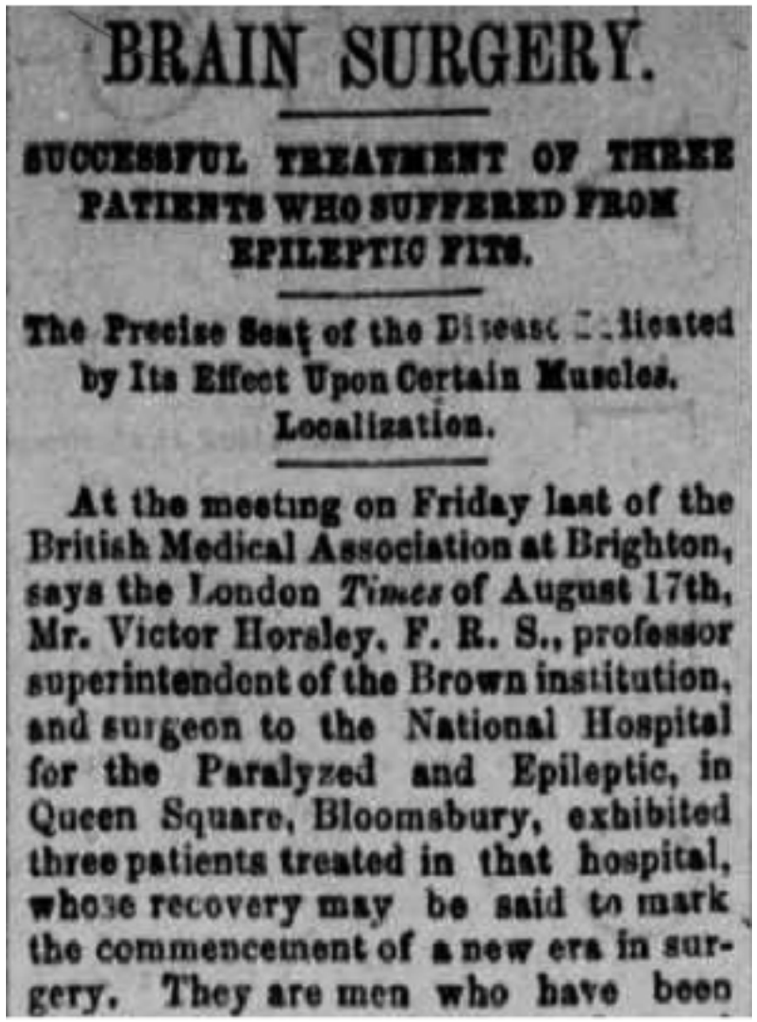
Sir Victor Horsley

FRS FRCS

Born 14 April 1857 London - Died 16 July 1916 Amarah Iraq

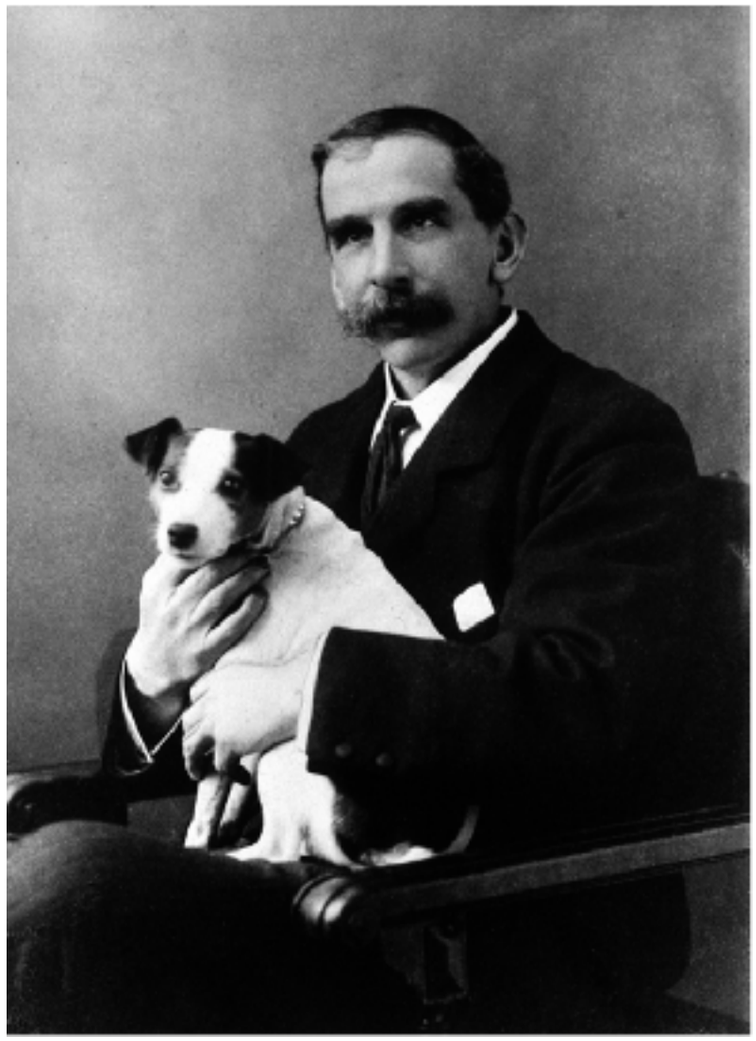


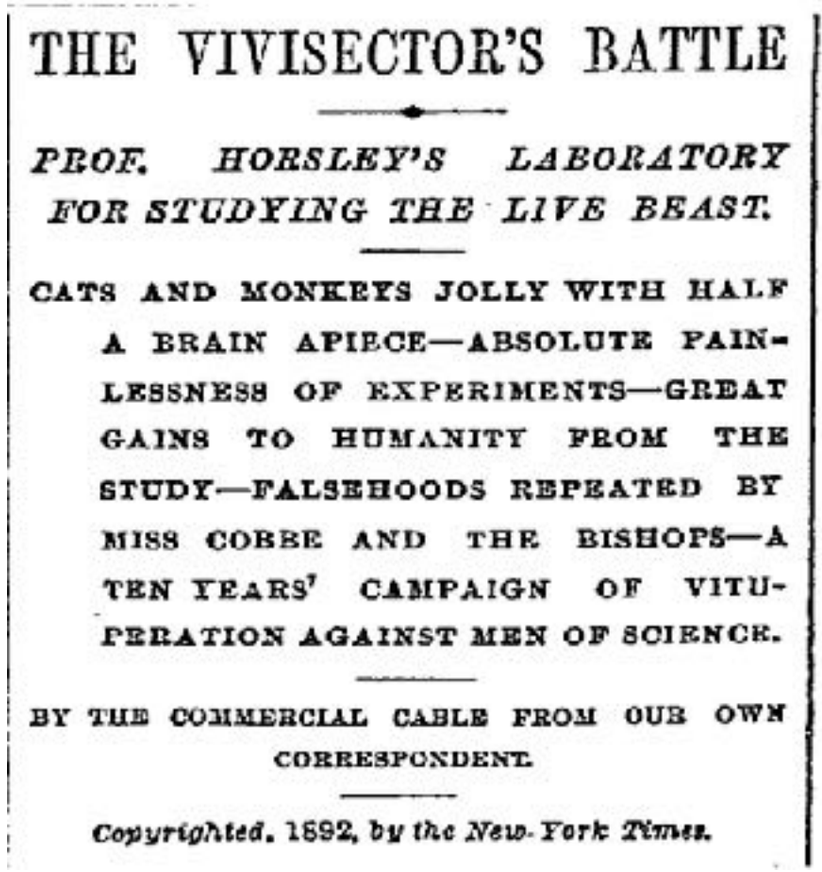
BRAIN SURGERY.

SUCCESSFUL TREATMENT OF THREE PATIENTS WHO SUFFERED FROM EPILEPTIC FITS.

The Precise Seat of the Disease Indicated by Its Effect Upon Certain Muscles. Localization.

At the meeting on Friday last of the British Medical Association at Brighton, says the London *Times* of August 17th, Mr. Victor Horsley, F. R. S., professor superintendent of the Brown institution, and surgeon to the National Hospital for the Paralyzed and Epileptic, in Queen Square, Bloomsbury, exhibited three patients treated in that hospital, whose recovery may be said to mark the commencement of a new era in surgery. They are men who have been





THE VIVISECTOR'S BATTLE

PROF. HORSLEY'S LABORATORY FOR STUDYING THE LIVE BEAST.

CATS AND MONKEYS JOLLY WITH HALF A BRAIN APIECE—ABSOLUTE PAINLESSNESS OF EXPERIMENTS—GREAT GAINS TO HUMANITY FROM THE STUDY—FALSEHOODS REPEATED BY MISS COBBE AND THE BISHOPS—A TEN YEARS' CAMPAIGN OF VITUPERATION AGAINST MEN OF SCIENCE.

BY THE COMMERCIAL CABLE FROM OUR OWN CORRESPONDENT.

Copyrighted, 1892, *by the New-York Times.*

David Abernethy Neurologist

Ron Easthope

Died 23 August 2022 aged 85

This talk was Ron's idea.

He was interested in medical history and worked on the history of Wellington Hospital and its staff.

He also interested in research and suggested a project for each cardiology registrar.

Mine was on the quality of anticoagulation after heart valve replacement

14 Publications, including:

Shaw CE, Easthope RN. Fatal bronchospasm following streptokinase. N Z Med J. 1993

Bradley T, Dixon J, **Easthope R**. Unexplained fainting, near drowning and unusual seizures in childhood: screening for long QT syndrome in New Zealand families. N Z Med J. 1999

SIR VICTOR HORSLEY

A STUDY OF HIS LIFE AND WORK

BY

STEPHEN PAGET

Misit de summo, et accepit me :
et assumpsit me de multis aquis.

