

John Russell Reynolds

JMS Pearce, MD, FRCP

Emeritus Consultant Neurologist, Department of Neurology, Hull Royal Infirmary, UK.

Correspondence to:

J.M.S. Pearce, 304 Beverley Road Anlaby, East Yorks, HU10 7BG, UK.
E. jms.pearce@me.com

Conflict of Interest statement: None declared

Date first submitted: 17/6/19

Acceptance date: 18/6/19

Published online first: 12/7/19

To cite: Pearce JMS, Adv Clin Neurosci Rehabil 2021;20(2):28-29

This is an open access article distributed under the terms & conditions of the Creative Commons Attribution license <http://creativecommons.org/licenses/by/4.0/>

<https://doi.org/10.47795/FIAE9943>



Figure 1: Sir J. Russell Reynolds. [Published in British Medical Journal, 6 June 1896].

Abstract

When neurology began to develop as a specialty, Russell Reynolds was one of the first Neurologists appointed to the Hospital for the Paralysed and Epileptic, Queen Square.

Of many contributions his work on epilepsy was influential, espousing many new concepts. He followed and developed Hughlings Jackson's original ideas about positive and negative neurological symptoms. His approach to patients was holistic at a time when more objectively defined notions of illness dominated medicine. He wrote on vertigo, and about criminal lunacy, and his book *The Diagnosis of Diseases of the Brain, Spinal Cord, Nerves and their appendages* was a major text of the period.

Well versed in poetry, philosophy, art, and music, he was widely admired. He became President of the Royal College of Physicians.

Like the great Sir Jonathan Hutchinson and other Victorians of privileged stock, Sir John Russell Reynolds (1828–1896) (Figure 1) never attended school. His father, a nonconformist minister at Romsey in Hampshire, educated him personally. His grandfather Henry Revell Reynolds (1745–1811), FRS, was

an illustrious physician at the Middlesex and St Thomas's Hospitals and physician to George III.

As a nonconformist he was excluded from Oxford and Cambridge* and read Medicine at University College London, graduating with a gold medal in physiology, comparative anatomy, and medicine in 1851.¹ An impecunious young Doctor, he sought a living, practising in Leeds where his brother was a Minister of the East Parade Mission Chapel, and his brother-in-law a journalist on the Leeds Mercury.

A year later his former teacher Marshall Hall, FRS (1790–1857), a Physician and brilliant experimental Physiologist, persuaded him to return to London,² where at modest cost Hall let him live in his home at 38, Grosvenor Street and join his consultant practice, mainly in nervous diseases.

Only four years after graduating Russell Reynolds' outstanding ability led to his appointment as Assistant Physician at the Hospital for Sick Children and to the Westminster and University College Hospitals. There he became Holme Professor of Clinical Medicine in 1862, and in 1867 succeeded Sir William Jenner as Professor of Medicine. Just five years after the opening of the National Hospital for the Relief and Cure of Paralysis and Epilepsy, Russell Reynolds showed his interest in neurology and was appointed to its staff. He was elected FRS

on 3rd June 1869.

At this time neurology began to flourish; he worked with many distinguished early Neurologists. They included Hughlings Jackson (1835–1911), Jabez Ramskill (1825–1897), Charles Bland Radcliffe (1822–1889) who succeeded Brown-Séquard in 1863, and published *Lectures on Epilepsy, Pain, Paralysis, and certain other disorders of the Nervous System*, 1864, and articles in Reynolds's *System of Medicine*. His brother John Netten Radcliffe (c. 1830–1884), a pioneering epidemiologist, was also Medical Superintendent of the Hospital for the Paralysed and Epileptic.

No man works in a vacuum. Marshall Hall, (who in spite of his acknowledged distinction³ surprisingly had failed to get an academic post in London) inspired and encouraged Reynolds. Amongst contemporary and subsequent notable physicians he influenced were: the erudite Charlton Bastian (1837–1915); Charles Edward Beevor, (1854–1908); Howard Tooth (1856–1925); James Taylor, (1859–1946) editor of Jackson's Selected Writings; and the punctilious Thomas Buzzard (1831–1919), his neighbour in Grosvenor Street, and friend of both Hughlings Jackson and David Ferrier (1843–1928).

Such was Reynolds's reputation that he was rewarded with both the Lumleian and the Harveian lectures at the Royal College of Physicians of London, becoming President from 1893–1895. Like his grandfather, he was physician to the royal household in 1879 and was made a baronet in 1895. He was President of the BMA until his death.

