

History of Neurology: Queen Square and Regal Neurology

Richard J. Barohn, MD

Professor of Neurology, University of Missouri –
Columbia

Formerly Executive Vice Chancellor for Health Affairs,
Hugh E. and Sarah D. Stephenson Dean, University of
Missouri School of Medicine

Distinguished Professor Emeritus of Neurology,
Former Chair Department of Neurology, and Dewey
Ziegler Professor of Neurology, University of Kansas

A live recording of this lecture can be viewed here:
[RRNMF - Regal Neurology](#)

This History of Neurology article is about the National
Hospital for Neurology at Queen Square in London and is
subtitled “Regal Neurology”.^{1,2}

Figure 1 shows a photograph of the National Hospital for Neurology in Queen Square, London, from the 1800s. The hospital opened in 1860 as the National Hospital for the Paralysed and Epileptic. It later was called at various times the National Hospital for Neurology, the National Hospital Queen Square, and more recently, the National Hospital for Neurology and Neurosurgery. It was and is still located on Queen Square in the historic Bloomsbury district of London. For the remainder of this article, we will simply refer to the institution as “Queen Square.” The first two physicians appointed in 1859, one year before the hospital officially opened, were Jabez Ramskill, and Charles-Édouard Brown-Séquard, who was the subject of a History of Neurology article in Volume 7, Issue 1 of this year (See *History of Neurology: Charles-Édouard Brown-Séquard - The Original International Neurologist, The Founders of Neurology*, p. 181-186 and *Fragments of Neurologic History*, p. 221-227).²

⁴ Of course Brown-Séquard became well-known as a young physician by describing the syndrome of cord hemi-section which he produced in animals and described in humans.⁵ Brown-Séquard moved back and forth between North America and Europe, and thus I have referred to him as the first international neurologist. He spent three years at Queen Square. While there, he gave a series of lectures and wrote his famous book, *Course of Lectures on the Physiology and Pathology of the Central Nervous System*.⁶