My sword I give to him that shall succeed me in my pilgrimage,
and my courage and skill to him that can get it.

He sent from on high, and he accepted me. And he took me up, out of many waters.

ILLUSTRATED

He rescued me from my strongest enemies, and from those who hated me. For they had been too strong for me.

LONDON
CONSTABLE AND COMPANY LTD
1919

Mr Valiant-for-truth found mortally wounded after he defeated 3 robbers: Faint Heart, Mistrust, Guilt in The Pilgrim's Progress

The first epilepsy surgery

- In October 1886 Victor Horsley, a 29 year old general surgeon from UCL and Queen Square, presented a paper **Brain Surgery** at the Brighton BMA meeting

- Since May that year he had operated on 3 patients for focal motor epilepsy and presented them in person

- The first had been semi conscious having hundreds of fits per day for weeks and appeared to have been cured by surgery

- The paper caused an international sensation

- Horsley was to become a household name, and was frequently quoted in the press on health topics

Understanding Horsley

- Pre-eminent Victorian
- Brilliant and Innovative Surgeon,
- Physiologist and experimental pathologist
- Professional leader
- Medical and national politician
- Soldier
- Powerful social conscience, fearless, with a sense of duty to act in face of wrong doing or injustice, regardless of the personal consequences

Personal qualities

- He often took an ``aggressive, imperious and uncompromising attitude,'' in discussions and made many enemies in defending his passionately held views

- Exhaustingly enthusiastic in his relationships with colleagues

- Kind and caring in his treatment of patients

- Distinction of rank, class, or race meant nothing to him

- He championed the appointment of J Risien Russell to Queen Square - JRR was part Afro-Carribean

- He only obeyed conventions when proven useful - he cycled to see his patients and dressed less formally accordingly

Background notable family

- His father was an artist and designer, well connected not wealthy
- His mother's brother, father and grandfather were surgeons
- His father's family were prominent artists and musicians his father's sister married Isambard K Brunel
- Marianne Skerret, Queen Victoria's companion and friend, was a friend of Horsley's mother.
- When Marianne pointed out VH birth notice on the same day as Queen Victoria's last child Beatrice, QV insisted he have the male version of her names: **Alexandrina Victoria**.

Education

- Cranbrook Grammar in Kent 1866 to July 1873
- June 1873 began learning microscopy, cutting his own sections
- He prepared for matriculation at the University of London with Mr. (later Sir) Philip Magnus.
- He passed in January 1874
- Then set to work for his preliminary scientific examination, attending lectures at University College, reading at home, and with Magnus with two others
- He worked furiously passing with first class honours and a gold medal in anatomy in July 1975
- He had an elite education at UCL a scientific and experimental approach to medicine was thriving
- The very best personal tuition for a future physiologist from Philip Magnus, applied mathematician, and in physics (Sir) Oliver Lodge FRS 1851-1940 physicist and pioneer of radio

Stellar Career

- 1875 Student University College Hospital
- 1880 M.R.C.S.
- 1881 Studied in Berlin
- 1881 M.B. B.S. age 24, winning the gold medal in surgery with a London University Scholarship
- 1882 elected surgical registrar responsible for all the surgical patients in the hospital
- 1882 Assistant professor of pathology University College London
- 1883 Admitted F.R.C.S.
- 1884 - 1890 Director (Professor-Superintendent) of the Brown Institution (Large animal facility)
- 1885 assistant surgeon to UCHospital
- 1886 Assistant Professor of Surgery at the National Hospital for Paralysis and Epilepsy,
- 1887–1896 Professor of Pathology at UCH
- 1890 full surgeon UCH retired in 1906 aged 49.

Scientific Achievements

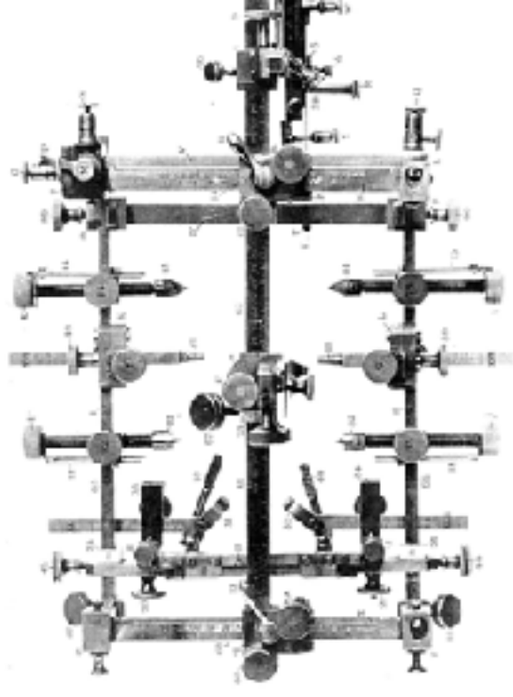
While an active general surgeon:

- First **UK Investigator of rabies**, instigator of control measures effective by 1904, last outbreak in Britain 1910
- Showed **thyroid removal** caused **myxoedema** in animals explaining the outcome after **goitre surgery**
- First to **remove the pituitary in animals** (and to show that it was not immediately fatal)
- Identification of the **reflex BP elevation and pulse slowing** in animal studies preceding death from raised ICP later credited to Cushing
- Investigations on **mechanism of tissue damage by gunshots** to the brain and first to demonstrate respiratory failure as the mode of death
- Extensive experimental work on **localisation of cerebral and spinal cord function**
- Driving force behind Harcourt's device to **control the concentration of chloroform** in inspired oxygen
- Developer with RH Clarke of a **stereotactic frame** and the first **precise deep electrolytic brain lesions** in physiology

Neurosurgical Achievements

- The first epilepsy surgery with remarkable success
- First to use intraoperative stimulation during surgery
- First to operate successfully on pituitary tumours and craniopharyngiomas
- The first large series of removal of the trigeminal nucleus for Trigeminal neuralgia

Technical contributions to neurosurgery



- bone wax - antiseptic malleable tenacious
- semilunar skin flap - previously cruciate -which meant the centre of the flap was most likely to breakdown
- muscle “stamps” for haemostasis (Coagulation was investigated by Wooldridge at the Brown Institute)
- carotid ligation for cerebral aneurysm,
- transcranial approach to the pituitary gland,
- intradural division of the trigeminal nerve root for tic douloureux,
- 1905 stereotactic frame (used only in research on the cerebellum)

The inscription over the door of the Hôtel-Dieu Paris

“This is the house of God and the Gate of Heaven”

Charles Ballance Horsley’s classmate:

When I entered St. Thomas's Hospital as a student nearly all operations, *and they were few in number*, were followed by sepsis - suppuration, cellulitis, erysipelas, septicaemia, or pyaemia.

It was just before this time that some hospitals on the Continent were closed because hospital gangrene and death followed every operative intervention.

Factors transforming risk and pain of surgery

- Anaesthesia First Ether given in London Dec 1847
- Chloroform J Y Simpson 1847 more widely adopted two years later,
- Antisepsis Lister 1867 not fully adopted until after Lister moved to King's in London in 1877 **(Horsley and Ballance started med school 1875)**
- Britain was the wealthiest nation on earth, and London its centre
- There was determination to apply science and technology to medical care, and systems to drive research and invention
- There was also a vociferous group opposed with powerful connections in government and the dominant Anglican Church Hierarchy

Baiting the antivivisectionists
Surgery before 1860
by Letter to the Times 20 Sept 1908

SIR VICTOR HORSLEY DEFENDS VIVISECTION

Has Transformed Surgical Wards from Veritable Death Traps to Places of Rest and Real Relief.

CONDITIONS 50 YEARS AGO

Declares Saving in Human Life and Human Suffering Due to Animal Experimentation Is Incalculable.

Special Correspond. nce THE NEW YORK TIMES.

- There were no anaesthetics to obliterate the pain of cutting operations, so that the fear as well as the physical distress of the patient must have been extreme.

- Suppuration, frequently sloughing of the wound, great pain, and prolonged fever were (except by accident) the invariable consequences of any surgical procedures.

- The mortality was extremely high

- Operations upon the internal organs were in the vast majority of cases fatal.

- Patients with abdominal diseases succumbing to acute peritonitis, which, as is well known, is one of the most distressingly: painful modes of death.

- Surgical wards, were veritable death traps, and patients could be persuaded to enter them with difficulty

- Dreading both the terrors or the operation itself and the subsequent inevitable weeks of acute and weary suffering, weakness, and semi-starvation at home consequent on the suppuration and fever which they would have to go through.

