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## HISTORICAL NOTES

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### Octave Landry's ascending paralysis and the Landry-Guillain-Barré-Strohl syndrome

Jean Baptiste Octave Landry de Thézillat (1826-65) was born in Limoges. He was greatly influenced in starting the study of medicine by his uncle, the neuropsychiatrist Dr de Thézillat. While still a trainee physician under Sandras and Gubler at the Hôtel Dieu and Hôpital Beaujon in 1852, he showed that muscular activity, both active and passive, depended on afferent relays derived from muscles: "sens de l'activité". This important notion foreshadowed by three years the same conclusion reached by Duchenne and Bellion.

In 1859 he published the first volume of his *Traité complet des paralysies*. And, in the same year his famous memoir on "ascending paralysis" recorded 10 patients, including five whom he had personally attended; three died, two at the height of the illness, one some months later. He described three types of presentation: ascending paralysis without sensory signs or symptoms; ascending paralysis with concomitant ascending anaesthesia and analgesia; and a progressive generalised disorder characterised by paralysis and sensory loss.

Landry described the illness that he called "ascending paralysis",<sup>1</sup> in a 43 year old paver. After premonitory fever, malaise, and pain in the limbs, on 1 June he walked to hospital complaining of "weakness, formications in the tips of his fingers and toes". There was no cramp, spinal pain or sphincter disturbance. Touch was lost in the feet but was little impaired in the upper two thirds of the lower limbs; it was absent in the finger tips.

The paralysis ascended, with formications and sensory loss: "like a band around the affected parts". He had to be supported when standing by his bed. By the third week his limbs were paralysed, he developed difficulty in breathing, chewing, and swallowing, accompanied by fever and coughing. Touch was lost in the feet and impaired in the finger tips, but, "pain and temperature sensation were not altered anywhere". The paver perished in the third week. The location of his illness

in the peripheral nerves remained undiscovered, for the necropsy included histological examination only of the cord and soleus muscle. Gubler examined and commented on the case drawing a parallel with diphtheritic paralysis; he mentioned exhaustion of the nervous system and permanent defects of innervation, but having come so close to the truth, curiously, failed to examine the peripheral nerves.

Samuel Wilks furnished details of nine such cases of ascending paralysis, recorded in his book in the chapter on the spinal cord; but its peripheral neural origin was not suspected. Wilks thought "it might be due to a reflex paralysis in which the cord is in no way structurally altered, and therefore may at any time recover . . ."<sup>2</sup>

Polyneuropathy is a recent name replacing Ernst von Leyden's (1832-1910) term "multiple neuritis".<sup>3</sup> The first account was probably one of beriberi neuritis described by Bontius in 1642.<sup>4</sup> Robert Graves in 1843 deserves credit for first implicating disease of the peripheral nerves as a cause of paralysis.<sup>5</sup> While in Paris in 1828 Graves observed the remarkable epidemic of acute sensorimotor polyneuropathy, aetiologically still obscure. Described by Auguste-Francois Chomel,<sup>6</sup> it was known as *épidémie de Paris*. Graves' account in 1843 is to be found in his *Clinical Lectures*.<sup>7</sup>

In 1876 Westphal referred to "Landry's ascending paralysis". Five years after Landry's account Louis Dumenil (1823-1890) provided the first account of the peripheral nerve pathology in four patients and in six published reports. His first was a 71 year old stone cutter afflicted by a Landry's type of neuropathy:

"a genuine atrophy of the medullary substance of the peripheral nerve tubes and related loss of transverse striations of shrunken muscle fibres in the periphery."<sup>8</sup>

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## Octave Landry's ascending paralysis and the Landry-Guillain-Barré-Strohl syndrome

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But it was not until 1916 that the next major contribution materialised, as the celebrated paper by Guillain, Barré, and Strohl describing the illness in two French soldiers.<sup>9</sup>

"The syndrome is characterised by motor disorders, abolition of the tendon reflexes with preservation of the cutaneous reflexes, paraesthesias with slight disturbance of objective sensation, pain on pressure of the muscle masses, marked modifications in the electrical reactions of the nerves and muscles, and remarkable hyperalbuminosis of the cerebrospinal fluid with absence of cytological reaction (albuminocytological dissociation).

This syndrome seemed to us to depend on a concomitant injury of the spinal roots, the nerves, and the muscles, probably of infectious or toxic nature."

The soldiers described both showed gross elevation of cerebrospinal fluid protein (2.5 g/l in the first case) without a cellular reaction. Strohl, whose name is often overlooked, performed the electrophysiological tests ("myographic curve"). Osler's 1892 classic *The principles and practice of medicine* recognised the illness, calling it acute febrile polyneuritis, and Bradford, Holmes, and others regarded it as acute infective polyneuritis.

In 1949 Haymaker and Kernohan commended the

eponym Landry-Guillain-Barré syndrome.<sup>10</sup> But Guillain was angered by the inclusion of Landry's name,<sup>11</sup> arguing that Landry's acute bulbar form was a separate condition, and since lumbar puncture was not practised until 1891 (Wynter and Quincke) before Landry's time, that the inclusion of his name was "une confusion nosographique absolue".

Barré, a fine clinician, became professor of neurology in Strasburg, concentrating his research on vestibular disorders. He died in 1967.

Landry, living for a time in straitened circumstances, had made no further contributions to the subject. His wife, Claire Giustigniani, he described as: "d'une grande beauté, d'une distinction suprême, mais beaucoup plus riche de noblesse que d'argent". A gentle and modest man, he directed a hydrotherapy clinic for nervous diseases at Auteuil, which eventually brought its own success and financial reward. A gifted exponent of the violoncello, he was also an accomplished singer and dancer. He cut an elegant and popular figure in artistic salons. But he was no lounge lizard, occupying his leisure as alpinist, geologist, horseman, and huntsman. Sadly, in his 40th year, Landry attended the penniless, destitute victims of a cholera epidemic in Paris, contracted the illness himself, and died a few days later.

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