Figure 1

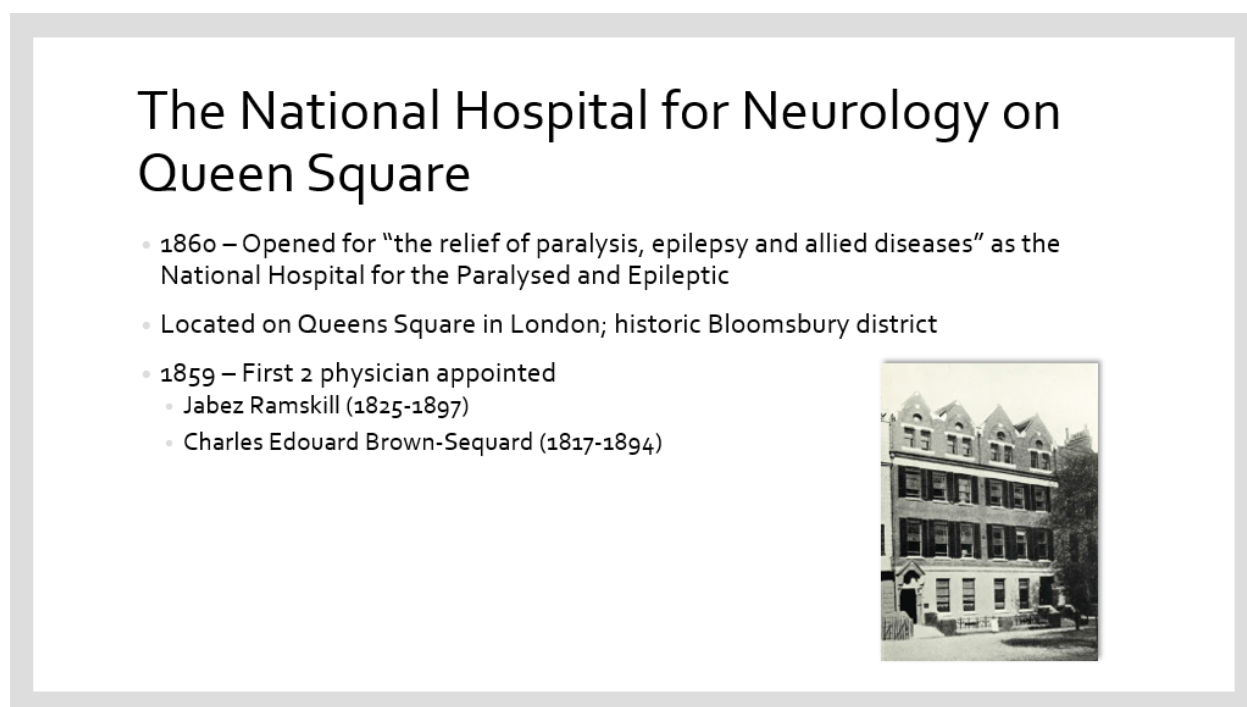


Figure 2

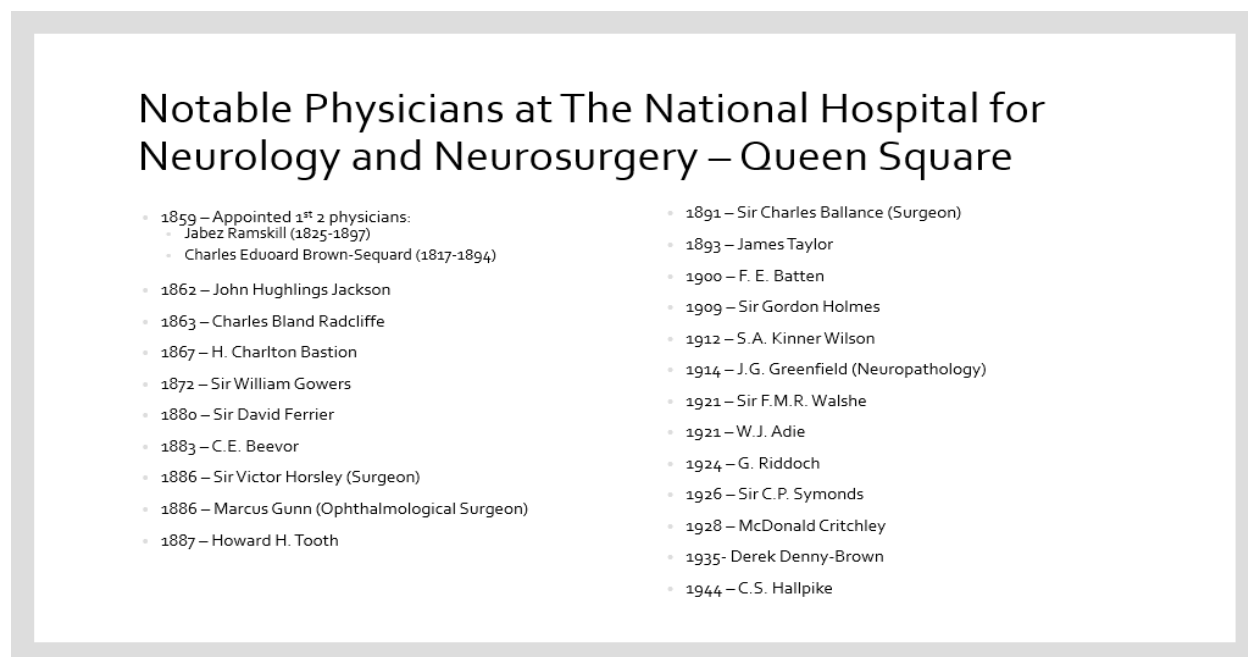


Figure 3

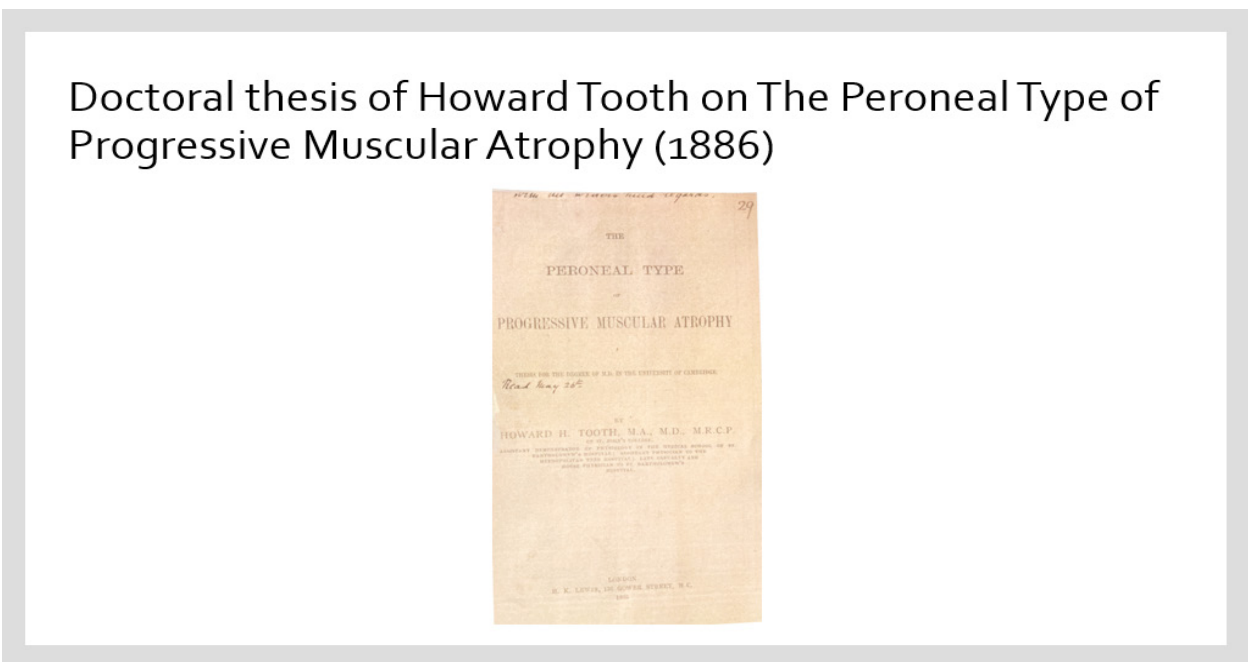


Figure 2 is a list of other well-known neurologists, neurosurgeons, and physicians who were at Queen Square up until the 1940s. As you can see, many of these names are very recognizable to neurologists, neurosurgeons, and neuroscientists. John Hughlings Jackson and William Gowers, whom we will discuss more in this article, are included, as well as Sir Victor Horsley, who created the field of neurosurgery beginning in England (*The Founders of Neurology*, p. 562-566 and *Fragments of Neurological History*, p. 191-193).^{2,3} He performed his first brain operation at Queen Square in 1886. The following year, he performed the first spine operation,

and in 1889, he performed the first operation of the pituitary gland. He is often considered the father of neurosurgery and influenced many young surgeons. However, Harvey Cushing, was not impressed on his 1900 European tour when he saw Horsley frenetically operate on a Gasserian ganglion on a patient in a British mansion and reported that he had little to learn from British neurosurgery. This anecdote became famously repeated; however, Cushing did acknowledge Horsley's contributions to the field. Horsley also performed electrical experiments in monkeys, stimulating the cerebral

cortex, internal capsule, and spinal cord. He used a string galvanometer to record electrical current. He published his experimental findings in papers and a book.^{7,8} Horsley unfortunately died at age 56 while he was serving as a field surgeon for the British Army in Mesopotamia during World War I. He succumbed to heatstroke complicated by intestinal infection while stationed at the British General Hospital in Iraq in Amara near Baghdad.

Figure 4

Rivers & Head - A Human Experiment in Nerve Division (1908) and Head – Aphasia and Kindred Disorders of Speech (1926)

