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HISTORY

Victor Horsley and Spinal Surgery

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ABSTRACT

The pioneer of neurological surgery in an era when no radiological investigation was available including X-ray, Sir Victor Horsley has earned recognition as the father of neurosurgery. His intellect, interest, and concern for humanity has earned him the knighthood. His association with Sir William Gowers was very appreciable, which helped in the introduction and progress of spinal surgery. The birth and growth of spinal surgery by Sir Victor Horsley and his contributions are briefly discussed in this article.

Keywords: Sir Victor Horsley, Sir William Gowers, Spinal cord tumor, Spinal surgery.

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INTRODUCTION

Ever remembered in the neurosurgical community for the introduction of "antiseptic wax," Sir Victor Horsley played a pivotal role in introducing and shaping the face of standard neurosurgical practice. He is credited as the first surgeon to perform a laminectomy and spinal cord tumor excision. He was a skilled surgeon. He had a lot of research interest. He was also a devoted social reformer.[1] Horsley established Neurosurgery as a specialty subdivided from General Surgery. This article shares a few memorable informations about Sir Victor Horsley's contribution to spine surgery.

BIRTH AND FAMILY

Born in Kensington, London, on April 14, 1857, he was gifted with a scholastic environment and was raised in a world of privilege; his father, John, was a well-known artist and architect, his aunt Sphy was a talented pianist, his uncle was a surgeon, and his maternal grandfather was a physician. He was ambidextrous, which also had contributed to his legendary skill in surgery.[2]

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Horsley got married to Eldred Bramwell in 1887, who was his strong supporter and companion. They had a strong interpersonal understanding, which provided mental support, particularly in the later part of his life, when he faced strong opposition to his views on vivisection, women's rights, and alcohol abstinence.

EARLY EDUCATION

Horsley's education stepped through London University to Medical School at University College in 1875, where was exceptionally bright and won gold medals in anatomy and surgery and a silver medal in physiology during his university examinations.

Served as Surgical Registrar, obtained Fellowship of the Royal College of Surgeons of England in 1883. He was given a position at National Hospital for the Paralysed and Epileptic in Queen Square, it was unopposed and with no alternate choice. He did his first craniotomy here.[3]

FIRST SPINAL SURGERY

He performed the first laminectomy for excision of a spinal tumor successfully in 1887. The patient was a 42-year-old man who presented with progressive paraplegia. The diagnosis was reached by Sir William Gowers, the renowned neurologist and his best friend. The patient made a remarkable recovery.

The grandson of this patient made a communication mail to cybermuseum, portraying the story of his grandfather. His communication said that, Victor Horsley was less than 30 years old when he operated on his grandfather, Captain Hubert Henry Grenfell of the Royal Navy, who was 45 years by then. His grand father had spastic paralysis of both legs but had a significant recovery after surgery.

HORSLEY AND CERVICAL SPINE

It was an era when cervical spine surgery was considered particularly hazardous due to high morbidity and mortality. In the absence of antibiotics, with no proper facilities, Horsley's presentation of 7 cases of cervical laminectomy at the meeting of the British Medical Association in 1895 was a major turning point to the specialty of spinal surgery. Of the 3 patients he presented, three were operated for tuberculosis and four for cervical spine trauma.

All of his patients made a recovery after his surgery, and four of his patients actually attended the British Medical Council Annul Meeting to attest his brilliant work, which made them to improve their quadriplegia. His work marked the dawn of spinal neurosurgery, and he was considered the doyen of British neurosurgery.

TUBERCULOSIS OF THE SPINE

Gowers collaborated with Horsley toward a potential surgical approach to spinal tuberculosis, and Horsley proved beyond doubt his extraordinary surgical skill in giving a prominent recovery with surgery.

In 1893, Horsley described a case of decompressive laminectomy for cervical caries (pachymeningitis cervicalis) with recovery from impending asphyxia. One of the major steps in surgery for spinal tuberculosis, recommended by Horsley, was to avoid forcible correction of tuberculous spinal deformity (redressment brusque), as it worsens the neurological deficit.

FRACTURE OF CERVICAL SPINE

The management of cervical spine injury was clouded with lots of controversies when Horsley accumulated the literature on laminectomy for spinal trauma. The credit goes to improved neurological localization, advent of X-ray, antiseptic techniques, and improved anesthesia.

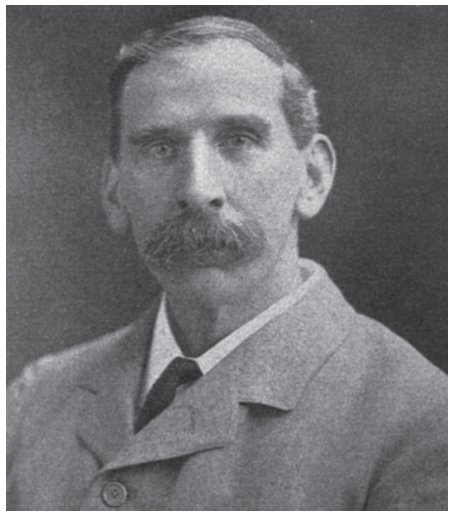
Horsley at Queen's Square, along with his neurology group, advocated early surgery whenever crepitus was documented. Only patients with injuries bearing spinal shock were sought with bed rest and hyperextension in view of its poor outcome due to complications like bed sore, cystitis, postural hypotension, etc.

BRITISH MEDICAL ASSOCIATION MEETING, 1895

In the 1894 meeting of the British Medical Association, at the Surgery Section, William Thorburn concluded that surgery for spinal trauma was rarely indicated and management with plaster jackets was the recommended treatment. But, in 1895, 1 year later, Victor Horsley presented his historical series of 7 patients on cervical laminectomy, in the same meeting, which shattered the ideas of everyone on stage. The patient series presented was also a tribute to Horsley's surgical talent. His work was truly a milestone for spinal surgery.

OTHER CONTRIBUTIONS

His contributions include the first laminectomy for spinal tumor, the first carotid ligation for cerebral aneurysm, the curved skin flap, the transcranial approach to the pituitary gland, intradural division of the trigeminal nerve root for trigeminal neuralgia, and surface marking of the cerebral cortex. He was a tireless scientist and played a significant role in discovering the cure for myxedema, the eradication of rabies from England, and the invention of the Horsley–Clarke stereotactic frame. He also is a pathologist and he performed research on bacteria and edema. He founded the Journal of Pathology.



Victor Horsley

Dr Walter Dandy essayed about him as a great surgeon, a physiologist, a pathologist a social reformer and one of the great teacher. Dandy related to him on several occasions that he studied and learned much from the writings of Sir Victor Horsley. Edwin M Todd scripted in his scholarly volume of essays, Reflections Through A Murky Crystal, which is a brief but bright and complete biography on Horsley, stating that Horsley is a literary scholar and an accomplished Neurosurgeon.

CONCLUSION

Knighted in 1902 for his many contributions to medicine, Sir Victor met an untimely death during World War I from heat stroke at the age of 59. He was an intellect with enormous skill and energy which drove him throughout his life to succeed in his career. It is justifiable to credit him as a "Pioneer of Neurological Surgery".

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