphilis of the brain), which consisted of clinical lessons compiled by Édouard Brissaud (1852–1909) [46].

In 1873, Lancereaux took an interest in ''syphilitic meningitis and encephalitis'' [47]. The diagnosis was complicated due to the absence of specificity in the clinical signs: increasing continuous headaches, behavioural disturbances (hebetude, aphasia, mania), convulsions, ataxia and gait disorders, hemiplegia with progressive onset, and coma. During autopsy, he observed the appearance of either pachymeningitis or ''localised tuberculomas'' which could, in these two cases, be associated with bone lesions. The intraparenchymal tuberculomas, comparable to tuberculomas, may suggest a brain tumour. Syphilis and tuberculosis were at that time very frequent, explaining the importance Lancereaux attributed to them, as attested by his pathological anatomy lesson given at La Pitié Hospital in 1880 and published in 1882 [48].

On 23 August 1877 in Le Havre, Lancereaux presented the anatomopathology of the cerebral arterial wall in syphilis to the members of the French Association for the Advancement of the Sciences: ''The lesion begins in the conjunctive tissue of the artery. At times the lesion is disseminated, at times it is able to produce stenosis of the artery by a protrusion it forms internally'' [49]; this led to aneurysms and occlusions. He stressed the difference with regard to the usual appearance of the atheromatous wall.

In 1891, Lancereaux summarised his previous publications on syphilitic encephalitis [50]. The starting point of this disease was arterial damage and neuralgia. Encephalitis consisted of ''one or more disseminated locations of induration, at times directly linked to the action of the specific virus, at times secondary to a bone lesion in the surrounding area''. The locations of induration or syphilomas progressed as tumours with functional damage to the structures compressed by their extension, before triggering intracranial hypertension. Tissue damage properly speaking induced epileptic seizures, paralysis, neurovegetative disorders, which may, with medullary damage, cause death. Lancereaux distinguished between this encephalitis and general paralysis, considering them as two different diseases. He considered it very difficult to diagnose encephalitis with certainty while the patient was still alive. Indeed, treponema would not be identified as the causal agent of syphilis until 1905, by Erich Hoffmann (1868–1959) and Fritz Schaudinn (1871–1906) [51]. Serological examinations, ensuring the specificity of the diagnosis, would be developed in 1906 by Jules Bordet (1870–1961) in Belgium and August von Wassermann (1866–1925) [52] in Germany. Finally, spirochaetes would be identified in brain tissue by Hideyo Noguchi (1876–1928) and Joseph Waldron Moore (1879–?) in 1913 [53].

We will only briefly cite other notes in relation to neurology that Lancereaux wrote: *Sur un cas d'hypertrophie de l'épendyme spinal avec oblitération du canal central* (on a case of hypertrophy of the spinal ependyma with obliteration of the central canal) in 1862 [54]; *De l'amaurose liée à la dégénération de nerfs optiques dans les cas d'altération des hémisphères cérébraux* (on amaurosis linked to degeneration of optical nerves in cases of damage to the cerebral hemispheres) in 1864 [55]; *Note sur l'intoxication saturnine déterminée par la fabrication du cordon briquet ou mèche briquet* (note on lead poisoning caused by the manufacture of cord or wick lighters) in 1875 [56]; and *Note sur un cas d'arachnoïde spinale hémorrhagique* (note on a case of spinal arachnoid haemorrhage) in 1879 [57].

10. Conclusion

Étienne Lancereaux left us with a superb *Atlas d'anatomie pathologique* [58] including, in addition to a volume of text, another volume of colour plates splendidly drawn by Pierre Lackerbauer (1824–1891). The work was published in 1871 (Fig. 5). These magnificent books bear witness to the extent of Lancereaux's clinical and histopathological skills, neurology being only one facet of his multiple contributions to medicine. Of particular interest is his work on vascular neurology and peripheral neuritis, which he was one of the first to analyse in detail, as much for clinical medicine as for pathophysiology.

Disclosure of interest

The author declares that he has no competing interest.