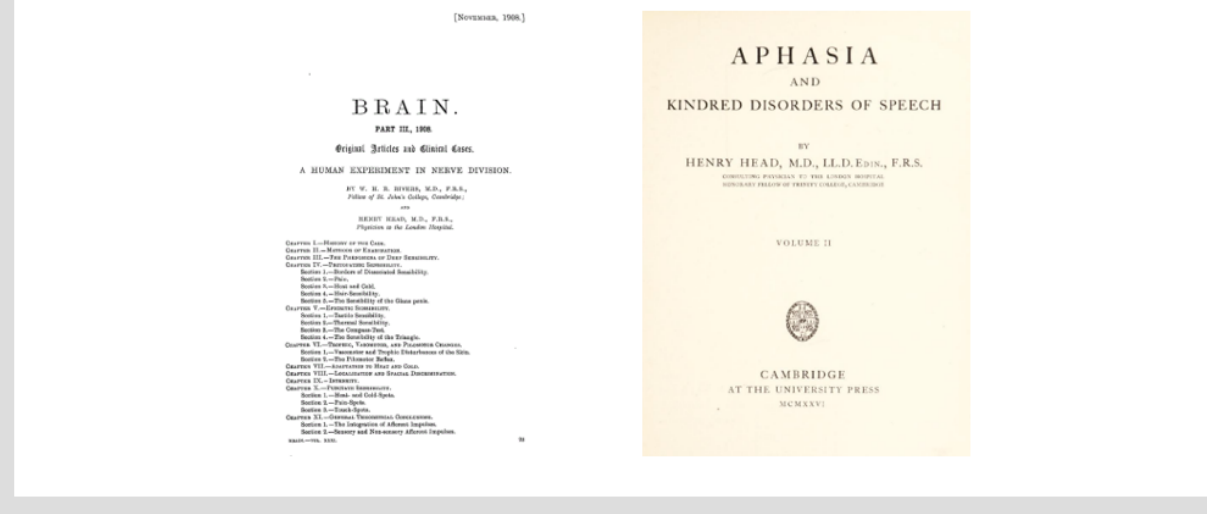


Figure 5



p. 535-539 and *Fragments of Neurological History*, p. 404-412)^{2,3}, of “Wilson’s disease” will be discussed further in this article; Derek Denny-Brown began his career in England and later moved to the United States at Harvard Medical School (*Fragments of Neurological History*, p. 573-575).³ C. S. Hallpike is known for the Hallpike maneuver in the evaluation of vertigo.

Sir Henry Head was a neurology house staff at Queen Square in the 1890s. While never on the faculty, he became quite famous for his experiments on sensory function and on his concepts concerning aphasia. Head and Rivers published the results of an experiment which Head had done on himself in which he had a surgeon sever his radial sensory nerves in his forearm. He and Rivers then wrote a detailed analysis of both the loss and return of sensory function in his own forearm over time (Figure 4).^{12,13}

Figure 5 is a photograph of some of the leaders at Queen Square in the 1880s. It includes many legends of Queen Square including Drs Gowers, Jackson, Gunn, Bastian, Horsley, Beevor, and Ferrier. Gowers, Horsley, and Ferrier were ultimately knighted.

Dr. Ferrier is primarily known for his pioneering work in neurophysiology in which he electrically stimulated the brain of rabbits, dogs, guinea pigs, rats, pigeons, and eventually monkeys (Figure 4) (*The Founders of Neurology*, p. 195-198).² He mapped the entire motor cortex. His detailed methodologic experiments were not performed in the National Hospital, but in laboratory space in the West Riding Lunatic Asylum.¹¹ Ferrier's work extended and elaborated on the work of Hitzig and Fritsch. He published his findings in the now classic book "The Functions of the Brain" (1876)¹⁴ and in his Croonian lectures in 1890.¹⁵ He was the first to apply the experimental

principles to observations in man. In some of his publications, he included descriptions of Jackson's patients, connecting the animal experimentation to human disorders. In 1881, at the International Medical Congress in London, Ferrier presented a monkey who had an experimentally produced hemiplegia. Jean Martin Charcot was in the audience and declared: "C'est un malade!" (It's a patient!).

Dr. Hughlings Jackson and Dr. Gowers were among the early physicians at Queen Square. Dr. Kinnier Wilson arrived in the early 1900s. All of them made extraordinary contributions to neurology, and I consider them in some ways the “BIG 3” of Queen Square neurology, which has had a lot of bigs.

Hughlings Jackson was particularly well known for developing foundational concepts of epilepsy, aphasia, hemiplegia (including its development and recovery), and on the doctrine of levels of function of the nervous system (*The Founders of Neurology*, p. 456-459).² For the latter, he was influenced by Darwin, whose famous *The Origin of Species* book was recently published in 1859,¹⁶ and Herbert Spencer. Regarding partial epilepsy, he famously observed that a motor seizure could begin in a thumb or toe and then spread in a march-like fashion up the limb and sometimes because generalized.¹⁷ This became known as the Jacksonian march of a seizure.¹⁸ He is considered by many to be the Father of English neurology. Jackson was appointed to be the first assistant physician to the National Hospital in 1862 at age 27. He never wrote a large neurology textbook unlike several other famous Queen Square neurologists. He was one of the founding editors of the journal *Brain* in 1878 (Figure 6). Several of his papers that he called neurologic fragments were assembled into a book of the same name in 1925 after his death (Figure 8).¹⁹

Figure 6

Sir David Ferrier (1843-1928)

- Born: Aberdeen
- 1873 - *Experimental Researches in Cerebral Physiology and Pathology*
- 1876 - *The Functions of the Brain*
- 1890 - *The Croonian Lectures on Cerebral Localisation*

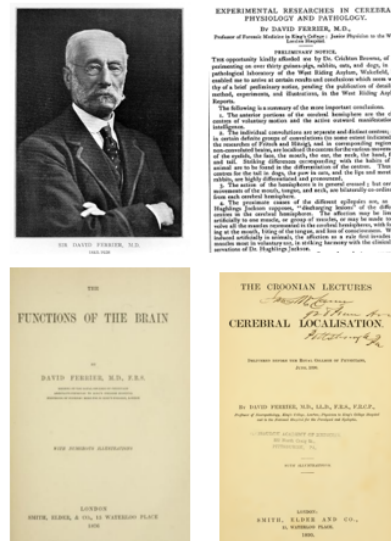


Figure 7

History of Neurology & The Brits – Late 1800's/Early 1900's *Clinical Neurology - Queen Square*

- **Hughlings Jackson (1835-1911)**
 - Born: Green Hammerton (York)
 - Epilepsy
 - Clinical Correlation
- **William Gowers (1845-1915)**
 - Born: London
 - Everything clinical!
 - 1886 – *Manual of Diseases of Nervous System*
- **Kinnier Wilson (1878-1937)**
 - Born: London
 - 1912 – Familial Progressive Lenticular Degeneration
 - 1940 – *Neurology*
 - *The best ever textbook of neurology*

