

Hugh Morrision Davies: pioneer in thoracic surgery

This year marks the 50th anniversary of the death, on 15 October 1965, of Hugh Morrision Davies, at the age of 88 years. His story is a remarkable one, in that he overcame a devastating infection of his dominant right hand at the age of 36 years, taught himself to operate with his left hand and continued his career as a pioneer in thoracic surgery, particularly the surgery of pulmonary tuberculosis.

Davies was born in 1879 in Huntington, where his father was a GP. He was educated at Winchester College, Cambridge University and University College Hospital, London, qualifying with the Conjoint diploma in 1903 and his Cambridge Bachelor of Medicine and of Surgery the following year, collecting a battery of prizes on the way. He passed the Cambridge Master of Surgery in 1907 and Doctor of Medicine the following year, in which he also passed his Fellowship of the Royal College of Surgeons (FRCS). This brilliant start of his career was crowned by his appointment as assistant surgeon at University College Hospital at the age of 29 years.

As a surgical registrar, Davies carried out studies on the sensory changes following section of the trigeminal ganglion for trigeminal neuralgia and also studies of sensory nerve regeneration using section of cutaneous nerves in his own arm as his experimental model. In this he was joined by Wilfred Trotter, another remarkably talented surgical colleague at University College Hospital.

In 1910 Davies went to Berlin to study the early attempts at open chest surgery being pioneered in Germany. In the days before the endotracheal tube, anaesthesia for such procedures posed enormous problems, with the patient having to be operated upon within a pressure chamber. The following year, he introduced a positive pressure machine of his own design and in

1912 performed the first successful thoracoplasty operation in this country.

In the same year, Davies performed the first dissection lobectomy (the operation in which the supplying vessels and bronchus to the affected lobe are isolated, divided and tied), the technique which is used today. Unfortunately, the patient, who had a carcinoma of the lung, died 8 days post-surgery from an empyema, but at post-mortem examination the divided

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and sutured bronchial stump had healed soundly. This technique, now standard, was not used again for many years. Things might have been different if the patient had survived.

Then in January 1916, at the age of 36 years, came a devastating accident. Davies cut his right hand during an emergency operation. The wound suppurated. Wilfred Trotter drained the hand and forearm, but Davies was left with a scarred and useless right hand. He resigned from the staff of University College Hospital and set out to write a treatise on chest surgery.

In 1918 a sanatorium for tuberculous patients in the Vale of Clwyd in Wales came up for sale. Davies bought it and became its medical superintendent. Many of these patients required surgery, principally thoracoplasty so, with great courage and determination, Davies trained himself to operate with his left hand and, by 1921, he returned to thoracic surgical practice. In addition to his work at his own hospital, Davies was appointed consultant to many Welsh hospitals and to others in Cheshire and Lancashire. Not only was he once more a superb technician, but he was also a tireless worker and great organizer, holding regular clinical meetings, principally dealing with the surgery of pulmonary tuberculosis.

Doctors qualifying in the last 50 years since the death of Davies can hardly imagine the part that tuberculosis played in clinical practice before that time. As a newly qualified house officer in 1948, I looked after patients with tuberculosis affecting the kidney, testes, peritoneal cavity and cervical lymph nodes. On my orthopaedic rotation, many of my patients, usually children, suffered from tuberculosis of the spine and other joints and, of course, the chest hospitals were overflowing with cases of pulmonary tuberculosis, where the treatment comprised bed rest, fresh air and nourishment, supplemented by lung collapse techniques (mainly pneumothorax), and finally thoracoplasty.

All this was about to undergo revolution. The first specific drug was the isolation of streptomycin by Selman Waksman in 1944. This alone was associated with the development of resistant strains of the bacillus. The introduction of combined treatment of streptomycin with para-aminosalicylic acid (PAS) and isonicotinic acid hydrazide (isoniazid) was highly effective, so that, by the early 1950s, the scourge of tuberculosis was largely being overcome in the western world.

During the second world war, Davies was appointed civilian consultant surgeon to the Royal Navy and Royal Air Force for north west England, and organized the treatment of both civilian and military chest injury casualties, principally at Broadgreen Hospital in Liverpool. All this, of course, involved an immense amount of travelling under war time restrictions, and the black-out at night.

A man of immense drive and energy, coupled with the grim determination to overcome what most of us would regard as a crippling injury, Davies continued to operate, teach, organize and write until he was 80 years old. He then retired to a remote cottage in North Wales, together with his wife, where he cultivated his rock garden. He died there 50 years ago at the age of 88 years. **BJHM**

Conflict of interest: none.

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