A popular and fluent lecturer, he was shy and serious but had a quiet humour and a 'directness of speech that was no respecter of persons.' Described as courteous, shrewd and kind, his approach was holistic—long before it became fashionable:

Not to merely make a diagnosis, much less to write a prescription, but to advise the individual patient what he or she should best do to regain their health... and what changes in the environment, mental, emotional, or physical were most likely to achieve this end.²

NEUROLOGICAL SIGNS REFERENCES

- Larner AJ. "Neurological literature": cognitive disorders. Adv Clin Neurosci Rehabil 2008;8(2):20.
- Latham J (ed.). *The Vintage book of amnesia: an anthology of writing on the subject of memory loss*. New York: Vintage, 2000.
- Parker ES, Cahill L, McGaugh JL. *A case of unusual autobiographical remembering*. Neurocase 2006;12:35–49. <https://doi.org/10.1080/13554790500473680>
- Luria AR. *The mind of a mnemonist. A little book about a vast memory*. New York: Basic Books, 1968.
- Von Neumann J. *The computer and the brain (2nd edition)*. New Haven and London: Yale University Press [1958] 2000:xxiv.
- Halmos PR. *The legend of John von Neumann*. Am Math Mon 1973;80:382–394. <https://doi.org/10.1080/00029890.1973.11993293>
<https://doi.org/10.2307/2319080>
- Cobb M. *The idea of the brain. A history*. London: Profile Books, 2020:181–183,187–192.
- Borges JL. *Fictions*. London: Penguin Classics, 2000:91–99.
- Sacks O. *The man who mistook his wife for a hat*. London: Picador, 1985: 106n,114,191,219–220.
- Mercier P. *Night train to Lisbon*. London: Atlantic Books [2004] 2009:279,280–281,283,284,415,420.

Medical works

Russell Reynolds is often remembered for his descriptions of epilepsy, eclamptic convulsions, and febrile convulsions in children.^{4,5} He also used electrotherapy in various nervous diseases.⁶

Interestingly, he is widely quoted for commending the “great value of Cannabis indica” in migraine, epileptic conditions, depression, and asthma. In 1890 he prescribed a cannabis tincture for the menstrual cramps suffered by Queen Victoria. He noted in *The Lancet*:

When pure and administered carefully, [cannabis] is one of the most valuable medicines we possess.⁷

Of greater import was his 1861 paper (Figure 2) that espoused the concept of positive and negative neurological symptoms.^{5,8} Positive symptoms were abnormal behaviours that included not only clonic jerking and abnormal movements but also hallucinations and paranoid delusions.

Some symptoms are negative, i.e. they consist in the negation of vital properties. Of this kind are paralysis, anaesthesia, and the like... Other symptoms are positive, i.e. they consist in excess or alteration of vital properties. Of this kind are spasms, pain, convulsions and the like... (p.9-12, 28)

Unfortunately he failed to write further on this theme. Like Jackson, Russell Reynolds shrewdly noted that the lesion did not directly cause the symptoms observed.

The origins of positive and negative symptoms were inextricably intertwined with Herbert Spencer's ideas of dissolution and evolution of the nervous system.⁹ Hughlings Jackson extended Spencer's idea to patients' symptoms, both positive and negative. Jackson believed that negative symptoms related to dissolution of neural function while positive symptoms resulted from excitation or the release of lower levels from higher inhibitory control:

Speaking of the physical side, there are degrees of loss of function of the least organised nervous arrangements with conservation of function of the more organised. There is in each reduction to a more automatic condition; in each there is dissolution, using this term as Spencer does, as the opposite of evolution.¹⁰

Russell Reynolds wrote his first book on *Vertigo*. In 1856 he examined legal pleas for insanity in his *Criminal Lunatics: are they Responsible?* He believed that epilepsy could be a distinct or ‘idiopathic’ disease, a controversial view well expressed in *The Diagnosis of Diseases of the Brain, Spinal Cord, Nerves and their appendages* in 1855 (dedicated to Marshall Hall),

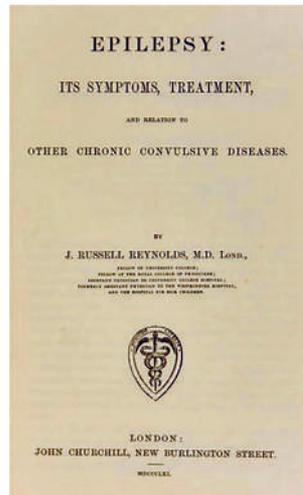


Figure 2. Reynolds: Epilepsy, its symptoms, treatment and relation to other chronic convulsive diseases. 1861

This was later contradicted by Kinnier Wilson who stated that all epileptic events were symptoms, whether or not any underlying pathology could be demonstrated.¹¹

Always inclined to a broad approach he described the interictal symptoms of 62 patients with idiopathic epilepsy. He found about one third had mild impairment of recent memory and a similar proportion had moderate to severe psychopathological findings. His interpretation of epileptic activity (well described by Eadie¹²) was in large measure approved by Hughlings Jackson.