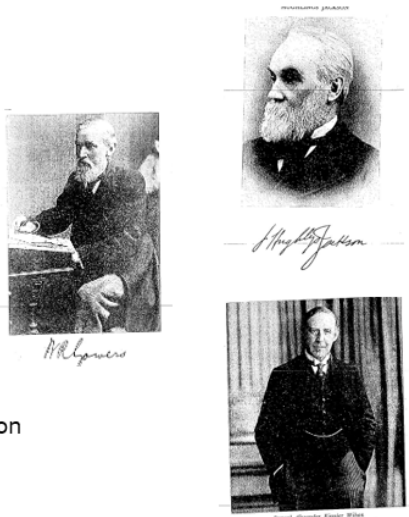


Figure 8

J. Hughlings Jackson – *Neurological Fragments* (1925) and First Volume of journal *Brain* (1878)

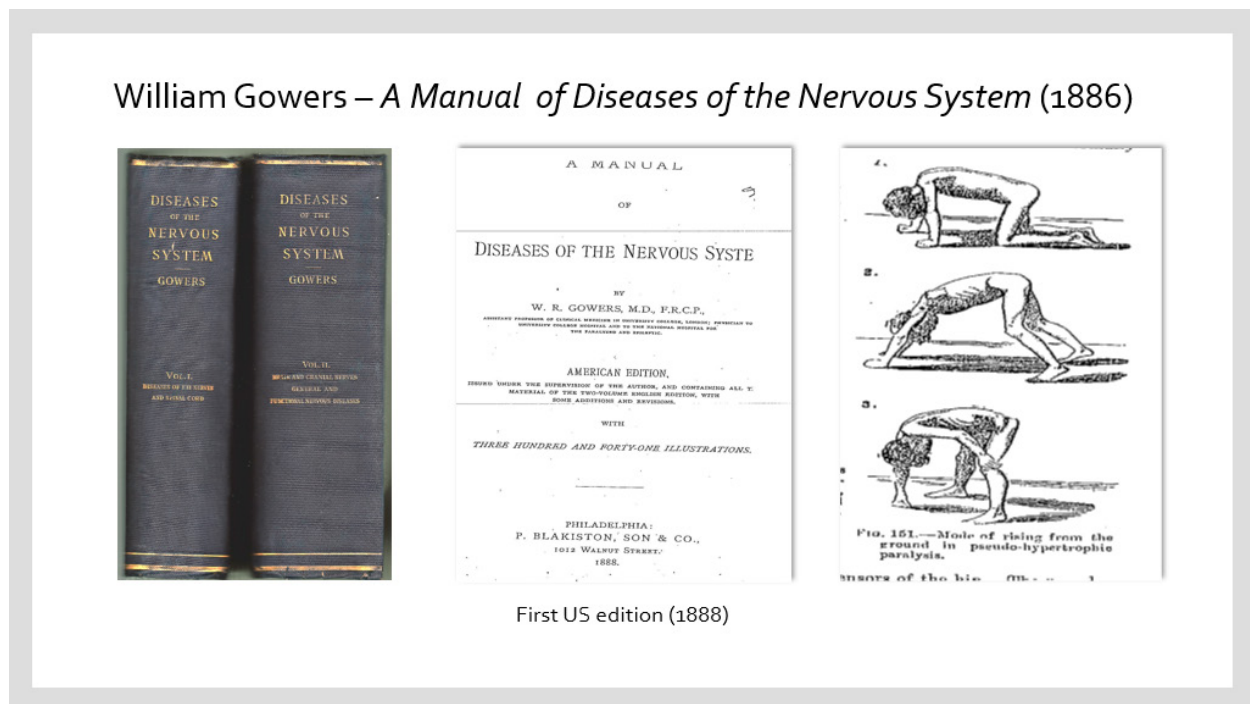


Despite very limited formal education until he was 15 years old, at which time he was apprentice to a physician, he ultimately attended medical school in York, where he practiced medicine before moving to London in 1856. He was considered a genius and profound thinker with colossal ideas, but he was a recluse, eccentric, a poor speaker, and writer. He made few acquaintances but was a kind and gentle man. He thought it was to his advantage not to have been over-educated. His casual reading consisted of westerns from the Victorian era, and his reading habit included tearing a book in

two and stuffing each half into the left and right coat pockets—as each was read, he would discard the half, often during his tram or carriage travels. However, Jackson had a “dry sense of humor.” Apparently after watching Horsley perform brain surgery on a patient, he was heard to say, “Awful, awful,” and when asked by Ferrier why he made that comment, he said, “...he opened a Scotsman’s head and failed to put a joke in it.”

William Gowers wrote many books and papers, but his most famous work is *A Manual of Diseases of the Nervous System* (Figure 7) (*The Founders of Neurology*, p. 441-445).^{2,20}

Figure 9



In 1870, Gowers was made the first medical registrar at Queen Square. Gowers' personality and nature was very different from Jackson's. Like Jackson, he received minimal formal education, and both were largely self-educated prior to entering the medical profession, but Gowers was a brilliant teacher, speaker, and writer, who had an extraordinary command of the English language. This of course continues to be evident in his many articles and textbooks which are still in print today. Gowers was the first of the great outpatient teachers of neurology, and he trained many other neurologists. Both Gowers and Jackson had incredible abilities of close and accurate clinical observation, and they had outstanding methods of recording the clinical findings of their patients.

A Manual of Disease of the Nervous System was published in both two-volume and single-volume formats. In my opinion, this is one of the most impressive neurology textbooks ever written, and it is still useful today. Both during his life and for generations this book was affectionately referred to as the "Bible of Neurology." Figure 7 shows illustrations of what we now call Gowers' sign in a patient with Duchenne muscular dystrophy (*Fragments of Neurological History*, p. 378-380),³ demonstrating proximal weakness. The image remains remarkably accurate. Gowers, like Charles Bell, was an artist and drew many of the illustrations in his books.

Figure 10 is a patient with progressive muscular atrophy, the lower motor neuron form of ALS, with arms hanging at their sides—what we have referred to as brachial amyotrophic diplegia.²¹ Gowers was the first to describe and illustrate this condition. Figure 8 also shows an illustration of a patient with head drop from a neuromuscular disorder that looks very similar to the head drop we described in a paper on isolated

neck extensor myopathy.²² When our group was writing about these neuromuscular presentations over 100 years after Gowers, we were definitely standing on the shoulders of a neurology giant. *A Manual of the Diseases of the Nervous System* is an extraordinary book that covered all areas of neurology and demonstrated that Gowers was truly an expert in everything related to neurology, ultimately becoming the face of neurology in England for decades.²⁰ Therefore, it is no surprise that he was knighted to become a Regal Neurologist.