Difficulties for surgeons in the1880s

- Tumour cases were usually well advanced before surgery was contemplated - poor understanding of ICP
- Opening the skull over the lesion - X-Rays from ~1897 (discovered Nov 1895) Another Horsley contribution
- Diathermy for meticulous control of bleeding (1926 Bovie and Cushing)
- Intraoperative monitoring primitive - sphygmomanometer in use from 1902
- Post operative shock - VH and Sherrington inspired George Crile's research published 1897 (GC Founder of Cleveland clinic)
- Blood typing 1906 organised blood transfusions 1920s
- Nurses often poorly trained Electric theatre lighting 1901 (Horsley used a head mirror and natural or gas light)
- Anaesthesia record from 1897 (Codman and Cushing)
- Early anaesthesia - chloroform dripped on a mask, often by the surgeon
- Tracheal intubation 1930s artificial ventilation 1960s
- Anticonvulsants Bromide 1857, Phenobarbitone 1912
- Antibiotic treatment for infection 1935 sulpha, 1940 penicillin, 1943 Streptomycin

Models and Mentors

Physiologists and experimental pathologists:

- John Burdon Sanderson (Non conformist)
- Edward Albert Sharpey-Schäfer

Surgical:

- Marcus Beck

Neurologists:

- Bastian, Gowers, Hughlings Jackson

Horsley's university career

- He was inspired particularly by his physiology teachers Burdon Sanderson and Schäfer

- He was identified early as a genius and recruited to advanced level study

- Immediately after qualification he was set up in a research facility and began experimental work in physiology with Schäfer

John Burdon-Sanderson
1828 – 1905

- Post graduate study of chemical pathology under Wurtz and physiology under Claude Bernard in Paris

- recognised for his scientific outlook and practical early work on epidemiology and pathology of infection typhoid, TB, anthrax, cattle plague (Rinderpest) during 11 years as MOH for Paddington while also physician to the Brompton, Asst Physician and Lecturer in physiology at the Middlesex

- 1864 Gave up clinical practice to set up experimental physiology at UCL (+ histology, chemical pathology)

JBS Research after moving to UCL in 1864

Sustained focus was on the actions of excitable tissues in response to stimuli in the interests of the organism as a fundamental feature of life and on the mechanism of the process

- spread of excitation over the frog ventricle
- the venus flytrap (Dionaea)
- the electric organs of certain fish
- contraction of skeletal muscle

VH on JBS

- Raised physiology from an imperfect guessing at the meaning of structure to a precise experimental science of applied physics and chemistry.

- Insisted accuracy should be as for experimental physics and he always sought the latest electrical measuring equipment

Surgical training

- He learned surgery and the techniques of antisepsis from Marcus Beck, Lister's cousin and disciple, in use at UCL but still controversial.
- The senior surgeon Christopher Heath opposed their use
- Later displaced by Halsted's aseptic techniques, which Horsley never adopted (Halsted himself was slow to use gloves)

Edward (Sharpey-)Schäfer 1850-1935

- Known as a kind, friendly, and compassionate man with a good sense of humour, and a particular friend to VH

- 1874 graduated from the University College Hospital Medical School

- 1874 Sharpey retired, Schafer became an Assistant Professor of Physiology at University College under Burdon Sanderson

Famous for

- 1877 showing histologically that Medusa Jelly fish nerves communicated but were not a syncytial net - the first evidence for nerve cell theory, and for synaptic delay

- 1893 discovering Adrenaline (with George Oliver physician)

- 1895 proposed loss of the internal secretion of the pancreatic islets as the likely cause of Diabetes Mellitus

Goltz' dog, Ferrier's Monkey

International Medical Congress London August 1881

- The issue was whether motor function and hearing were localised in the cerebral cortex, or whether the brain operated in a more wholistic fashion as claimed by Goltz (current network theory shows its both)

- Goltz showed a dog walking normally after he claimed to have removed the sensory, motor, and association cortex

- Ferrier showed a monkey with a hemiparesis 7 months after resection of the Rolandic area

- On seeing the monkey's hemiparetic gait Charcot exclaimed: "C'est un malade!" [patient]

- Schafer was appointed to an expert committee to review the claims - in his case the monkey's brain

- Schafer found himself disagreeing with Ferrier's conclusions - and decided to do his own investigations - 9 papers resulted, the first with Horsley on the marginal convolution

- Anti-vivsectionists outraged -> Ferrier prosecuted for cruelty to animals in Dec 1881 - but case fell apart because Yeo had performed the surgery. Both sides dissatisfied.

Ferrier Functions of the Brain 2nd Ed Work between 1873-1886

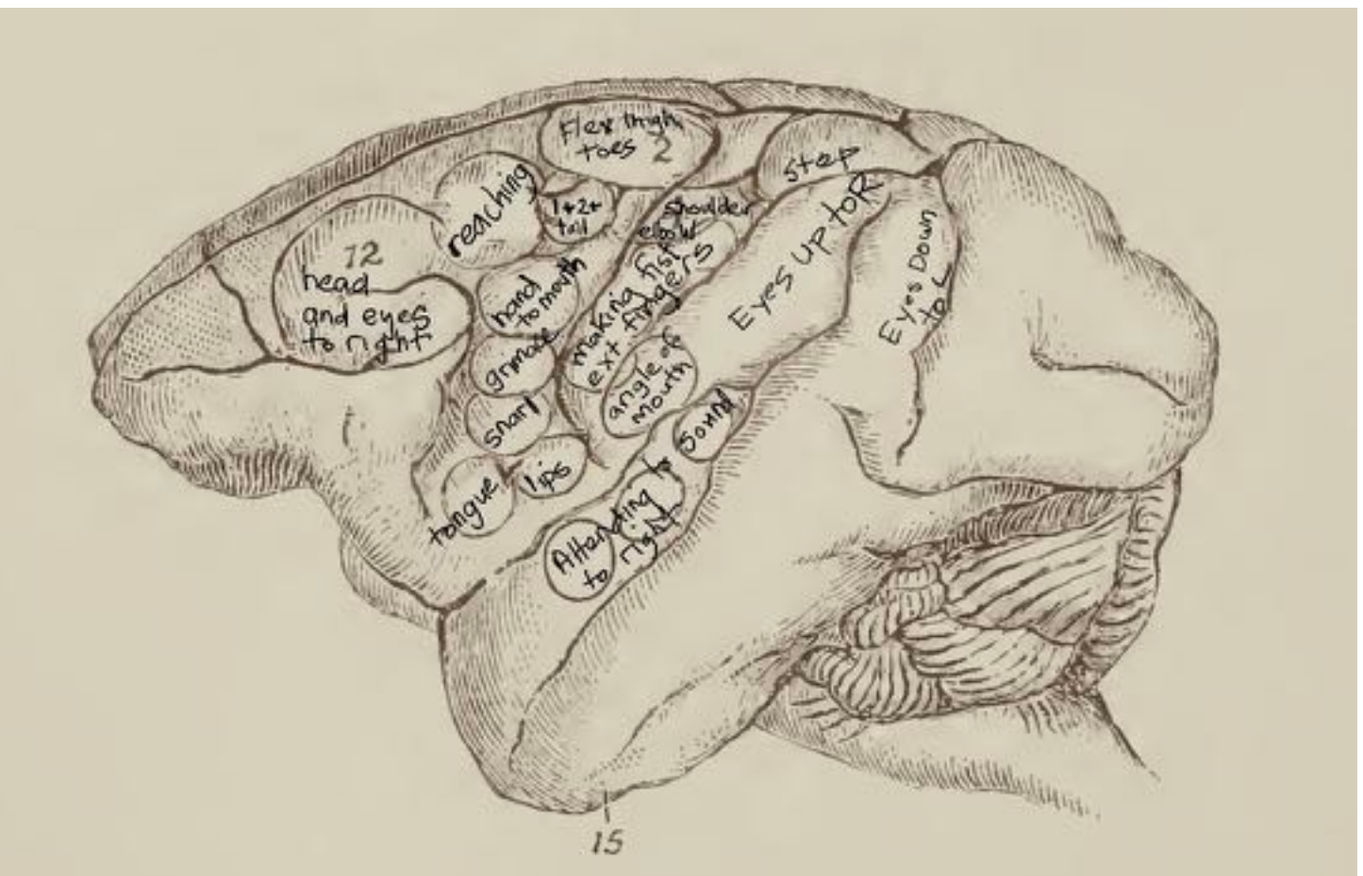


FIG. 70.—The Left Hemisphere of the Monkey. (Royal Soc.)

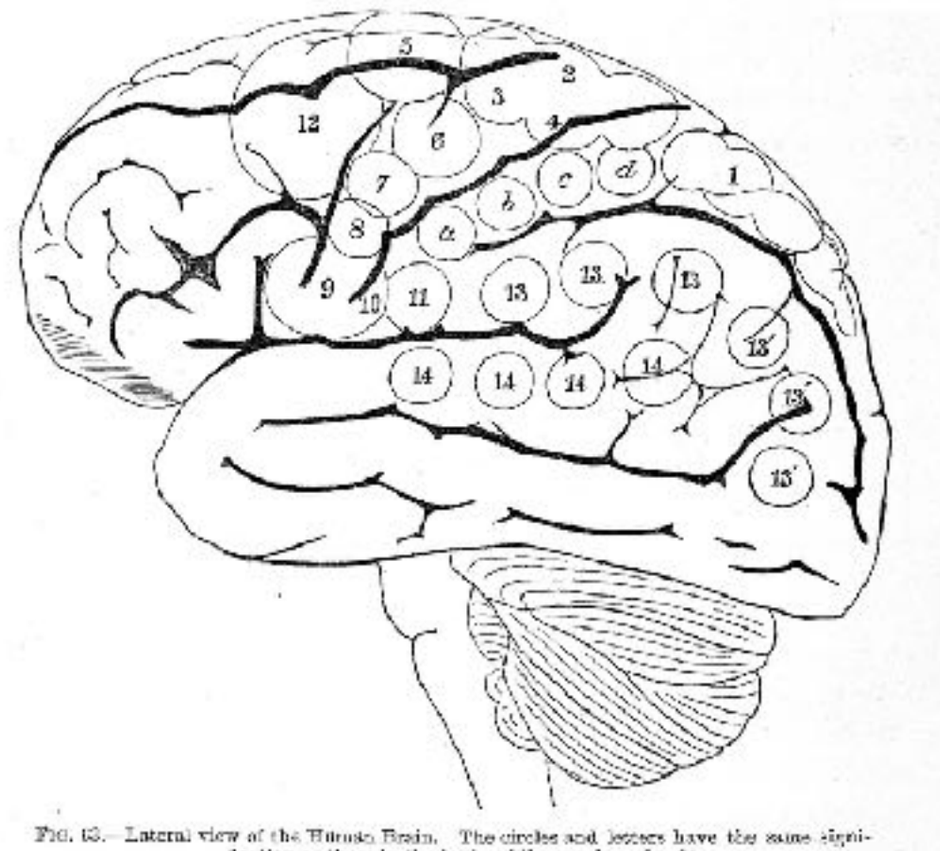


FIG. 65.—Lateral view of the Hiroshi Brain. The circles and letters have the same signification as those in the brain of the monkey, fig. 64.

