

Section of the History of Medicine

President W H McMenemey MD

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Paper

Some Aspects of the Life of Dr C E Brown-Séquard

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Medical history does not need always to consider only the features of a man's published works. It is interesting to ask ourselves what may have caused that man to do what he did; and how his personality and domestic background may have led him to the career which history now may reveal. This Address comes from an attempt to understand those circumstances and intellectual forces which mould and direct the work of any man of science in his time, and links the present with the times of nearly two hundred years ago.

If we go back to 1784, we find ourselves in the year that Dr Samuel Johnson died, about the time of the start of the French Revolution, and the drafting of the Constitution of the United States. The younger Pitt was Prime Minister for King George III, himself an involuntary patient of Queen Square.

We find ourselves in Philadelphia, in the USA, for the birth of an American boy to be named Edward Charles Brown. This boy grew up to become a seaman, and later became a captain in the American mercantile marine.

We next move eight thousand miles across the world to Mauritius, in the year 1787, and to a marriage between Pierre Paul Séquard and Marie Elizabeth Nativel. Their marriage certificate described Séquard as a trader of Port Louis, Mauritius, and hailing from Marseilles in Provence. Marie Elizabeth Nativel lived in the island of Bourbon (Réunion) and was the daughter of André Nativel. One year later, in 1788, a daughter was born of this marriage. Her name was Henriette Charlotte Perrine Séquard, and her birth was registered in 1790. She grew up in Mauritius and was destined to be the mother of an important figure in the history of medicine; to be early widowed from an American husband; and to die in Paris, in 1842, at the age of 54.

Mauritius was ceded to Britain in 1810; the capital is Port Louis and it is the only port of any size on the island. Mauritius is about the same

area as Surrey, and is a volcanic island surrounded by a typical coral reef of the kind described by Darwin, who visited Mauritius on the homeward journey of 'The Beagle'. It is geologically part of the continent of India. Its situation is in the centre of that magnificent, enormous and rather mysterious ocean, the Indian Ocean; and has Africa on its west side, India to the north. Some 3,000 miles to the east are the Cocos Islands and Australia. To the south no land appears before the Antarctic continent. The climate is tropical, very variable, and provides an everchanging spectacle of light and clouds, storm and sunshine. Cyclones frequently pass near or over the island, causing much damage to the principal crop, sugar beet, though, fortunately, loss of life is small.

The way of life can have changed little since the time of Miss Séquard. Mauritius has about 800,000 people, who are composed of French, British, African, Indian and Chinese. The intermixing of these races produces some extremely beautiful inhabitants. The people speak English and French equally well; and have their own patois, which is known as Creole.

Our next point in time is a marriage, between an American sea captain (the boy from Philadelphia), now aged 29, in 1813, and Miss Séquard. In 1817 we reach an important date, that of the birth of their son, Edward Charles Brown, the man later to be known by the names of both his parents – an American father, and Mauritian French mother; who by his birth in Mauritius was a British citizen, and who died seventy-four years later in Paris, as a Professor of French nationality. On the certificate of birth there was no signature of Brown's father. Captain Brown had set out some time before his son's birth on a venture to India, to relieve famine. He was either captured by pirates or lost in a cyclone. He and his ship vanished in the Indian Ocean. La veuve Brown brought up her son in poverty, it is said, doing needlework to make a living; and the boy had a job in a store in Port Louis, where he had access to books. Though they may have had little to live on, they had plenty of help in their home, for in the census returns of 1823, it is shown that they employed several slaves.

Early French Influences

When young Brown was 21, he and his mother left Mauritius for Paris, where he intended to make a literary career. Brown was advised that his literary chances were slender and he chose instead to study medicine. His fees were paid by his mother, who made a living as a boarding-house keeper. Four years later, in 1842, Madame Brown died. Her son was then aged 25; and it was then that he added his mother's name to that of his father. Though there is a story that Brown-Séguard said that he had lengthened his name because there were so many Browns about, it is equally possible that he was aware of his debt to his mother, that he was shocked by her death, and that he wished her to have some memorial, as she does, by a linkage of name.