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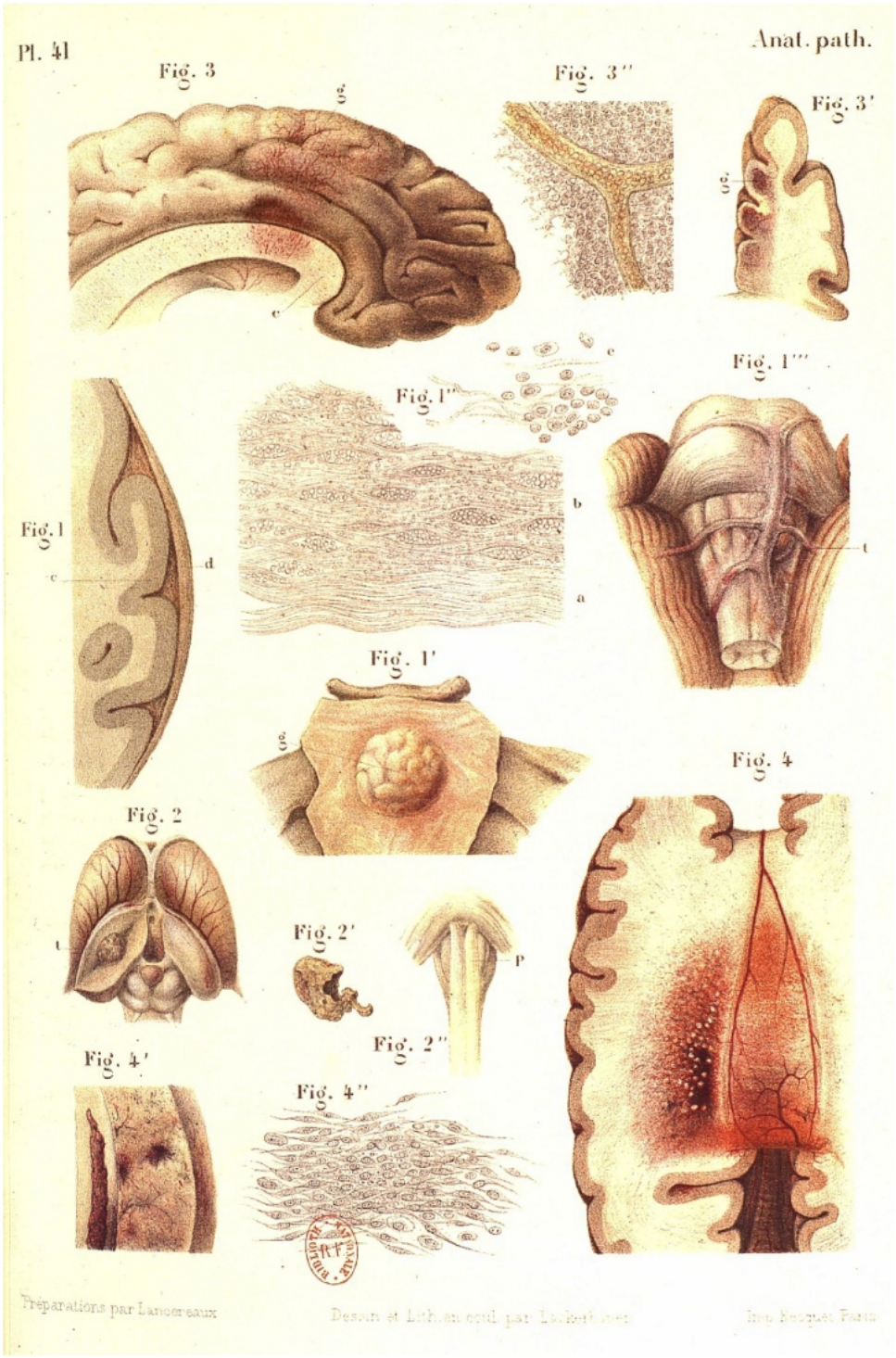

Fig. 5 – Plate 41 of the *Atlas Anatomie pathologique, méningite et gomme syphilitiques* (atlas of pathological anatomy, meningitis, and syphiloma). (© BIUsanté, Université Paris Cité).

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