Work with Schäfer on cerebral localisation

- 1884 Schäfer became Professor of physiology at UCL
- Shäfer and Sanderson saw him appointed Professor Superintendent of the Brown Institute which had large animal experimental facilities
- He asked Horsley to work with him repeating and extending Ferrier's 1873 brain cortex stimulation experiments in the macaque
- They differed from Ferrier finding the cortical representation of movements gradually blending into the next with noticeable overlap
- They extirpated areas of brain, let the animal recover, to check the electrophysiological conclusions
- Schäfer reportedly resented being left to care for and observe the monkeys when Horsley rushed off to his surgical commitments

John Hughlings Jackson

- Analysed the muscles contracting in focal motor seizures and those weakened in paralysis together with the concept of positive and negative symptoms (Brown Sequard) to infer motor representation on the cortex

- Noted that the less automatic movements had and required wider representation and more nerve cells - and focal motor seizures usually began in the face the thumb and the great toe

- Extended this to the “dreamy state” of temporal lobe seizures

- Though Ferrier and Horsley felt they were demonstrating JHJ theories, after the second edition of Ferriers “The Functions of the Nervous System (1886 edition), Jackson remarked that *“he had never seen his real view on this subject anywhere referred to”*

- Schafer and Horsley findings in their first study were consistent but they don’t interpret them as such - but they went on looking in a mosaic approach

Work on cerebral localisation

1884-91 Horsley and colleagues published eight celebrated articles in the Transactions of the Royal Society, 525 pages with 33 pages of plates

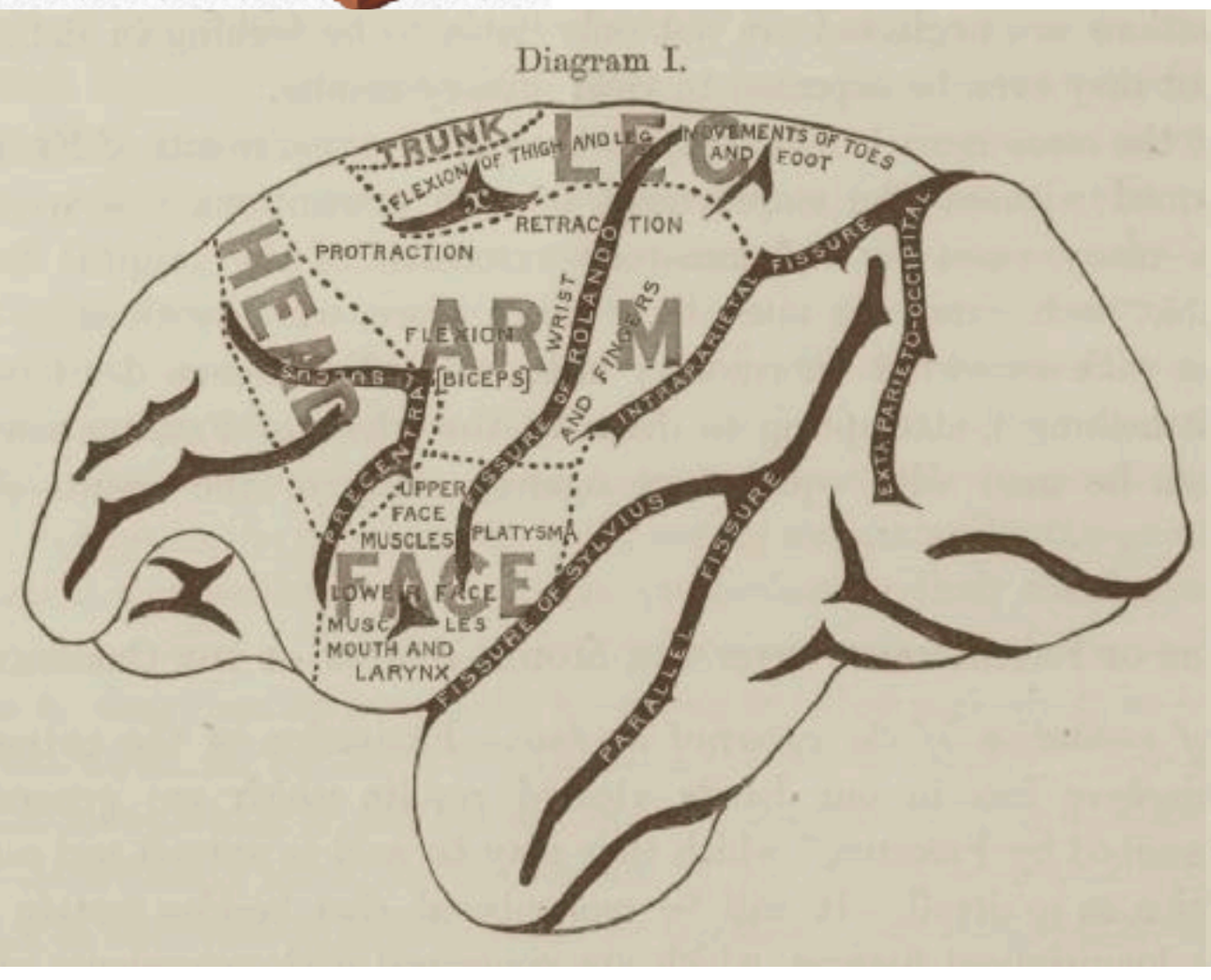
- with Charles Beevor (b 1854, neurologist) on a detailed analysis of cerebral localisation and the projection of cerebral neurones to the spinal cord in monkeys.

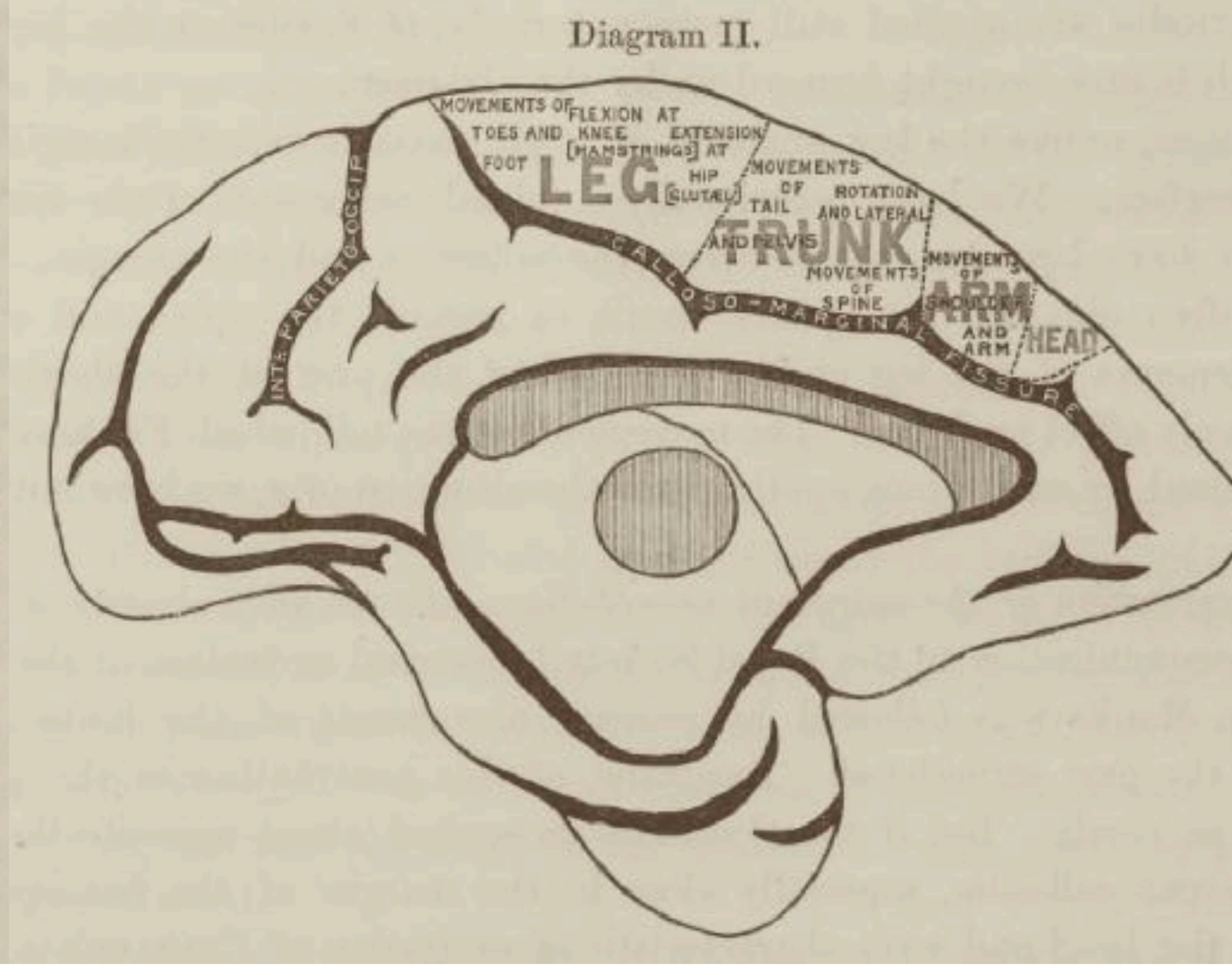
- 1890 cortical and brainstem control of the larynx with Felix Semon

- The posterior roots and columns of the spinal cord with Mott and Howard Tooth

- The cerebellum with Schäfer, Risien Russell (neurologist), and Robert Henry Clarke.