Brown-Séguard was now alone in a strange city, not yet qualified in his profession. Perhaps to find some solace from scenes of childhood he returned to Mauritius. But he can have found no comfort there, and returned to Paris in 1843. He obtained his Paris Doctorate at the age of 29, in 1846. He had a few medical appointments, but devoted most of his time to experimental physiology 'under the most harassing conditions of extreme poverty' (I quote from the *Dictionary of National Biography*). In 1852 he left France because of strong Republican opinions and went to New York, where he gave lessons in French, and took mid-wifery cases at five dollars a time.

In 1853 he married for the first time and returned to France. In 1854 he again set off to Mauritius, to settle in practice, but finding a cholera epidemic there, he took charge of the hospital. He used the method of treatment with opium, as suggested by Magendie. Ever the experimentalist, he swallowed the vomit of cholera patients. When he felt that he had caught cholera, he took a huge dose of laudanum, and was found semiconscious in his room, curled up in a corner, strong enough only to signal for coffee. He was twice recommended for the CMG but never obtained this honour.

When the epidemic was over he knew that he could not do his work properly in Mauritius, and must have been thankful to find that, on May 25, 1854, he had been appointed to the Professorship of the Institutes of Medicine and Medical Jurisprudence at the newly-formed Medical College of Virginia in Richmond.

Brown-Séguard was no lover of slavery, and his colleagues were not lovers of animal experiment without anaesthesia, nor of Brown-Séguard's 'asthmatic' unintelligibility of address. Within a few months of his appointment at Richmond, he disappeared suddenly and without warning, and returned to Paris in 1855.

We see in all these frequent and profound changes, which continued through his life, though

in milder form as the years passed, a profound restlessness and recurrent dissatisfaction, which in lesser men would have resulted in bitterness and cantankerous failure. These personality traits must have some origins in his ancestry, and the background of his youth, with its uncertainties and privations. But they were offset by a degree of industry, intellectual concentration and originality of tremendous force, together with a feeling for the future benefit of humanity and a gentle, unassuming manner, which endeared him very generally. We have a glimpse of him thus, in the account of Judge Condé-Williams of Mauritius: 'A small dark man with a smile full of kindness.'

From this uncertain personal and professional background Brown-Séguard made plans to move to London in 1858. In a letter from Brown-Séguard we have evidence of the founding of the medical tradition of the National Hospital, Queen Square.¹ This letter is reproduced below:

Dec/6/59

'My dear Sir,
You treated me with so much kindness when I had the honor of seeing you in London eighteen months ago, that I feel authorised to ask you to help me to obtain the appointment of Physician to a Hospital for Paralytics and Epileptics soon to be established in your metropolis...'

On reaching London he had an immediate success. He gave a course of six lectures at the Royal College of Surgeons, on the physiology and pathology of the nervous system. He lectured also in Edinburgh, Dublin and Glasgow, being elected to the Fellowship of the Faculty of Physicians and Surgeons of Glasgow. He began, with Dr Ramskill, the clinical history of the National Hospital.

His 'Lectures on Nervous Diseases' were published in 1860; and in this year he became a Fellow of the Royal College of Physicians, and of the Royal Society, thus obtaining, within two years of arriving in England, the highest scientific distinction which this country confers. Among the names of his supporters on the nomination form for Fellowship of the Royal Society are those of the famous surgeon Paget (to whom Brown-Séguard dedicated a journal); Arnott, then President of the Royal College of Surgeons, whose influence he had requested in obtaining his National Hospital appointment; Sibson, another surgeon, whose name is familiar to all students of human anatomy; and William Carpenter, the first person to suggest, as Sir Francis Walshe (1958) pointed out, a brain-stem activating system. Brown-Séguard's name appears in the Charter Book of Fellows' signatures in the same column as Lord Lister and Francis Galton, and in the company of three bishops and a banker.

