

Sir William Bowman: a histologist and an ophthalmic surgeon

This year we celebrate the 200th anniversary of the birth of Sir William Bowman, one of the great figures of medicine in the Victorian era. He is remembered today by a number of eponyms that record his work first in histology and then in ophthalmology.

William Bowman was born in the small Midlands town of Nantwich on 20 July 1816. His father was a banker, but also an amateur botanist and geologist of considerable talent and a Fellow of the Linnean Society. William's mother was a skilled draughtswoman and painter of flowers. From both his parents he may well have acquired his considerable powers of observation and execution.

At the age of 10 years, Bowman was sent to Hazelwood School, outside Birmingham. This was a remarkable institution, founded by Thomas Wright Hill, one of whose sons, Sir Rowland Hill, one of the fathers of the modern postal system, taught at the school as a young man. This was quite a remarkably progressive institution; it was governed by the boys themselves. Corporal punishment was never used (in those days elsewhere it involved vicious flagellation). Bad marks were cleared by useful work carried out while the other boys were enjoying their play break. Their laws insisted on rigid punctuality. Boys from all over the world, many the sons of distinguished men, attended the school. Leaving Hazelwood School at the age of 16 years, William was apprenticed to Thomas Hodgson, surgeon to the Birmingham General Hospital, who was later to be elected President of the Royal College of Surgeons.

In 1837, Bowman moved to King's College London. The following year, he travelled extensively in Europe, visiting hospitals in Holland, Germany, Austria and France. On return to King's, Bowman became a demonstrator, first in physiology

and then anatomy, and in 1840 passed his Membership examination of the Royal College of Surgeons, becoming a Fellow in 1844. When King's College Hospital was founded in 1839 (in an old workhouse near Lincoln's Inn Fields), Bowman was appointed there as assistant surgeon.

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It was during these early days that Bowman carried out his brilliant histological studies. The first was on the minute structure of voluntary muscle. This involved a prodigious amount of work studying the muscle of man and 10 other species of mammal, as well as muscle of birds, reptiles, fish and insects. He then turned his attention to the fine structure of the Malpighian corpuscles of the kidney. His description remains relatively unchanged today and we still use the term 'Bowman's capsule'. Bowman described many new anatomical structures at microscopic level, of which at least six bear his name.

It must be remembered that microscopes and histological techniques in those days were quite primitive; the microtome had not been invented, sections were cut by hand. The beautiful illustrations of his findings were all drawn by Bowman himself.

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In 1846, Bowman was appointed assistant surgeon at the Royal London Ophthalmic Hospital, Moorfields, being promoted to full surgeon in 1851; he remained there until he reached the mandatory retirement

age of 60 years. It was at Moorfields that Bowman's second great interest developed – ophthalmology. After retiring from Moorfields, he remained in private ophthalmic practice for a further 10 years.

As an eye surgeon, Bowman demonstrated a high degree of manual dexterity. He was one of the first in England to become expert in the use of the newly introduced ophthalmoscope, invented by Helmholtz in 1851. He pioneered von Graefe's treatment of glaucoma by iridectomy, which was published in 1857. Bowman translated von Graefe's paper into English and carried out the operation in this country for the first time the same year. He was deeply involved with new techniques in the treatment of detached retina and cataract, for example, the removal of soft cataracts by means of suction, an operation he performed under chloroform anaesthesia. However, Bowman's open-mindedness in adopting new procedures was tempered by his excellent clinical judgment.

Bowman took a great interest in the nursing profession at an early stage of its evolution. This was stimulated, no doubt, by his friendship with Florence Nightingale, whose first nursing post was at the Harley Street Institution for the Care of Sick Gentlewomen, where Bowman was the surgeon. He and Miss Nightingale remained friends thereafter and Bowman was able to help Florence Nightingale by arranging to send out trained nurses to assist at the Crimean War.

In 1842 Bowman married Miss Harriet Paget, the daughter of a Norwich surgeon. They had seven children. He was a handsome slim man who rarely drank, never smoked, was an early riser and a hard worker. He exemplified all the Victorian virtues. In 1884 he was created a baronet.

Bowman died of pneumonia at his country house outside Guildford in 1892 and lies buried in the nearby churchyard. His life and brilliant work well deserve to be remembered. **BJHM**

Conflict of interest: none.

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