Shäfer and Horsley's findings





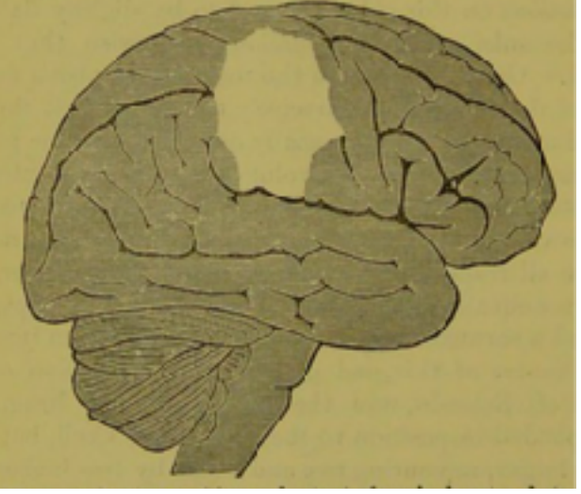
They used a shock generated from an induction coil just sufficient to be felt on the tongue

Work on cerebral localisation
Francis Gotch Burdon Sanderson

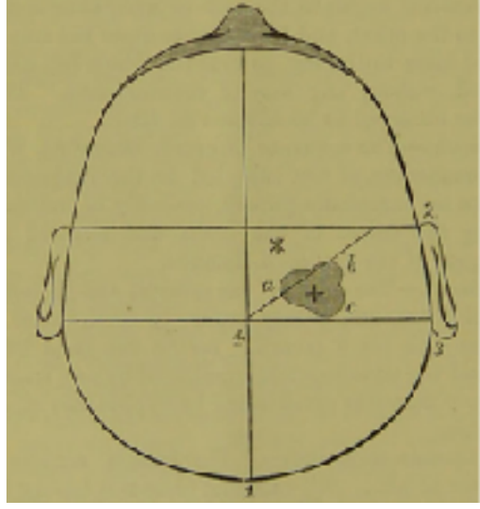
- With Burdon-Sanderson and Francis Gotch (classmate and brother-in-law)

- They showed that current descends to the spinal cord after excitation of the cerebral cortex with muscular contractions in the lower limb that are first persistent, then rhythmic, corresponding to tonic and clonic contractions and to convulsions.

- They used the Lippmann capillary electrometer with resolution of 0.1mV



Debate over the surgical technique in the Hughes Godlee case



- A famous case report in 1885 by Hughes Bennett, Queen Sq neurologist, and Rickman Godlee, a UCL surgeon,

- Describes the correct diagnosis, localisation by symptoms and signs and excision of a primary intrinsic cerebral tumour

- Godlee had never operated on the brain

- He located and removed the tumour.

- the operation was a success the patient died of wound infection, brain hernia and meningitis

- It is clear from the remarks in discussion over the surgical techniques that there had been discussion with Horsley who was present in theatre and his methods and recommendations were not welcomed

Godlee's discussion

Should he have arrested the haemorrhage from the interior of the wound by means of the galvano-cautery given it produces a lot of detritus, bleeding was not severe and would likely have arrested by natural means.

Should he have used a drainage-tube? It was not judged safe to completely close so large a wound, filled with accumulated serum and blood. It is not likely that the soft india-rubber tube would have caused any serious irritation.

The argument in favour of complete closure of the wound, so strongly advocated by those whose experience is confined to operations on the brains of monkeys is, it is maintained, not convincing when applied to a large injury in the human subject, **the more rapid healing of the tissues of the lower animals being a matter of common knowledge**.

Another point of doubt is the propriety of introducing sutures into the dura mater.

All the usual anti septic precautions were taken during the operation, and the only flaws in its strict application which suggests themselves are, first, that **the scalp was not sufficiently purified prior to the operation**, and second, that **no special measures were taken to carbolise the galvano-cautery apparatus**.

Setting up neurosurgery at Queen Square

- Improved neurological diagnosis, introduced by Charcot and by John Hughlings Jackson, William Gowers, and David Ferrier in London, inspired interest in the potential of surgical neurology

- Victor Horsley brought this solid grounding in experimental primate studies which required mastery of the anaesthetic, surgical and infection problems

- His other important attribute was his drive to understand disease through experiment

- The neurologists knew his work - when it came time to appoint a surgeon at Queen Square for the first time the consultants only wanted Horsley

Charles Ballance reminiscences

Horsley and I at first only had a kitchen to operate in but, following the Listerian doctrines, I do not think we ever had sepsis supervening on an operation.

In those early days very few nervous system operations were performed - one a month, if so many.

Brain Surgery Presentation BMA October 1886 annual meeting

Horsley gave a detailed description of his techniques and their basis in animal research:

- pre-operative preparation, and antisepsis
- the anaesthetic chloroform 2% during pain, as little as possible during operation
- the line of incision, treatment of the dura mater, methods of brain resection, prevention of brain herniation
- control of bleeding - venous by raising inspired O2, arteriolar with warm water, arterial by lowering blood pressure with chloroform
- wound closure and drainage, post-operative care
- He then described the clinical symptoms of the seizures, in the three cases, details of the operations carried out, and introduced the three patients

Horsley hits back

- With pointed remarks over the similarity of wound healing between animals and men

- And on the control of bleeding by “the actual cautery” which he and Schäfer used early to excise brain tissue but abandoned in their first study in favour of resection because of the extent of necrosis

- It was a battery powered red hot wire

Control of bleeding

- .. natural desire to avoid haemorrhage the custom to avoid the supposed danger by the use of **the actual cautery**, a **barbarous plan**, which is accompanied, of course, by secondary inflammatory troubles, as proved by experimental investigation.

Thinly veiled jibes at Godlee

a brief comment upon the opinions of those who seem to consider that the **processes of repair of tissue** in the lower animals **differ greatly from those in man**, and that, therefore, safe deduction cannot be made from one to the other.

.. it is the **greatest possible error** to imagine that wounds heal in a manner different from that which we see in man

.. **stereotyped views on this subject** have no doubt **hindered the progress of brain surgery**, since 1880 when Dr. Ferrier and Professor Yeo fully demonstrated that the popular views concerning operations on the brain were erroneous.

Drainage of the wound 1886

Objectives

- firm union of the wound by 4-5 days
- prevent brain herniation by allowing some tension in the wound
- blood serous ooze 24 hours - drain for that time from most dependent part of the incision
- reopen tract of drain with a probe if union threatened

Bleeding control by 1906

- every bleeding artery and large vein should be secured by ligature
- arteriolar and capillary oozing by hot irrigation 46ºC
- before resection raise chloroform to to 1 or 2 percent a quarter to half a minute to lower BP
- venous bleeding controlled by raising oxygenation of blood

First case 25 May 1886

- His first patient was a 22-year-old Scotsman, admitted under Jackson, who had sustained head trauma 15 years earlier, causing a depressed fracture of the skull.

- By 1885, he was having many seizures (2,870 were recorded in the first 13 days in hospital) and was in status epilepticus for several days.

- The seizures 'occurred in batches, with a well-defined "march" which started in the right leg and spread to involve the right arm and face with turning of the head and eyes to the right'.

- Jackson, Ferrier and Horsley predicted the site of the epileptic focus on the basis of his experimental studies on cortical localisation.

- He opened the skull and dura over the central cortex of the left hemisphere, with Jackson and Ferrier present, and found a highly vascular scar in the exact location predicted to be the cause of the symptoms.

- Excision of the focus and surrounding brain substance to a depth of just over 2 cm resulted in complete resolution of seizures.

