

Charcot in Medical Eponyms

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BIOGRAPHY

Jean-martin Charcot, the great French neurologist, was born in Paris, France, in 29th November, 1825, and was son of a coach-builder. He is considered to be the founder of modern neurology. His name is associated with many eponyms, at least 18 in number of which the most known is Charcot-Marie-Tooth disease. Though a scientist of 19th century, his influence carried on into the next century, especially in the work of some of his well-known students like Sigmund Freud, Pierre Marie, Josef FF Babinski, D-M Bourneville, Alfred Binet and GAEB Gilles de la Tourette. He graduated in 1848, at the age of 23 years and started preparation of his outstanding doctoral thesis on gout and chronic rheumatism (arthritis nodosa). Charcot was a professor at the University of Paris for 33 years. In 1862, at the age of 37 years, he was appointed as senior physician of Paris's famous Salpetriere Hospital where he continued throughout his life, ultimately becoming the director of the institution. Before him the hospital was associated with history of great physicians, like LJB Cruveilhier and E-C Lasegue but it was under the charismatic leadership of Charcot that classic French neurology was founded. He was an excellent clinician and an illustrious teacher who attracted students from all over Europe. From a man of internal medicine, his focus ultimately turned on to neurology. In 1882, he established a neurological clinic at the Salpetriere Hospital, which was unique in Europe.

Charcot, the wizard clinician, made many important observations on different diseases; he described the characteristics of tabes dorsalis, differentiation between multiple sclerosis and paralysis agitans. He took special interest in the malady then called hysteria. To study the hysterics, he learned the technique of hypnosis and ultimately became a master of a relatively new 'science'. He did not try to cure them by hypnosis but did so in order to study their symptoms under the influence of hypnosis, and nicknamed as 'Napoleon of the neurosis' and 'Caesar of the Salpetriere'. His insight into the nature of hysteria was highly credited by Sigmund Freud. Charcot recognized multiple sclerosis as a distinct disease and was the first man to diagnose it on a living patient.

He had keen interest in drawing and painting which probably taught him the importance of having patience in

making careful observations, from which he was later benefited greatly, both as a teacher and a scientist. Charcot, the genius neurologist and a gifted clinician, was very hard working: 'he worked uninterruptedly all day, and the lamp on the desk in his large library was still to be seen burning at two o'clock in the night. His only leisurely pleasure was music, Ludvig Van Beethoven being his favorite composer. On his Thursday evenings, which were devoted entirely to music, nobody was allowed to utter a single word on medicine'. In later years, he was disturbed by the idea of diseases running in families. He was an officer of the Legion d'Honneur and received doctor of honour at the University of Wurzburg in 1882. From 1890, his health deteriorated with several attacks of angina and on 16th August, 1893, this brilliant scientist died of pulmonary oedema in Morvan, France.

He was a formidable writer, the author of many articles and books. His memorable quotes are:

- 1) "Symptoms then, are in reality nothing but the cry from suffering organs",
- 2) "To learn how to treat a disease, one must learn how to recognize it. The diagnosis is the best trump in the scheme of treatment".

Associated eponyms:

- 1) *Charcot-Leyden crystals-*

Synonyms: Asthma crystals, Charcot-Robin's crystals

The crystals: Double-pointed, colourless, hexagonal and often needle-shaped phosphate crystals (the crystallized membrane-associated eosinophil enzyme lysophospholipase) found in sputum of patients suffering from bronchial asthma or stool of patients with acute amoebic dysentery and ulcerative colitis. The crystals were first noticed by Friedreich Albert von Zenker in 1851, and then described by others.

Other persons associated: Ernst Viktor von Leyden, Charles-Philippe Robin

- 2) *Charcot's joint-*

Synonym: Neuropathic joint

The joint: Non-inflammatory, painless, disorganized or destroyed, hypermobile, huge swelling of joints (especially knee) with crepitus felt on joint movement due to presence of loose bodies. There is marked instability of the joint. The condition may be seen in diabetes mellitus, leprosy, syringomyelia or tabes dorsalis. The posterior column sensations are lost in patients with Charcot's joint.