Kinnier Wilson was another towering figure at Queen Square. He practiced in the first half of the twentieth century immediately after Gowers and Jackson. He died relatively young at age 58. Near the end of his life, he ultimately wrote a three-volume textbook (Figure 9). This impressive textbook is simply titled *Neurology* (1940).²³ It was published posthumously several years after his death through the efforts of Dr. A Ninian Bruce. Later, *Neurology* went through another edition (UK-1954/US-1955) also edited by Bruce.²⁴ Arguably, it is the best referenced textbook of the first half of the last century. It summarized the entire neurological literature of the late 1800s and 1900s up to the time of publication, covering every aspect of neurology. I still consult this book when I look up specific neurologic diseases to research who wrote about them prior to 1940. Wilson was a showman, an eccentric, an original, and could "light up in a revealing fashion what had previously been a thing of obscurity."²⁵ Like Gowers, he was an impressive teacher and it is said, "Wilson's disciples formed a small band of votaries who would meet on Saturday in (a) ... sitting room to meditate upon the most puzzling clinical problems in the hospital."²⁵ He of course remains famous for what we now call "Wilson's disease," progressive lenticular

Figure 10

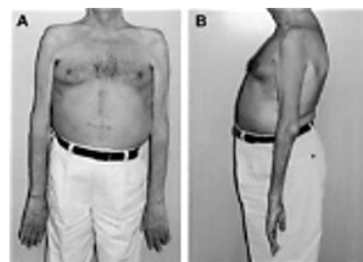
Progressive Muscular Atrophy in the Arms and Head Drop Due to Neuromuscular Disease - From Gowers to Katz and Barohn



From Gowers' *A Manual of Diseases of the Nervous System*



Katz, Barohn, et al. *Neurology* 1996;46:917-921.
Isolated neck extensor myopathy



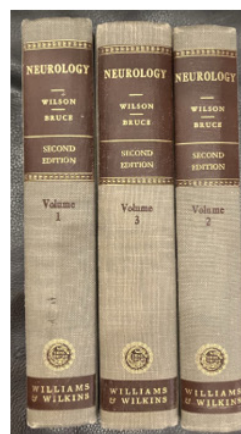
Katz, Barohn, et al. *Neurology* 1999;53:1071-1076.
Brachial amyotrophic diplegia

Figure 11

Kinnier Wilson – *Neurology* (1940 & 1954/55)



Title page from UK 1st edition (1940)



American 2nd edition (1955) in my collection

Figure 12

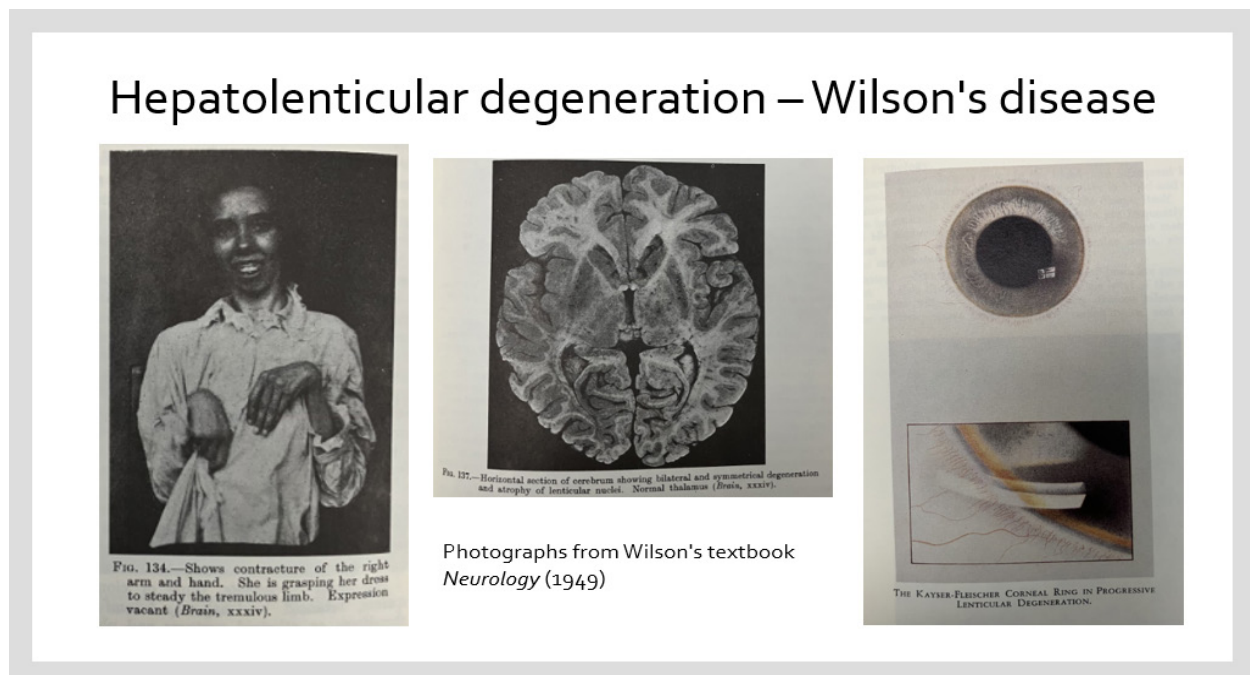


Figure 13

Queen Square Neurology

- **Gordon Morgan Holmes** (1876 – 1965)
 - Born: Farnham
 - Research of the cerebellum and visual cortex
- **F.M.R. Walshe** (1885 - 1973)
 - Born: London
 - 1943 - *Diseases of the Nervous System*; 11 editions
 - Knighted 1953
 - Edited *Brain* for 16 years
- **MacDonald Critchley** (1890-1997)
 - Born: Bristol
 - 1953 - *The Parietal Lobes*



Holmes



Walshe



Critchley

degeneration (also known as hepatolenticular degeneration), and the associated movement and cognitive disorders, liver failure, and ocular changes (Kayser-Fleischer corneal pigmentation) which he described in 1912 when he was still a young physician at Queen Square.²⁶

Figure 12 from his textbook shows a patient with hepatolenticular degeneration and the characteristic fixed exaggerated “fixed smile and retracted lips” called risus sardonicus, a cross section of a brain preparation showing a symmetrical degeneration and atrophy of the lenticular nuclei, and the Kayser-Fleischer corneal ring. Wilson also

founded a journal called the *Journal of Neurology and Psychopathology* in 1920 which later became known as the *Journal of Neurology, Neurosurgery, and Psychiatry*.

Two other well-known neurologists at Queen Square include Gordon Holmes and F. M. R. Walshe. Both were ultimately knighted. Holmes conducted extensive research and clinical reporting on the cerebellum and visual cortex. He wrote the first book on the history of Queen Square in 1954 (Figure 14).²⁷ Another recent book on the history of Queen Square was published in 2020 by Simon Shorvon and Alistair Compston.²⁸