¹With acknowledgments to the Wellcome Historical Museum

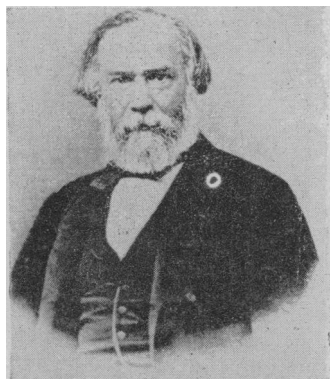


Fig 1 Photograph and autograph about 1880

E. Brown-Séquard

In 1861, Brown-Séquard delivered at the Royal Society the Croonian Lecture on the subject of 'The relation between muscular irritability, cadaveric rigidity and putrefaction'. His Goulstonian Lectures, six in all, on symptoms of brain disease, were published in the *British Medical Journal*, after they had been delivered at the Royal College of Physicians in Pall Mall East.

The National Hospital

Details of his appointment to the National Hospital are scarce. It is clear that with Dr Ramskill he was a founder member of the staff, and that his appointment was made especially to give the best academic status and respectability to the new hospital, at a time when many were seeking the appointment for their own gain. One candidate offered the sum of £1,000 if he were successful. The first entry to be found in the hospital records is:

'29th December 1859

It was Resolved and carried unanimously That E. Brown-Séquard, M.D. etc. be and is hereby elected a Physician to the Hospital.'

'14th January 1860

The following letter was ordered to be entered on the minutes:

Paris—22 Rue de l'Ouest
12 Jan. 1860

Sir,

Owing to distressing circumstances which have disturbed me for the last ten days, I have neglected to acknowledge as I should have done the reception of the letter you wrote to inform me officially of my election to the office of Physician to the National Hospital for the Paralysed and Epileptic.

I have written to Mr Alderman Wire of the Committee to pray him to offer my thanks to the Committee.

Believe me, Sir

Yours very sincerely

(signed) Ed. Brown-Séquard M.D.

Mr. Reid,
46 Great Coram St.'

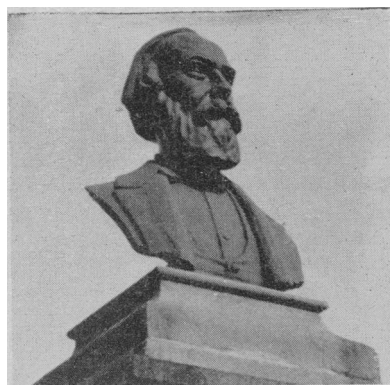


Fig 2 Modern bust in Port Louis, Mauritius

'19th April 1860

The Physicians having applied through Dr Brown-Séquard for instruments

It was Resolved That they procure such as are necessary at an expense not exceeding Twenty pounds.'

'26th April 1860 (Furnishing Committee)

Dr. Brown-Séquard intimated that he would give Clinical Lectures every Monday at the Hospital, and his first would commence on the 14th May at 3.30. Agreed.'

'17th May 1860

It was Resolved That Dr. Brown-Séquard's Lectures be advertised in the *Lancet*, *Medical Journal* and *Times* for a month.'

'7th June 1860

Dr. Ramskill was also present and read a note from Dr. Séquard.

It was Resolved That the names of the Physicians shall not be published nor allusion made to their cures in future advertisements.'

'21st June 1860

It was Resolved That Dr. Séquard be requested to communicate with Mrs. Scarce (an Indoor Patient from Brighton) that it would not be useful to her case to remain longer in the hospital.'

'25th October 1860

The Secretary was instructed to take Dr. Brown-Séquard's orders for a Gymnasium for the patients.'

'18th September 1861

Dr. Brown-Séquard complained of the conduct of the House Surgeon, Mr. Smith, who was called in to explain: when after some conversation on the subject the following Resolution was read to Mr. Smith:

It was Resolved That having heard the complaint of Dr. Brown-Séquard against Mr. Smith, the House Surgeon, who was called in and was heard in his defence and having read the Resolution of the 30th of May last respecting him - Resolved that Mr. Smith be requested forthwith to tender his resignation.'

'2nd October 1861

Mr. Smith tendered his resignation as Resident House Surgeon.'

