Pioneers in Movement Disorders

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Movement Disorders is an established sub-speciality of Clinical Neurology and encompasses the study of several common disorders, e.g., Parkinson’s Disease as well as uncommon disorders, e.g., dystonias, atypical akinetic rigid disorders and so on so forth. It is therefore relevant to review the pioneering work done by selected neurologists in the last five centuries. Although, many physicians and neurologists carried out pioneering works on movement disorders, a detailed account of every work is beyond the scope of this review. Some of the cardinal works only by Thomas Sydenham, James Parkinson, Kinnier Wilson, and David Marsden are presented in this short essay.

Thomas Sydenham (1624-1689)

In 1886, Sydenham, an English physician, wrote an account of ‘chorea minor’, a frequent complication of rheumatic fever in those days in the Western World, and this is in all probability, the first documented evidence of description of movement disorders in the United Kingdom.1,2

Sydenham initially left academic pursuits to help overthrow the monarchy of King Charles Stuart in the 1640s.1 The revolt led to the execution of the King in 1649. Thereafter, he returned to Oxford in 1645 and completed his medical education. Following the restoration of Monarchy in 1660, he fell out of favour with the King Charles II and focussed his entire attention to medical science. John Arbuthnot, a leading Scottish physician called him ‘aemulus Hippocratis’, literally meaning the ‘rival of Hippocrates’,1 and he is universally recognized as the ‘Father of Clinical Medicine’. He wrote his account in Latin but a verbatim English translation was appended at the end of the paper, written by Pechy in 1906, which appeared in the celebrated textbook, Neurology, by Kinnier Wilson, published in 1940. 'It reads,

‘Chorea Saint Viti is a sort of Convulsion, which chiefly invades Boys and Girls from ten Years of age to Puberty; firstly, it shows itself by a certain Lameness, or rather Instability of one of the Legs which the Patient drags after him like a Fool; afterwards, it appears in the Hand of the same side, which is affected with the disease, can by no means keep in the same Posture for one Moment... If a Drink be put into his Hand, he represents a thousand Gestures, like Jugglers, before he brings it to his Mouth for whereas he cannot carry it to his Mouth in a Right line, his Hand being drawn hither and thither by the Convulsions, he turns it suddenly into his Mouth and drinks greedily as if the poor Wretch was designed to make Sport’

This brilliant clinical account was however, not readily agreed upon by one and all and in 1785, William Cullen thought that though the convulsive disease of Sydenham encompassed within its ambit, both ‘diverse states mimicking the gesticulations of ludicrous antics of a stage clown’ and the ‘convulsive agitations of the body with the retention of consciousness, as described by Limmaeus’, in essence, they were identical.1,2

Incidentally, the term, Chorea Sancti Viti, was originally used for dancing mania, a form of hysteria, which was common in Europe in the 15th and 16th century. Subsequently, it was known as Chorea Magna, and Sydenham’s disease as Chorea Minor and later, the eponym was assigned to him. The old entity, ‘dancing mania’, had largely disappeared by the time Sydenham arrived and it is most unlikely that he ever encountered such a condition. His description was based on the complications of rheumatic fever only, which he might have had confused with Chorea Sancti Viti.1,2

James Parkinson (1755-1824)

In all probability, James Parkinson is the most talked-about personality in the world literature on movement disorders and in
spite of the fact, that eponyms are generally discouraged now a days, this one in all likelihood, will survive the grind of time. It is to be noted that no verified portrait of Parkinson exists, even in the National Art Gallery in London.

Parkinson was born in 1755 in London, and dabbled in different directions. Appointed as the Warden of the Surgeon’s Company that replaced the Barbers’ Company in 1745, and even later, succeeded by the Royal College of Surgeons, he turned into a political reformer, a vociferous campaigner of social welfare, a radical pamphleteer writing under the pseudonym, Old Hubert, and a member of various secret societies, after he was galvanized by the spirit of the French revolution in 1789. His magnum opus, ‘An Essay on the Shaking Palsy’ was published in 1817 and it ran into 5 chapters and spanned 66 pages. Published by Sherwood, Neely and Jones, London, it remains a classic in the medical literature.

In his description notably, he ignored rigidity in his patients and that was for the simple reason that examination of the muscle tone as a clinical sign was not yet described. He had no clue to its aetiology and also felt that the seat of the lesion was in upper cervical cord, extending upto the medulla, a view that was rectified ages later by the works of Heinrich Lewy, from the United States of America, who demonstrated the inclusion bodies in substantia nigra in 1912, and Konstantin Tretiakoff from Soviet Russia in 1919, who described the nigral lesions.¹

It is of considerable interest that the leading British journals at that time, like, The Medico-Chirurgical Review, The London Medical and Physical Journal and the London Medical Repository did not publish any obituary of this outstanding clinician. Indeed, James Parkinson was not adequately recognised in his life-time, and he left the world, unwed, unhonoured and unsung. As a matter of fact, in 1912, JG Rowntree, one of the earliest biographers of Parkinson, wrote almost sarcastically in Johns Hopkins Hospital Bulletin, that, ‘English born, English bred, forgotten by the English and the world at large, such was the fate of James Parkinson.’¹

**Samuel Alexander Kinnier Wilson (1878-1938)**

Wilson was born in United States,¹,² but studied at the University of Edinburgh, and thereafter worked with Joseph Babinski and Pierre Marie in France. He was then appointed as registrar at the National Hospital, Queen Square, London, as pathologist, and thereafter, he was almost destined to serve there in one capacity or the other for the rest of his life. He was subsequently elevated to the post of assistant physician in 1913 and finally became full physician in 1925. Along with Sir Gordon Holmes, he constituted the core of ‘Queen Square Neurology’ that was almost synonymous with British neurology in the first half of the last century. Incidentally, he was the first physician in England who practiced neurology as an exclusive subject.

Kinnier Wilson coined the term ‘extrapyramidal’ The condition he described constituted his thesis for MD while he was working as a registrar in Queen Square and it earned him a gold medal. It was entitled, ‘Progressive lenticular degeneration: A familial nervous disease associated with cirrhosis of the liver.’ Later, in 1912, he published his work in the celebrated journal, Brain, that ran for two hundred and twelve pages, the longest paper ever published in that journal, and was the only article in that volume.

Kinnier Wilson was described as ‘Olympian’ by Webb Haymaker, ‘pompous’ by Derek Denny Brown and ‘kind and humorous’, by Robert Foster Kennedy, the last-mentioned ones being his registrars in King’s College, London. The story goes that once during the clinical rounds, Denny Brown asked Wilson about the diagnostic pointers for hepatolenticular degeneration, whereupon Wilson after a few steps forward, looked back, touched the lapel of his inner coat with his thumbs, and asked in his resonant voice, ‘You mean Kinnier Wilson’s disease?’ Foster Kennedy narrates a story that after examining a patient of lateral medullary syndrome for three hours, Wilson was still not certain about a few signs and asked the patient, ‘Will you see to it that I get your brain when you die?’ He died of carcinoma in 1938, though some authors write that he died in 1937. He was nominated for Fellow of Royal Society, London by Sir Charles Scott Sherrington and Edgar Adrian, the Nobel Laureates of 1933, but he breathed his last before it could be conferred upon him. Equally sad, he did not live to see the publication of his monumental book, which appeared in 1940. And finally, King’s College, London, commemorated the 50th year of his untimely death in 1988, when David Marsden and Stanley Fahn, two contemporary giants in the field of movement disorders wrote in the Editorial of Movement Disorders.

‘Kinnier Wilson was the father of basal ganglia research. We stand on his shoulders, and it is a pleasure to do tribute to his memory.’

**References**