Figure 14

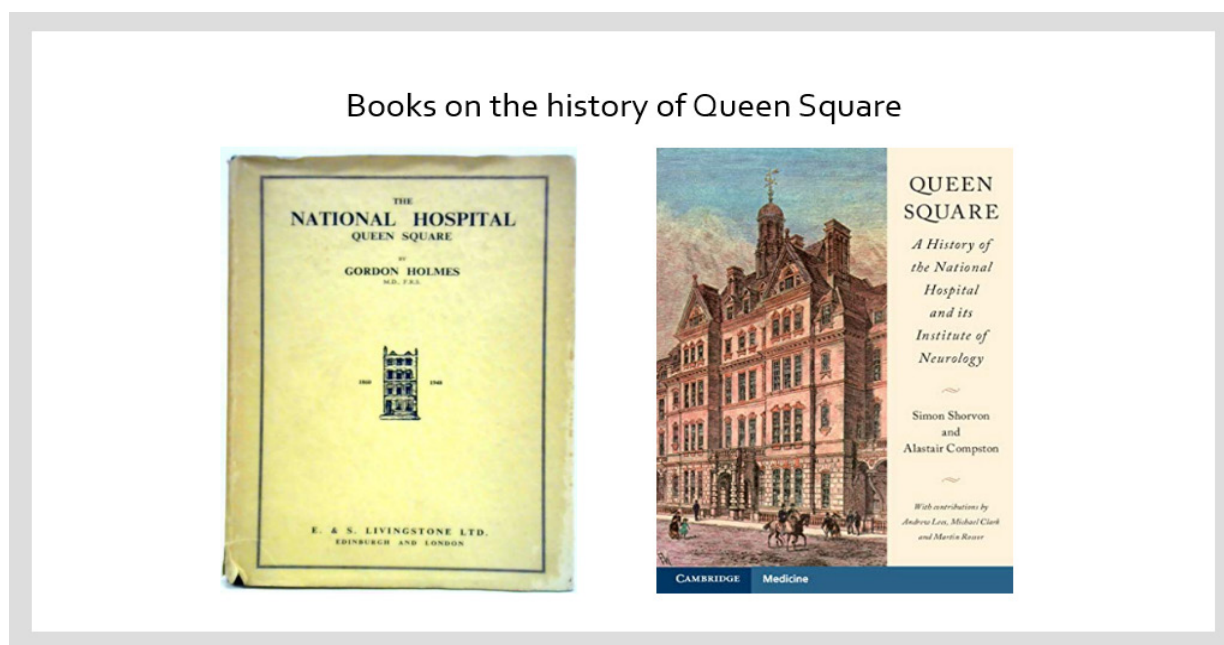
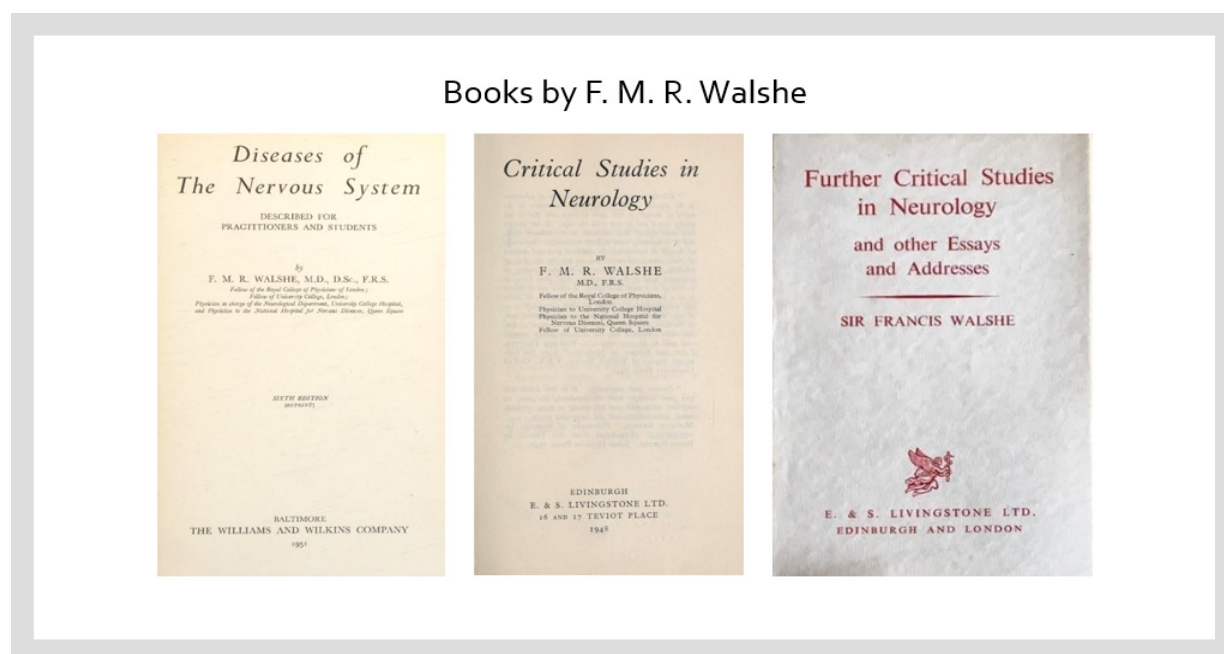


Figure 15



F. M. R. Walshe, wrote *Diseases of the Nervous System*,²⁹ which became the major neurology textbook after World War II on both sides of the Atlantic and went through 11 editions. He republished many of his articles originally published in the journal *Brain* in two books: *Critical Studies in Neurology* (1948)³⁰ and *Further Critical Studies in Neurology and other Essays and Addresses* (1965) (Figure 15).³¹

The 1948 book contains an excellent detailed article about the physiology and significance of the Babinski plantar response.³² The 1965 book contains a wonderful historical paper about William Harvey and writing in medicine.^{33,34}

Macdonald Critchley authored an insightful book on the parietal lobes.³⁵ Figure 14 shows a color plate from Critchley's book. It is a beautifully written work focused on the clinical aspects of parietal lobe function. Critchley also wrote a biographical article about Hughlings Jackson in the proceedings of the Royal Society of Medicine that ultimately turned into a book titled "John Hughlings Jackson: Father of English Neurology."^{36,37} He also published a history titled "The Beginnings of the National Hospital, Queen Square (1859-1960)" in the *British Medical Journal*.²⁵