In a minute of May 1862, we find for the first time the name of the man destined to become the most famous figure of British neurology, John Hughlings Jackson:

'Dr. Brown-Séguard proposed and Mr. Norman Wilkinson seconded, when

It was Resolved

That Dr. Jackson be and is hereby elected Assistant Physician on the understanding that he should visit the Hospital twice a day and see the out-patients at their homes for which extra service he will be allowed the remuneration of fifty pounds per annum.'

There is no doubt that Brown-Séguard and Jackson were friends; and that Brown-Séguard, as the senior of the two, must have considerably influenced the thought of Jackson.

In a minute of July 15 1863 we find:

'Dr. Brown-Séguard stated that he intended to give up practice in the country and was reluctantly compelled to withdraw from the Hospital and would be glad that a successor might be named as soon as was convenient. It was proposed by Mr. Barton - seconded by Mr. Hart and Resolved

That this Committee have learned with infinite regret the intention of Dr. Brown-Séguard to retire from practice in this country and that he has in consequence tendered his resignation as one of the Physicians of this Hospital.'

In July 1863 the Hospital Committee resolved that Dr Brown-Séguard be elected Honorary Physician.

Notes on His Later Career

With this note Brown-Séguard disappears from the daily life of the Hospital, to be remembered only for the spinal cord syndrome, for which he is famous - even though it is uncertain that he ever described the effects of hemisection in the way we now use.

History seems to have forgotten that he was the founder of modern endocrinology; and that he was the first person to show that animals perished if their suprarenal glands were excised.

Brown-Séguard first lived at 82 Wimpole Street, but soon moved to 25 Cavendish Square. The house no longer stands, but an adjoining one may still be seen.

It is supposed by some that Brown-Séguard decided to leave London on an impulse provoked by seeing from his consulting-room window a line of carriages belonging to his fashionable (and, I have no doubt, exacting) patients.

Brown-Séguard held the highest possible position in the world of science. A letter from Charles

Darwin still exists asking for a favourable review of 'The Origin of Species' and another from Louis Pasteur addressing Brown-Séguard as 'Cher grand maître'.

In 1863, Brown-Séguard left London, having accepted the post of professor of the physiology and pathology of the nervous system at Harvard. On the death of his wife in 1867 he returned to Europe, *via* Dublin to Paris, where he held the chair of comparative and experimental medicine. In 1872 he went to New York and settled in practice, and married again. In 1875 he returned to London for a short while, declining the chair of physiology in Glasgow. He accepted in 1877 the chair at Geneva. In 1878, on the death of his old friend and colleague, Claude Bernard, he took over the professorship of experimental medicine at the Collège de France, in which post he remained to the end of his life, becoming a member of the Academy of Sciences in 1886. He died on April 1, 1894 after a cerebral thrombosis with hemiplegia and visual field defect.

In 1960, I visited Paris to make a pilgrimage to the grave of Brown-Séguard, in the cemetery of Montparnasse. None of the custodians knew of his grave. Eventually a most helpful official looked up the records of Brown-Séguard's burial, and showed me papers signed by, or on behalf of, his family. In this way I was able to trace his daughter, Mrs McCausland to Folkestone. She was last mentioned in Olmsted's biography as living in Victoria Street, London. A letter addressed to Folkestone was, however, returned unopened, but after more than a year, when casually looking through the list of names of those educated at Winchester, and especially for those who had become doctors, quite by chance I caught the names of two McCauslands, one a doctor; I noted that the initials were 'C. E.', and the address given was Folkestone.

I at once wrote a letter to the elder of the two and soon had a reply saying that Brown-Séguard was his grandfather and that his grandfather had had a daughter Charlotte, who married an Irish surgeon.

It was not long before I made the pilgrimage to Folkestone; and it was there that Dr McCausland showed me many treasures kept from his grandfather's day. We even dined off a dinner service with the monogram BS upon it. Dr and Mrs McCausland [who, with their daughter, were present at the delivery of this Address] have both helped me greatly in understanding the life and work of Brown-Séguard, and by their memories of what Brown-Séguard's daughter had told them.

REFERENCE

Walshe F M R (1958) In: *The History and Philosophy of Knowledge of the Brain and its Functions*. Ed. F N L Poynter. Oxford: p 224