He edited and wrote many chapters in *A system of medicine* (London: Macmillan, in five volumes from 1866 to 1879), a major text rivalled only by John Cooke's *Treatise in Nervous Diseases*, published in two volumes, in 1820 and 1823, the second volume of Bright's *Reports of Medical Cases* 1831, and Romberg's *Manual of the Nervous Diseases of Man* 1840.¹³

Russell Reynolds practised at a time when neurology was in its infancy. It relied on clinical description and elementary pathology. In this morass of evolving knowledge Reynolds formulated a classification of neurological diseases that remains the kernel of modern systems. His work in neurology linked the highly original physiological and clinical works of his mentor Marshall Hall to Hughlings Jackson's intellectual explorations of the brain's complex functions and hierarchies, and to the more systematic descriptive neurology of William Gowers.¹² His students included Charlton Bastian (1837-1915) and Sir William Gowers (1845-1915), whose writings often reflect his influence.

Legacy

He was well versed in poetry, philosophy, art, and music. He was married, first, to Margaret Ainslie, and, secondly, to Frances Crespigny, but left no children. He died aged 68 of ‘pulmonary congestion’ at his home in 1896.

The scholarship and clinical advances made by Reynolds can be seen as important influences on contemporary and also later notable Neurologists at the National Hospital.

He bridged the eras of Victorian neurology with that of the dawning 20th century. He was noted as:

A man of scholarship and wisdom, in his Presidential address in 1894, in a spirit of prophecy he warned the subject-ridden student of to day of the danger of becoming entangled in the net of an ill-considered and misunderstood technical phraseology, and of juggling with words when he ought to be dealing with concrete things.²

And Eadie characterised him as:

A most eminent, scholarly and influential physician who was greatly respected and admired by his contemporaries... the sort of man whose ideas would not readily be discarded because it might almost seem disrespectful to do so unless a better alternative could be clearly demonstrated to exist.¹²

* So-called dissenters (Catholics, Jews, and Quakers) were denied admission because their religious beliefs prevented their taking an oath to adhere to the 39 articles of the Anglican Church. This was abolished by the Universities Tests Act in 1871.

Women had studied at Oxford since the 1870s. But until 1921, they were not entitled to claim the degrees they had earned. Cambridge followed in 1947.

REFERENCES

1. Brown GH. Munk's Roll. *Lives of the Fellows of the Royal College of Physicians of London (1826-1925)*. London: The Royal College of Physicians, 1955:IV:116-7.
2. Obituary Sir J. Russell Reynolds, MD, FRCP, FRS. *Brit Med J* 1896;1: 1422-3. <https://doi.org/10.1136/bmj.1.1849.1422>
3. Pearce JMS. *The life and work of Marshall Hall*. *Quarterly Journal of Medicine*, 1997;90:801-803. <https://doi.org/10.1093/qjmed/90.12.801>
4. Reynolds JR. *On the pathology of convulsions, with special reference to those children*. *Liverpool Med Chir J* 1858;2:1-14.
5. Reynolds JR. *Epilepsy: its symptoms. In: Treatment and relation to other chronic convulsive diseases*. London: John Churchill, 1861:8-10.
6. Reynolds J. In: *Lectures on the clinical uses of electricity delivered in University College Hospital*. 2nd edn. London: John A Churchill, 1873.
7. Reynolds JR. *Therapeutic uses and toxic effects of Cannabis indica*. *The Lancet* 1890;1:639.
8. Pearce JMS. *Positive and negative cerebral symptoms: the roles of Russell Reynolds and Hughlings Jackson*. *Journal of Neurology Neurosurgery and Psychiatry* 2004;75:1148. <https://doi.org/10.1136/jnnp.2004.038422>
9. Spencer H. *Principles of psychology*. London: Longman, Brown, Green, 1855. <https://doi.org/10.1037/14065-000>
10. Jackson JH. *Remarks on dissolution of the nervous system as exemplified by certain post-epileptic conditions*. Medical Press and Circular 1881:329.
11. Wilson SAK. *Modern Problems in Neurology*. London: Edward Arnold: 1928. <https://doi.org/10.1136/bmj.2.3541.914>
12. Eadie MJ. *The neurological legacy of John Russell Reynolds (1828-1896)*. *J Clin Neurosci*. 2007;(4):309-16. Epub 2007 Jan 22. <https://doi.org/10.1016/j.jocn.2006.03.033>
13. Romberg MH. (Translated by Sieveking EH.) *A Manual of the Nervous Diseases of Man*. London: New Sydenham Society; 1853.