First case 25 May 1886

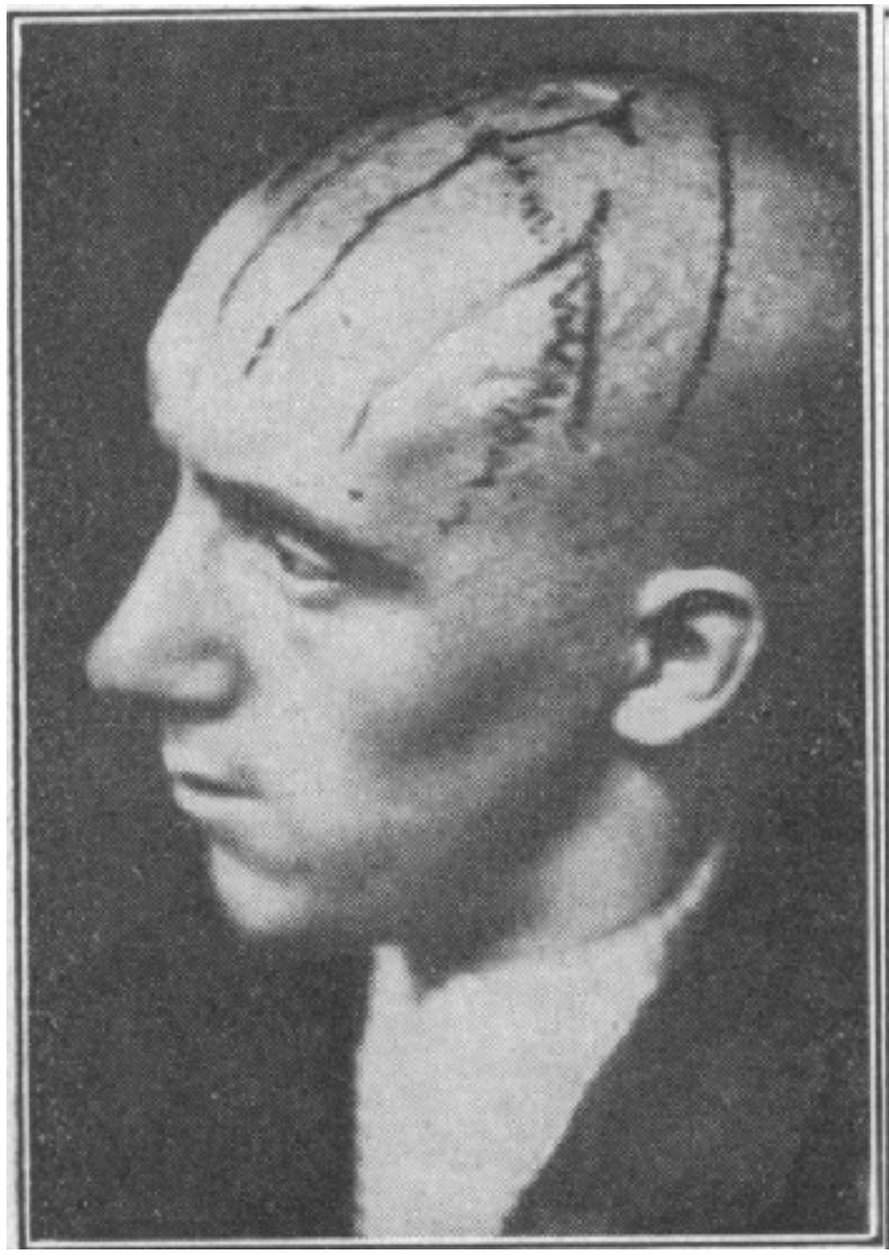


FIG. 1. coronal sutures and the cerebral fissures drawn on the skull

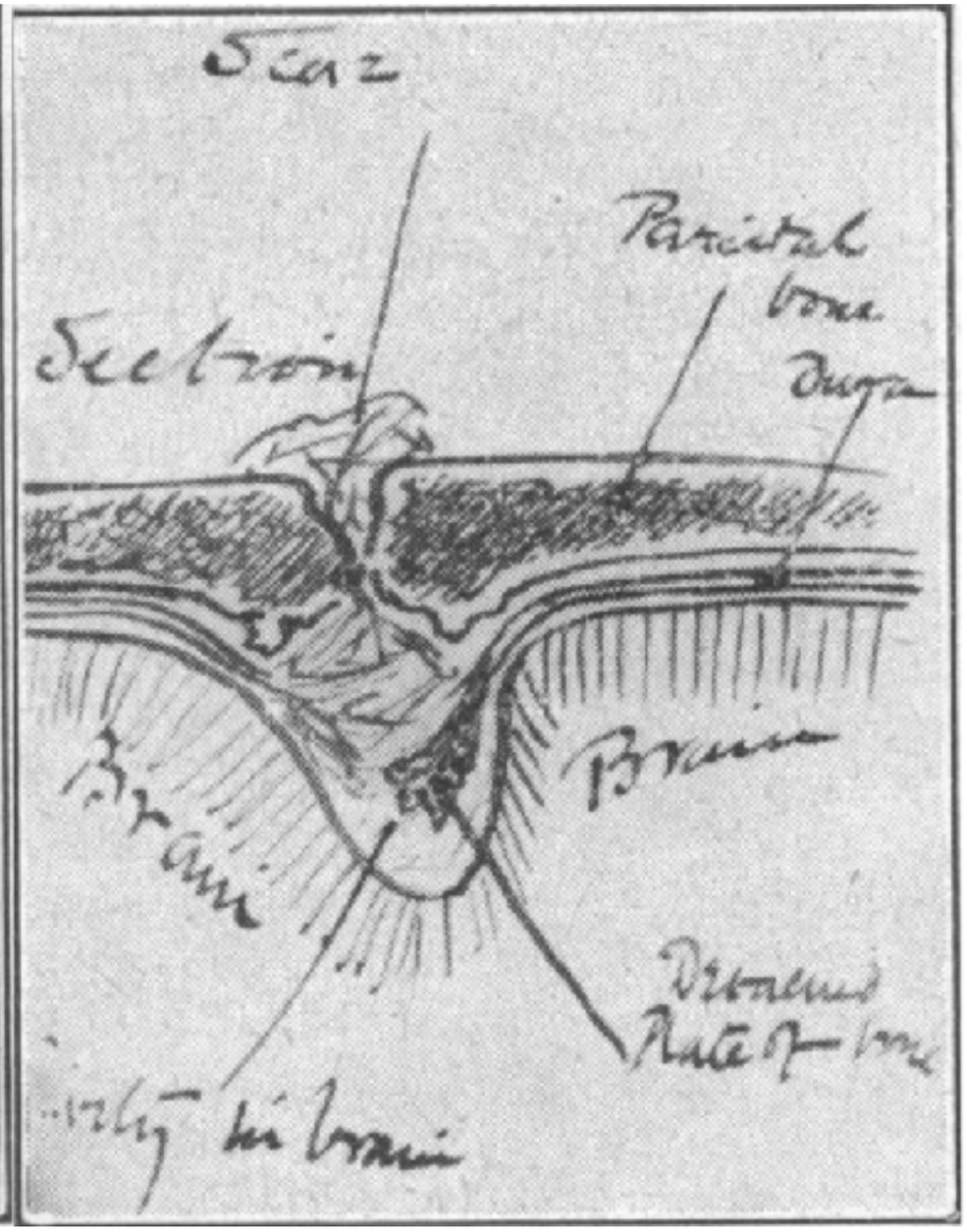
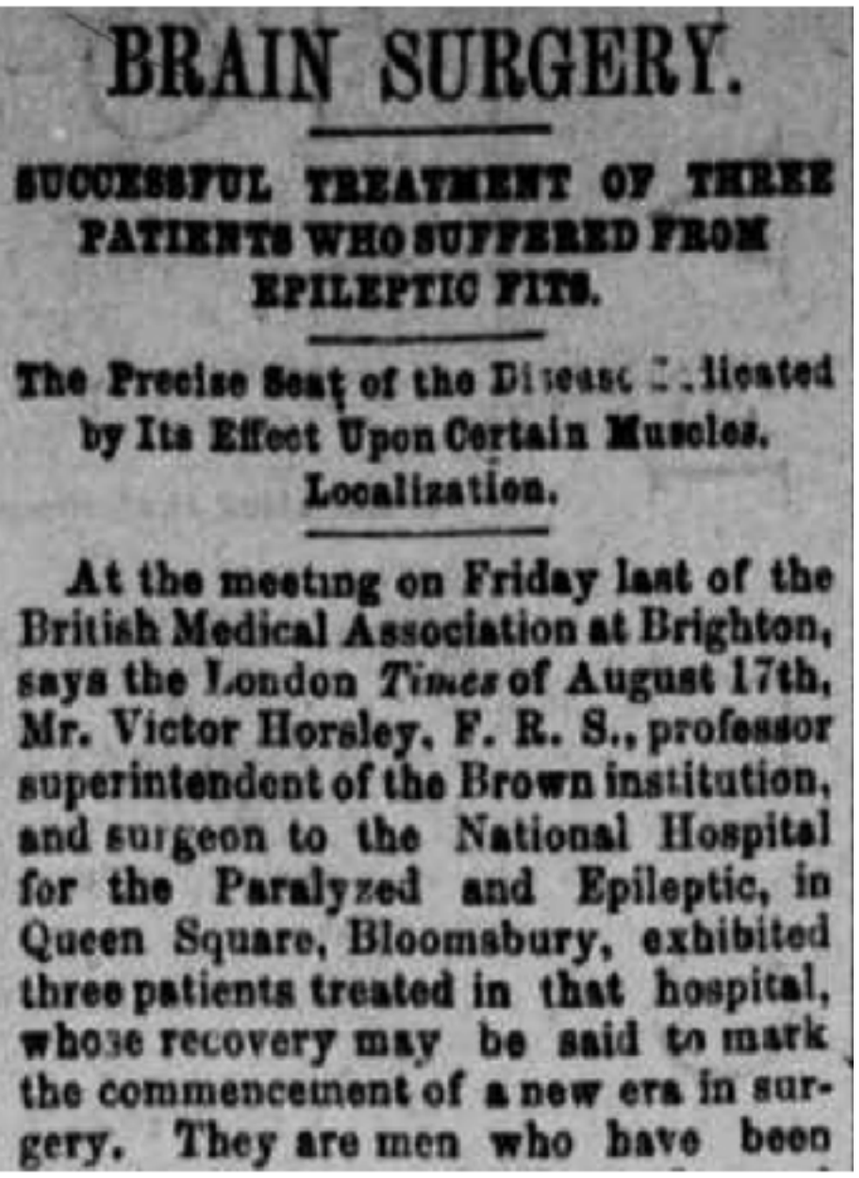


FIG. 2. Sketch from the operation notes Queen Square, 1886

Reception



BRAIN SURGERY.

SUCCESSFUL TREATMENT OF THREE PATIENTS WHO SUFFERED FROM EPILEPTIC FITS.

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- The presentation was a triumph and caused an international sensation
- Charcot: "British surgery was to be highly congratulated on the recent advances made in the surgery of the nervous system... not only had English surgeons cut out tumours of the brain, but here was a case in which it was probable that epilepsy had been cured by operative measures."

The harsh reality of glioma surgery

- The fourth case 23 September 1886, had left hemiplegia, severe fits, and was semi-comatose for ten days before the procedure

- Horsley's pre-operative diagnosis was of a 'tumour of the cortex involving the upper part of the arm-centre in the right hemisphere'.

- A glioma weighing 41⁄2 ounces was removed, the patient regained consciousness, the fits stopped, and he was able to walk with assistance.

- It was considered a brilliant result, but the patient died of recurrence six months later

- By the end of 1886 he had operated on 10 cases of epilepsy with 9 considered successful.