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- 3) *Charcot-Neumann crystals-*
The crystals: it is the phosphate crystals present in semen
Other person associated: Franz Ernst Christian Neumann
- 4) *Charcot's triad I (cerebral triad)-*
The triad: The combination of intention tremor, nystagmus, and scanning or staccato speech, which is very often seen in multiple sclerosis.
- 5) *Charcot's triad II (biliary triad)-*
The triad: Recurrent pain in right upper abdomen or biliary colic, fluctuating jaundice, and intermittent spiking fever with rigors seen in patients with stone in common bile duct.
- 6) *Charcot's intermittent hepatic fever-*
The fever: This is in continuation of Charcot's triad II, where there is pyrexia due to cholangitis, and associated with jaundice and upper abdominal discomfort.
- 7) *Charcot-Bouchard aneurysm-*
Synonym: Charcot's artery of cerebral haemorrhage (i.e., the lenticulostriate branch of middle cerebral artery)
The aneurysm: Microaneurysm of small cerebral perforated vessels, rupture of which may result in intracerebral bleeding.
Other person associated: Charles-Joseph Bouchard
- 8) *Charcot's oedema-*
The oedema: A local and very painful oedema with a bluish appearance of the extremities, seen in hysterical paralysis.
- 9) *Charcot's disease-*
Synonym: Charcot's sclerosis, Lou Gehrig's disease, tabes spasmodica
The disease: It is a rare disorder of nervous system with degeneration of nerves conducting signal to muscles. There is early asymmetrical weakness of limb muscles, followed by fatigue, cramps, wasting and fibrillation of the upper extremity, and spasticity of the lower limbs. It usually affects adults over 50 years of age but may occur in younger persons with a M:F ratio of 2:1. The entity is now known as amyotrophic lateral sclerosis, and commonly known to media as Lou Gehrig's disease, after Henry Louis (Lou) Gehrig, an American baseball player who died from it in 1941.
- 10) *Charcot's vertigo-*
Synonym: Cough syncope
The entity: An attack of violent coughing may result in laryngeal spasm or glottic closure, which ultimately leads to intense vertigo or syncope
- 11) *Charcot's-Marie-Tooth disease-*
Synonym: Charcot's-Marie-Tooth-Hoffmann disease, Tooth's syndrome, peroneal muscular atrophy
The disease: It is the commonest disease within a group of conditions known as Hereditary Motor and Sensory Neuropathies (HMSN). There is slowly progressive weakness as well as wasting of distal muscles of legs and arms, resulting from degeneration of the peripheral nerves, nerve roots, and even the spinal cord. The patient is usually a young one who develops foot drop, high-stepping gait and 'inverted champagne bottle' appearance of the legs. The affected person has normal intelligence with normal life span. The disease was first described by Friedreich Schultze in 1884 but the work of Charcot threw light over the disease with a new concept that it is a neuropathy, rather than being a myopathy.
Other persons associated: Pierre Marie, Howard Henry Tooth, Johann Hoffmann
- 12) *Charcot' zones-*
The zones: Hysterogenic zones in the human body
- 13) *Charcot-Wilbrand syndrome-*
The syndrome: A neuro-ophthalmic syndrome, resulting in visual agnosia and inability to revisualise images due to occlusion of the posterior cerebral artery of the dominant hemisphere. The condition is sometimes associated with Gerstmann's syndrome.
Other person associated: Hermann Wilbrand
- 14) *Erb-Charcot paralysis-*
The paralysis: a rare syndrome comprising of spinal syphilis with paraesthesia, spastic weakness, sphincteric disorder, brisk deep reflexes, muscle atrophy, sensory disturbances, and paraplegia.
Other person associated: Withelm Heinrich Erb
- 15) *Charcot's angina cruris-*
Synonym: Charcot syndrome I, intermittent claudication, intermittent limping syndrome
The disease: It is an intermittent gait disturbance caused by obliterative angiopathy with diminished circulation of muscles of legs. There is appearance of pain, discomfort, cramp and weakness of legs, most commonly developing after physical effort/walking and disappearing after rest. The condition is symptomatic of a variety of vascular disease, including Buerger's disease. The term coined at the title is no longer used for intermittent gait disturbances.
- 16) *Charcot-Joffroy syndrome-*
Synonym: Spiller's syndrome, epidural ascending spinal paralysis
The syndrome: A syndrome characterized by sensory disturbances of lower limbs, localized or diffuse pain in the back/legs/chest, followed by weakness of knees, and transverse myelitis There may be presence of hyperaesthesia, vasomotor and sphincteric disturbances, resulting from thrombophlebitis of the meningeal veins with subacute/chronic pachymeningitis. In 1911, Spiller first reported two cases.
Other persons associated: William Gibson Spiller, Alexis

Joffroy

17) *Souques-Charcot syndrome-*

A variant of Hutchinson-Gilford syndrome (premature aging in younger children with dwarfism) consisting of eunuchoid habitus, mental subnormality, loose-shiny-dry skin with subcutaneous atrophy.

Other associated person: Alexandre-Achille Souques, Sir Jonathan Huchinson

18) *Charcot-Weiss-Baker syndrome-*

Synonym: Carotid sinus hypersensitivity syndrome, tight collar syndrome, vagal syncope

The syndrome: Transient attacks of syncope associated with bradycardia and hypotension, resulting from

application of strong pressure on the neck over the bifurcation of common carotid artery, or by sudden turning of head, or wearing a tight collar. This syndrome was first described by Johann Nepomuk Czermak in 1866.

Other persons associated: Soma Weiss, James Porter Baker

CONCLUSION

How one can forget this memorable comment of Charcot: "In the last analysis, we see only what we are ready to see, what we have been taught to see. We eliminate and ignore everything that is not a part of our prejudices".

Certainly, a historic truth!

Announcement

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Announcement

A CME in Medicine will be held at **RNT Medical College, Udaipur on 25th and 26th September, 2004.**

Members interested in attending are requested to contact **Dr. Swati Shrivastava**, Asst. Prof. Medicine, 30th N.M. Acharaya Marg, Opp. Lok Kala Mandal, Udaipur. Tel. 2419118.