Figure 16

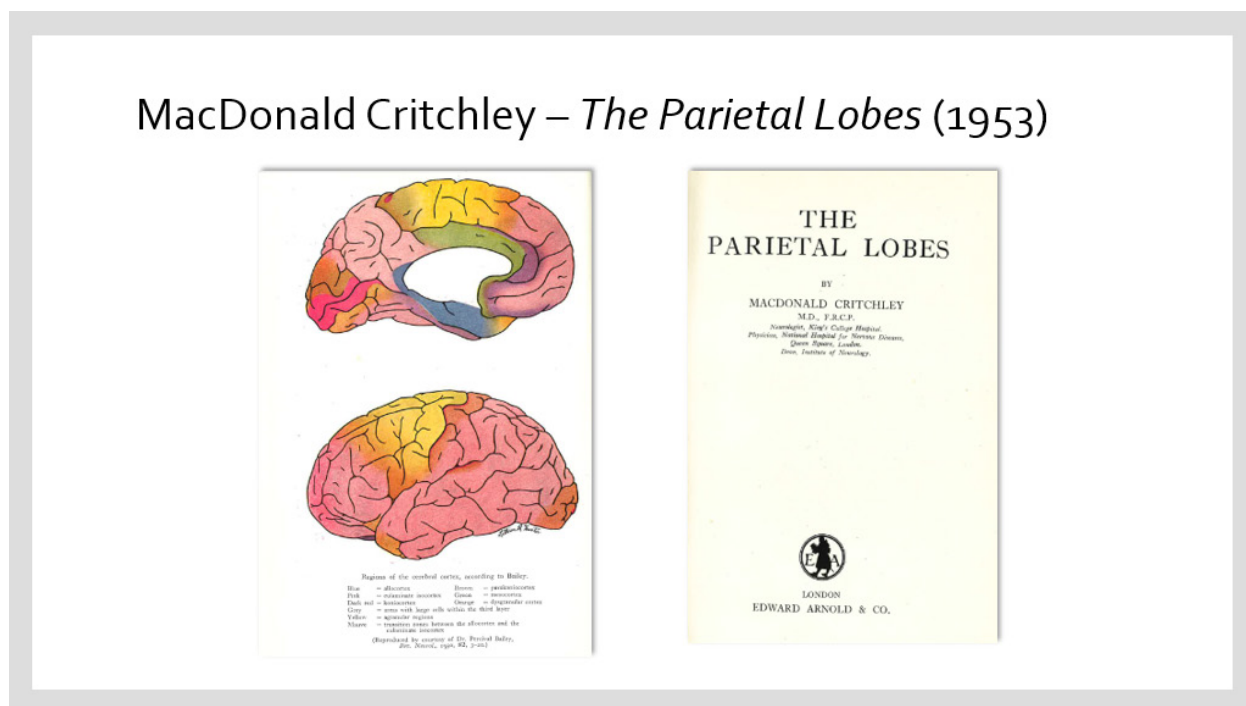


Figure 17

Program for Jan-Mar 1983 Neurology Case Demonstrations at Queen Square

University of London (British Postgraduate Medical Federation)		INSTITUTE OF NEUROLOGY THE NATIONAL HOSPITAL QUEEN SQUARE LONDON WC1N 3BG Tel: 01 637 3611	
CLINICAL DEMONSTRATIONS JANUARY-MARCH 1983			
WEDNESDAYS AT 4.15 p.m.		SATURDAYS AT 10.30 a.m.	
JANUARY	12th Sir Roger Barnister	JANUARY	15th Dr. R.E. Kelly
	19th Professor J. Marshall		22nd Dr. D.J. Thomas
	26th Dr. R. Ross Russell		29th Dr. K.J. Zilkha
FEB.	2nd Dr. C.J. Earl	FEB.	5th Professor N. Ian McDonald
	9th Dr. J.H. Blau		12th Dr. G.D. Schott
	16th Dr. A.J. Lees		19th Dr. Peter Rudge
	23rd Professor J. Dawson-Davis		26th Dr. C.H. Miles
MARCH	2nd Dr. P. C. Goutier-Smith	MARCH	5th Dr. J. Gowler
	9th Professor P.K. Thomas		12th Dr. R.S. Kocen
	16th Dr. S.H. Brett		19th Professor R.W. Gilliatt
	23rd Dr. J. Scadding		26th Mr. D.G.T. Thomas

The fee for attending either course is £7.00
(£14 for both courses) or £1.00 per demonstration.

Queen Square, for many generations and continuing to the present day, has been a place not only for patients to be seen by experts in neurology but also as a place of training for generations of neurologists. Many American neurologists made pilgrimages to Queen Square to obtain additional training and to round out their neurology

careers. When I was in the US Air Force in the 1980s and stationed outside Cambridge as a general medical officer at RAF Alconbury, I would pilgrimage to Queen Square every Saturday for neurologic demonstrations held in one of the old amphitheatres (Figure 17). Figure 14 is the program I obtained when I was attending the case demonstrations in the winter of 1983.

Figure 18

Institute of Neurology – Queen Square Dean/Directors Since 1940's		
NAME	ROLE	YEAR
Dr. J Purdon Martin	Dean	1943-1948
Dr. MacDonald Critchley	Dean	1948-1953
Dr. Michael Kremer	Dean	1953-1962
Dr. JWD Bull	Dean	1962-1968
Dr. RE Kelly	Dean	1968-1975
Dr. PC Gautier-Smith	Dean	1975-1982
Prof. John Marshall	Dean	1982-1987
Prof. David Landon	Dean	1987-1995
Prof. David Marsden FR5	Dean	1995-1998
Prof. Richard Frackowiack	Dean	1998-2002
Prof. Roger Lemon	Dean	2002-2008
Prof. Alan Thompson	Director	2008-2012
Prof. Michael Hanna	Director	2012-Present

Figure 19



To gain admittance, you would pay a pound (£), put it in a box outside of the classroom, which would allow you to enter a small amphitheater where the trainees sat. One of the Queen Square professors would examine a patient. The patient was unknown to the professor. The professor would open their briefcase that contained their neurology tools, take a history, examine the patient in front of the group, and then pronounce a diagnosis. Of course, they were usually correct. Everyone would clap. This made a huge impression on me in my twenties and was one of the experiences that solidified my desire to become a neurologist. Later I learned more about Kinnier Wilson's Saturday sessions with his trainees 50 years earlier, which have some similarities to my experience-learning at the feet of the great Queen Square professors.

The Institute of Neurology at Queen Square and the National Hospital at Queen Square are related but separate institutions. The National Hospital Medical School was founded in 1898 for post-graduate medical training for physicians to become neurologists. In other words, for registrar training (resident training in the United States). When the National Hospital was transferred to the National Health Service (NHS) in 1948, the medical institute was made into an independent body and called the Institute of Neurology. The Institute of Neurology was incorporated into the University College of London in 1996. It has been led by Deans or Directors and MacDonald Critchley was one of the early Deans.

The current director of the University College of London (UCL) Institute of Neurology at Queen Square is Professor Michael Hanna, a close friend of mine and a muscle disease expert. Shown here is a photograph of Dr. Hanna and me at a Neuromuscular Study Group meeting in Utah, where we were talking about neurology and relaxing during the "evening session." Dr. Hanna and I have co-directed the NMSG since 2015. Dr. Robert C. (Berch) Griggs began the organization as the Muscle Study Group in 1999. The NMSG is an international organization where neuromuscular experts gather annually to discuss advances in clinical neuromuscular research.