Removal of an intradural extramedullary spinal tumour 9 June 1887

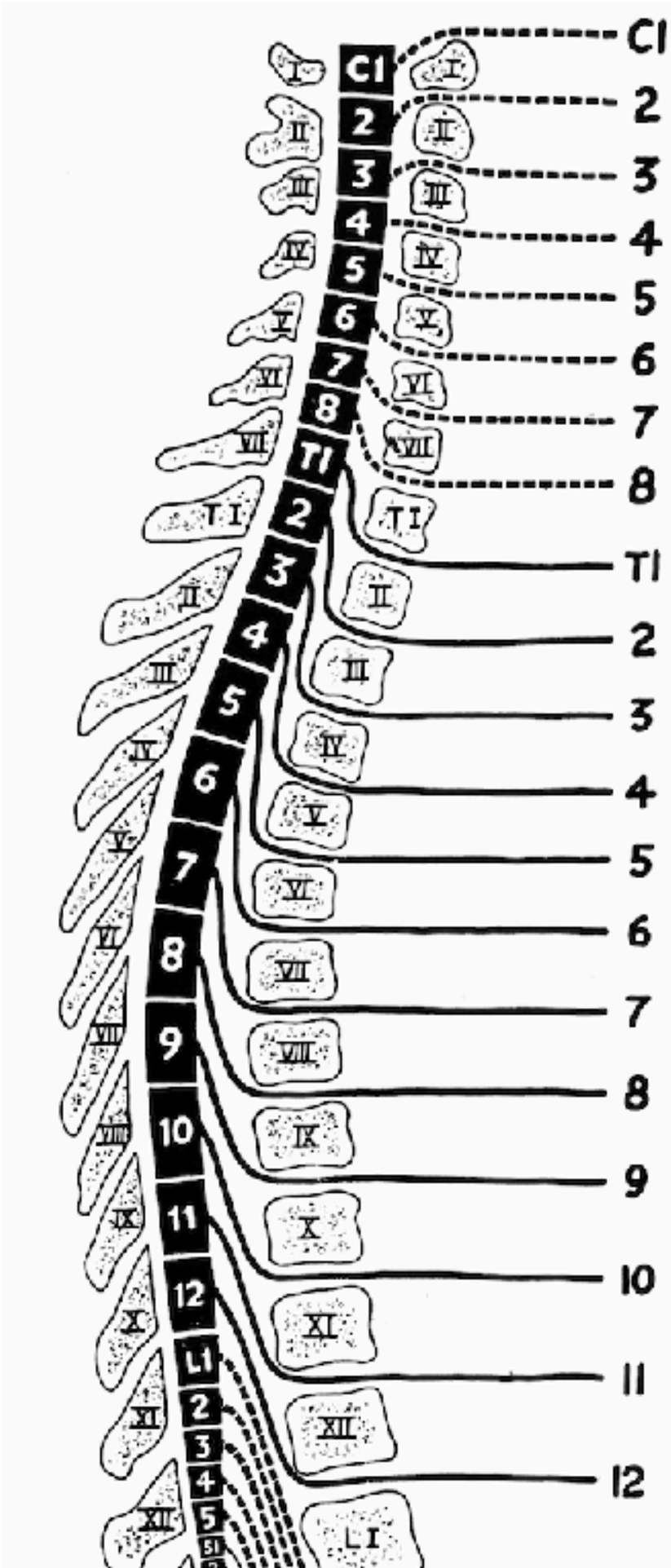
- an Army captain had 3 years of increasingly severe spinal pain, worse on movement, and radiating around the chest.

- weakness progressed over months to total paraplegia with clonus, spasms, and incontinence

- sensory loss below the xiphoid process (~T6),

The operation

- Gowers and Kidd were present, and Ballance assisted.
- laminectomy was performed at three levels but no abnormality was seen.
- Ballance, an anatomy demonstrator, urged Horsley to extend the laminectomy upwards
- a small fibromyxoma causing cord compression was found and excised.
- for two weeks he had severe pain and CSF leak
- then a remarkable progressive recovery of sensory, motor and sphincter function
- within six months was pain free and walking three miles.
- after a year back working 16 hours each day.
- he died 20 years later from an unrelated cause without recurrence

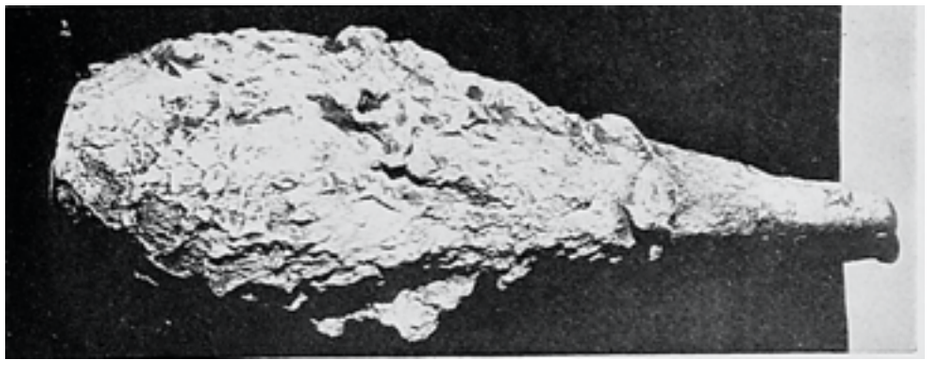


Shift from scientific surgery to medical then national politics from 1900

- He reformed the MDU, then the BMA, then the GMC, and midwives registration
- He was an ardent opponent of the drinking of alcohol for any purpose after he noted it dulled his wits when studying.
- He had a celebrated dispute over statistics on the hereditary effects of alcohol with Karl Pearson, polymath statistician. Maynard Keynes was highly critical of the same study.
- He crusaded against the anti-vivisectionists.
- He and his wife opposed force feeding and arbitrary recall to prison of suffragettes (a highly unpopular cause)
- He could see Lloyd George's national insurance scheme would benefit most GPs but lost their support and referrals to his private practice suffered
- He stood twice unsuccessfully for parliament
- As typical of his positions they were rational, typically far sighted and roundly rejected by his contemporaries

Horsley and WW1

- Horsley was an expert on bullet wounds having studied plaster casts of the cavity produced in modelling clay by metal jacketed and soft nosed or exploding bullets



- His opinion was very useful to Kitchener and the War Office rebutting the Kaiser's false claims about allied bullets, particularly British officer's revolver bullets - a cover for documented German use with devastating limb injuries typically requiring amputation

Quickly off side with the military bigwigs

- His long running campaign against the Rum ration citing reduced efficiency, accuracy shooting, and resistance to cold

- The rum ration was 1/8 pint, 54.5% alcohol by volume = two 150ml glasses 13%vol pinot noir

- Arguing in the press with Godlee (on the Central Medical Committee) over the treatment of wounds with carbolic paste causing tissue necrosis and damage to natural resistance to infection, recommending along with Almaroth Wright rigorous washout with saline. Told by Keogh to “leave it alone”

- Objecting to Godlee’s comments about tetanus anti toxin having only a short effective period - Horsley thought he should have gone out of his way to emphasize its effectiveness (High rates of infection until introduced overall rate 0.127)

- Drawing attention to the need for early attention to wounds by experienced house surgeons in France at clearing stations and on trains implying unnecessary deaths

Horsley in Iraq

- Horsley was not wanted in France and sent to Cairo

- There was a series of British defeats in the campaign to capture Baghdad and scandal over the treatment of the wounded, sent untreated down river on filthy barges, with one toilet and no clean water, mattresses or sun cover. Sunstroke and paratyphoid were rife

- Horsley travelled to India where he met key people and then on 16 April 2016 to Bazra where he enquired into conditions for the wounded and doctors, and did clinical work for head wounds

On 25 April 2016 he wrote to the Director of medical services Indian army

- pleading for adequate X-ray facilities in all hospitals

He pointed out

  - the lack of sterile dressings
  - the poor quality of instruments in field surgical panniers
  - inadequate medical staffing
  - above all, very poor transport arrangements.

- He sent a similar letter to Keogh DG Army Medical Services London

Lawrence at Kut

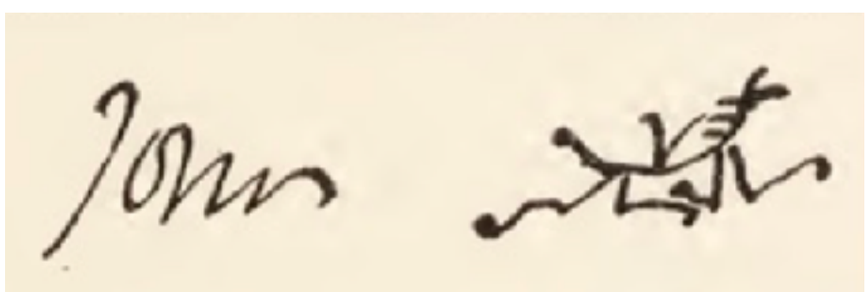
- Townshends Army was beseiged in Kut from November 2015
- 5 April 2016 TE Lawrence was sent to Bazra, then up the river to the HMS Snakefly in the Tigris below Kut, with a letter to Sir Percy Cox British India's chief political officer in Iraq
- Lawrence was under orders from Kitchener to offer £1m in gold for the release of Townshend's Army
- The offer was made on April 29th but that day Townshend independently destroyed his guns and surrendered

Last days

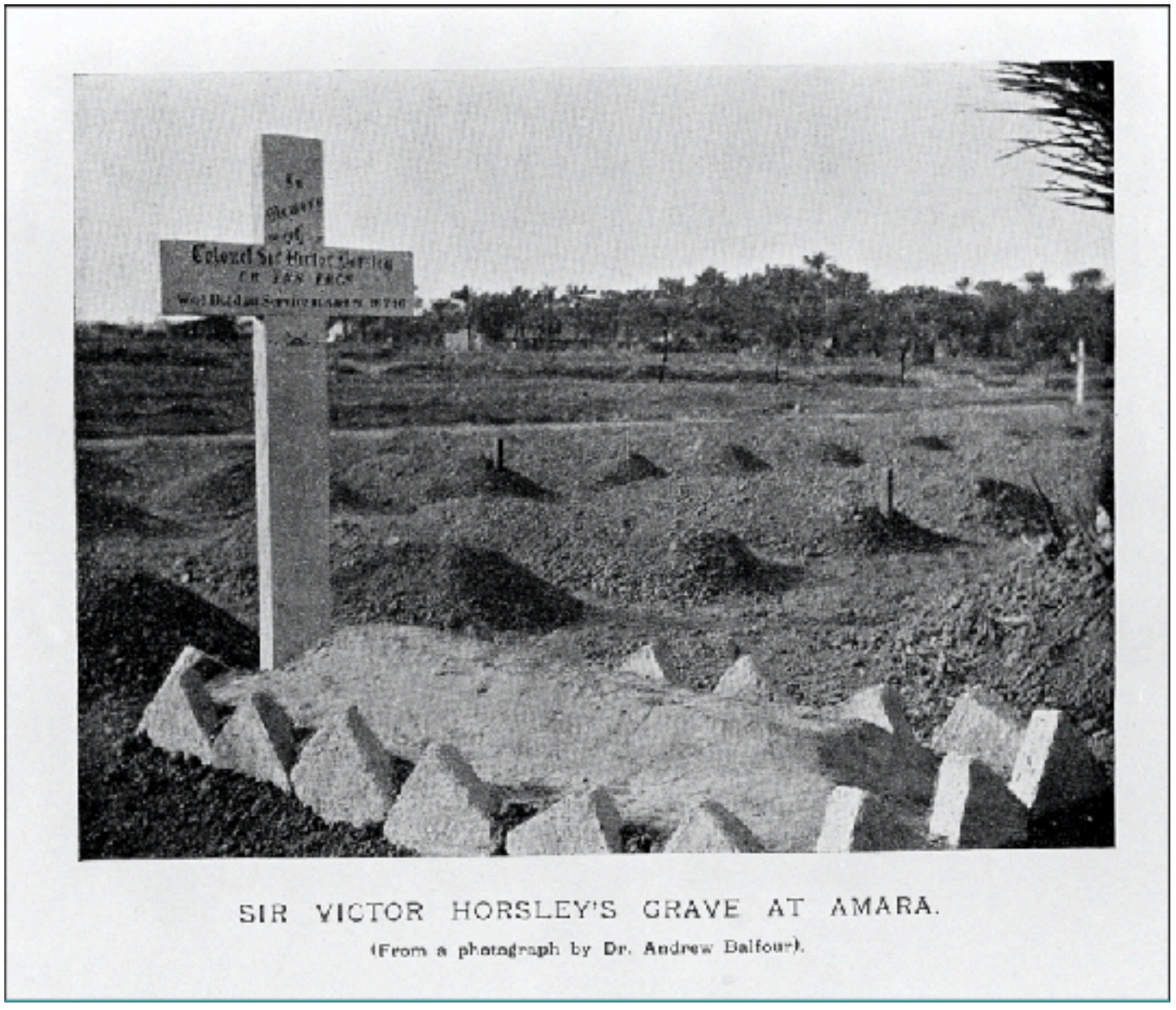
- He believed that being a teetotaller protected him from heat stroke and that its effects were over rated.

- On 16 July 1916 Sir Victor Horsley died from hyperpyrexia probably complicating paratyphoid fever while on active service in Mesopotamia.

- In a letter to his wife only a few months prior Horsley had written, “Don’t worry about me, I don’t matter, I can’t live forever, it’s the young that matter.”



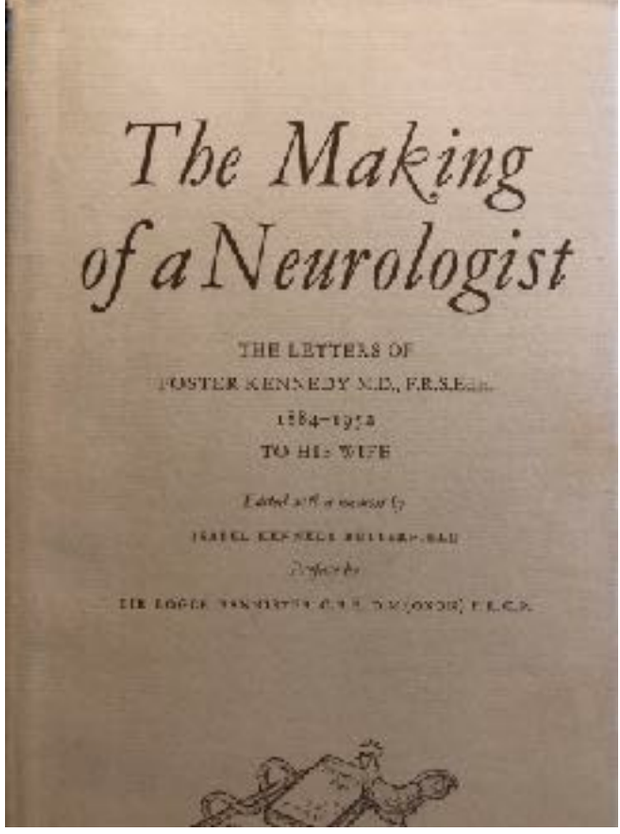
In some corner of a foreign field



SIR VICTOR HORSLEY'S GRAVE AT AMARA.

(From a photograph by Dr. Andrew Balfour).

Letters of Robert Foster Kennedy (1884–1952) to his future wife



Trained in Queen's College Belfast

Resident House Officer Queen Sq Nov 1906 to 1910

Later prominent New York neurologist Bellvue and Cornell

He was 21, self confident and brash

Horsley was 49 and very experienced

Foster Kennedy on a bad day with VH

Tuesday morning was rather fierce and Horsley was in one of his bad humors and I had the misfortune to have to give an anesthetic to the fourth case.

He was in vile temper and slanged me and all the rest of the world—for a great man he is at times singularly petty

—a vindictive fellow also, for yesterday I got a letter from him couched in indignant language because of trouble into which his optimism in operations had led him—he is trying hard to make me the scapegoat

—every R.M.O. here within the memory of the oldest inhabitant has quarreled with Horsley and I see I'm going to be no exception.

What Horsley was really like

My Dear,

Yesterday was scrumptious! In the morning I had a public triumph over Horsley and Turner. It sounds big, but it was so!

A man here came in three weeks ago, very ill with all the signs of heightened intracranial pressure — he was Gibb's case under Aldren Turner, who both diagnosed tumor in right frontal lobe.

I said he had an abscess and asked Turner if that were not possible. He said he didn't see a sign of abscess.

Horsley saw him later, said it was tumor.

I went to Horsley and put some points before him which I thought pointed to abscess. He wouldn't hear of it.

I felt squashed but managed to convert Gibb and Prentice though the Seniors remained staunch, of course.

So sure was I of my diagnosis that when Turner asked me last Tuesday week if his chap couldn't be done before the others, I repeated the possibility of it being septic as an argument in favor of doing it last.

However, he thought it wasn't abscess.

The patient was sent in before the others and the 1st stage (removal of skull) was done. No sign of abscess was found.

Part 2

- Yesterday I sent him in last.
- Horsley asked me why I had done so and I told him.
- He laughed and said ‘all right’ and humored me in my fancy.
- The brain membrane was incised, the cortex exposed. Part of it was greatly discoloured, as though something was below the surface.
- Then Horsley just let himself go and as usual talked all round himself.
- There was a big gallery, a couple of Belfast men among them.
- He said, ‘This is the worst case I’ve ever seen, the whole underlying brain is infiltrated with a hyper-malignant tumor—very difficult to remove as it’s quite without a lining capsule.
- This slatey gray color is quite typical etc., etc.,’ and I felt as sick as possible for I thought I was wrong.

Part 3

- He ligatured the cortical vessels and said he'd try and get the thing out some way—took a knife and put it in—a gush of yellowish pus—I almost yelled with excitement in a silence absolutely deathlike, broken at last by Horsley with a great 'By God!' He let all the pus out, dissected out the membrane of the abscess cavity and then turned round to his gallery and said that 'abscess had been Dr. Kennedy's diagnosis for the last fortnight' and after- wards he and a lot of other chaps came up and shook hands with me and gave me congratulations.

- It was better than when I got through my final!!

- Then it set right a diagnosis I'd made in another man, for, in him, I said he had a frontal tumor. Horsley said 'no, temporosphenoidal' and removed it from that place!

Russian Roulette

- We were very busy yesterday. Horsley did five operations—I think any one of them would have been a sensation at home. We were in the theatre from 8.45 till two o'clock, and at it as hard as we could go with the exception of a cup of tea at twelve. I gave the anaesthetic in two of the cases, was first assistant in two of the others and second in the last, so I quite enjoyed myself.

- One of the men was a solicitor—an awfully nice fellow — from whose brain Horsley succeeded in extracting a bullet which as the man naively told us he 'had put there himself'!

- An extraordinary escape for which he is devoutly thankful.

A telephone probe to find the bullet

- Horsley used a very cute telephone probe to find it.

- A plate of zinc and copper is put into the patient's mouth, the acid of the saliva generates a current which is 'completed' when the probe touches the metal of the bullet and a bell is run!

- He fished through that part of the brain that the X-rays . . . (Ferrier's come . . . Lord!).

- Later . . . he's gone—and I'm going to write some more so you've got to listen! To complete a sentence —he fished through that part of the brain in which the X-rays showed the bullet to be lying, and so finally got it out

FIG. 2.