Dr. Hanna is the longest serving Dean/Director in the existence of the Institute of Neurology at Queen Square. He will end his long service in this role in December 2026, when he will take on the role of UCL's new Pro-Vice Provost (Clinical) within the office of the Vice Provost (Health).

The National Hospital for Neurology Queen Square and the Institute of Neurology it spawned certainly has had a profound impact on the field of neurology worldwide. Many of the neurologists who practiced, taught, and wrote at Queen Square have become legendary and a few of them have become knights! It deserves to be considered the birthplace and home of Regal Neurology.

References

1. McHenry LC. Garrison's History of Neurology. Springfield, Illinois: Charles C Thomas; 1969:219-223, 303-326.
2. Haymaker W, Schiller F. The Founders of Neurology. 2nd ed. Springfield, Illinois: Charles C Thomas; 1970:181-186, 195-198, 328-333, 405-407, 441-445, 456-459, 535-539, 562-566.
3. Pearce JMS. Fragments of Neurological History. London: Imperial College Press; 2003:191-193, 221-227, 245-247, 249-251, 324-331, 378-380, 404-412, 573-575 (Many of these chapters were originally published in the Journal of Neurology, Neurosurgery and Psychiatry).
4. Barohn RJ. History of Neurology: Charles-Édouard Brown-Séquard—The Original International Neurologist. *RRNMF Neuromuscular Journal*. 2026;7(1).
5. Brown-Séquard CE. On the transmission of sensory impressions by the spinal cord. Originally published in French as *De la transmission des impressions sensibles par la moelle épinière*. *Compt Rend Soc Biol*. 1849;1:192-194. Reprinted in Wilkins RH and Brody IA, *Neurological Classics*. Johnson Reprint Corporation, New York and London, 1973:49-50.
6. Brown-Séquard CE. *Course of Lectures on the Physiology and Pathology of the Central Nervous System*. Philadelphia: Collins; 1860.
7. Horsley VA, Schäfer EA. A record of experiments upon the functions of the cerebral cortex. *Philos Trans R Soc Lond B*. 1888;179:1-45.
8. Horsley VA. *The Structure and Functions of the Brain and Spinal Cord: Being the Fullerian Lectures for 1891*. London: Charles Griffin & Co; 1892.
9. Adie WJ. Tonic pupils and absent tendon reflexes: A benign disorder sui generis; its complete and incomplete forms. *Brain*. 1932;55:98-113. Reprinted in Wilkins RH and Brody IA, *Neurological Classics*. New York and London: Johnson Reprint Corporation; 1973:34-39.
10. Tooth HH. *The Peroneal Type of Progressive Muscular Atrophy*. London: H. K. Lewis; 1886.
11. Ferrier D. Experimental researches in cerebral physiology and pathology. *West Riding Lunatic Asylum Medical Reports*; 1873;3:30.
12. Rivers, W. H. R., & Head, H. (1908). A Human Experiment in Nerve Division. *Brain*; 1908;31(3):323-450.
13. Head, Sir H. *Aphasia and kindred disorders of speech*. Cambridge: University Press; 1926.
14. Ferrier D. *The Functions of the Brain*. London: Smith, Elder & Co; 1876.
15. Ferrier D. *The Croonian Lectures on Cerebral Localisation*. London: Smith, Elder & Co; 1890.
16. Darwin C. *The Origin of Species*. New York: P. F. Collier; 1859.
17. Jackson JH. A study of convulsions. *Transactions of the Saint Andrews Medical Graduates Association*. 1870;3:162-204. Reprinted in Wilkins RH and Brody IA, *Neurological Classics*. New York and London: Johnson Reprint Corporation; 1973:135-142.

18. Jackson JH. A study of convulsions. *Trans St Andrews Med Grad Assoc.* 1870;3:162-204. Reprinted in: Wilkins RH, Brody IA, eds. *Neurological Classics.* New York and London: Johnson Reprint Corporation; 1973:135-142.
19. Jackson JH. *Neurological Fragments.* London: Humphrey Milford, Oxford University Press; 1925.
20. Gowers WR. *A Manual of Diseases of the Nervous System.* Philadelphia: P. Blakiston's Son & Co; 1899.
21. Katz JS, Wolfe GI, Andersson PB, Saperstein DS, Elliot JL, Nations SP, Bryan WW, Barohn RJ. Brachial amyotrophic diplegia. *Neurology.* 1999;53(5):1071-1076.
22. Katz JS, Wolfe GI, Burns DK, Bryan WW, Fleckenstein JL, Barohn RJ. Isolated neck extensor myopathy: A common cause of dropped head syndrome. *Neurology.* 1996;46(4):917-921.
23. Wilson K. *Neurology.* London: Edward Arnold & Co; 1940.
24. Wilson K. *Neurology.* 2nd ed. London: Butterworth & Co; 1954.
25. Critchley M. The Beginnings of the National Hospital, Queen Square (1859-1860). *Br Med J.* 1960.
26. Wilson SAK. Progressive lenticular degeneration: A familial nervous disease associated with cirrhosis of the liver. *Brain.* 1912;34:295-509. Reprinted in part in Wilkins RH and Brody IA, *Neurological Classics.* New York and London: Johnson Reprint Corporation; 1973:164-171.
27. Holmes G. *The National Hospital, Queen Square, 1860-1948.* Edinburgh: Livingstone; 1954.
28. Shorvon SD, Compston A, Lees A, Clark M, Rossor M. *Queen Square: A History of the National Hospital and Its Institute of Neurology.* Cambridge, United Kingdom: Cambridge University Press; 2020.
29. Walshe FMR. *Diseases of the Nervous System Described for Practitioners and Students.* Edinburgh: E & S Livingstone; 1944.
30. Walshe FMR. *Critical Studies in Neurology.* Edinburgh: E & S Livingstone; 1948.
31. Walshe FMR. *Further Critical Studies in Neurology and Other Essays and Addresses.* Edinburgh and London: E & S Livingstone; 1965.
32. Walshe FMR. The Babinski plantar response, its forms and its physiological and pathological significance. *Brain.* 1956;79(4):529-556.
33. Walshe FMR. *The Structure of Medicine and Its Place Among the Sciences.* Edinburgh: E & S Livingstone; 1948.
34. Walshe FMR. *Humanism, History, and Natural Science in Medicine.* Edinburgh: E & S Livingstone; 1950.
35. Critchley M. *The Parietal Lobes.* New York: Macmillan; 1953.
36. Critchley M. Hughlings Jackson, the man, and the early days of the National Hospital. *Proc R Soc Med.* 1960;53(8):613-618.
37. Critchley M. *John Hughlings Jackson: Father of English Neurology.* Oxford: Oxford University Press; 1998.