

Henry Vandyke Carter and his meritorious works in India

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Henry Vandyke Carter (1831–1897), rightly called “The Anatomical Artist”,^[1] a British National, devoted most of his life for selfless, pioneering work studying leprosy and mycetoma, as well as providing a number of medical and social services in India.

CARTER’S LIFE

Henry Vandyke Carter [Figure 1] was born on 22nd May 1831, in Hull, a city in the east hiding of Yorkshire, England.^[1] He was the eldest son of Henry Barlow Carter, a well-known marine artist of his time and a religious mother. When he was 14, his grandmother inculcated in him the habit of recording his thoughts and views in a diary. He became a reserved person with an inclination toward art. He was considered as a deeply decent sort of person, often paralyzed by self-doubt and believing himself abjectly undeserving.^[2] While in India, he married Harriet Bushell, who

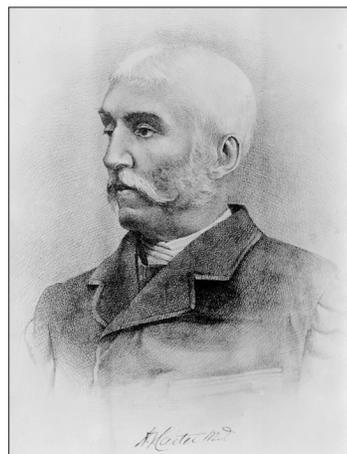


Figure 1: Henry Vandyke Carter, self-portrait (reprinted with permission from Wellcome Library, London)

feigned to be a widow, but in reality she had been legally divorced. He broke his relationship with her and married Mary Ellen Robison in England in 1890 and had two children. Finally, Carter had a sad demise in the year 1897.

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BRITISH MEDICAL EDUCATION IN 1940s

In the early 1940s, there were three paths to become a physician. The first and simplest exams were those of the Worshipful Society of the Art and Mystery of Apothecaries of the City of London. The next was the exam conducted by the Royal Colleges of Surgeries, Medicine, etc., and lastly the most difficult exams were those of the universities. Many of the aspirants took the Apothecaries exam, the easiest way to become a practitioner, so did Henry Vandyke Carter.

THE MAKING OF GRAY’S ANATOMY AND CARTER’S CONTRIBUTIONS

Henry Vandyke Carter’s interest in art gradually

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leaned toward medicine as he matured; however, owing to the family's financial situation, being unable to afford a university education, he chose to train as an apothecary in London. In June 1853, he obtained a membership in human and comparative anatomy at the Royal College of Surgeons. Then, he joined as a demonstrator in St. George's Hospital, London.^[1]

At the St. George's Hospital, Carter became associated with Henry Gray (1827–1861) who was 4 years older than him. He worked for Gray for his publication titled "The structure and use of the human spleen" initially.^[2] In 1856, Carter commenced the illustrations for Gray's book on anatomy. They decided that the book had to be simple, well illustrated and well organized. Innovatively, Carter's labels were not adjacent to his pictures, distracting the readers to cross-check; instead his nomenclature appeared on the flesh itself.^[3] Also, Carter, being a talented artist, made his drawings in reverse directly on wood surface, so that they appeared the right way on the printed page.^[2] His excellent style and skilful use of shadows resulted in quality drawings which earlier anatomy books lacked. Carter's drawings portrayed subjects with their eyes and mouths closed, as if they were anesthetized with chloroform; in contrast to that appeared in other works of anatomy, in which subjects were depicted in tortured postures, as if they were in pain.^[4] On the flip side of the popularity the book gained, there existed an unhappy relationship between the two, Henry Vandyke Carter and Henry Gray. The publishers of the first edition wanted to ascribe joint authorship of the book to Henry Carter as his illustrations were just about as noteworthy as the text but Gray objected. It is said that Gray altered the lead page of the book "Anatomy – Descriptive and Surgical" published by John W Parker and son, West Stand, 1858, to diminish Carter's contribution toward making of the book.^[2] Also, Gray never gave Carter his share of all the royalties the early editions of the book earned. It is thus portrayed that "two very different men of medicine whose unlikely collaboration has launched a masterpiece".^[5]

HENRY VANDYKE CARTER IN INDIA AND HIS CONTRIBUTIONS

Frustrated by Henry Gray's attitude, Carter decided to take the exams for the Indian Medical Service. He joined the Bombay Medical Service as Assistant Surgeon in January 1858, and in May 1858, he assumed the charge of gazetted Professor of Anatomy and

Physiology at Grant Medical College. Subsequently, he served as a Civil Surgeon in Satara from 1863 to 1872.

In 1873, Carter visited Norway for the purpose of studying leprosy and the arrangements made in this country for the segregation and treatment of patients. He also visited Italy, Greece, Algeria and Asia Minor for investigating leprosy and the destructive skin disease known as "bouton de Briska", Sind sore or Delhi boil.^[6] On his return to India in 1875, he was deputed to Kathiawar (now in Gujarat) to investigate leprosy. He presented stained preparations of the *Lepra bacilli* from an Indian leprosy patient in a medical meeting. He published his work on Modern Indian leprosy in 1876 in a scientific publication.^[1] His study on leprosy was among the truly valuable papers, excelling in the descriptions of macroscopic anatomy of the lesions.

During a massive outbreak of famine fever of 1877–1878 in India, Carter shouldered the responsibility of investigating the cause of fever amongst the starving people and labeled it as relapsing fever. He identified *Spirillum minus*, the spirochete, in blood of the diseased cases, first time ever in India.^[7] He postulated that it could be transmitted by inoculation of blood, not only to man but also to monkeys. In the course of this study, he brought to notice the role of spleen in clearing the blood off microorganisms.^[6]

Apart from leprosy, Henry Vandyke Carter was the person who named mycetoma as "Fungal tumour" in 1860^[1] although he failed to characterize the fungus causing the disease owing to the imperfection of the apparatus and methods available then to him to investigate the same. He described correctly for the first time, its clinical and anatomical features.

He was the first to put forth the view that chyluria is due to rupture of lymphatic varices in the urinary tract. Other works of Carter that deserve mention are on the microscopic structure of calculi and parasite of malaria.^[6] These are the real testimonials of Carter's interest and contribution in the field of tropical pathology. His seven famous publications are:

1. The microscopic structure and mode of formation of urinary calculi (London, 1873)
2. On mycetoma or the fungus disease of India (London, 1874)
3. Report on leprosy and leper asylums of Norway (London, 1874)
4. On leprosy and elephantiasis (London, 1874)

5. Modern Indian leprosy (Bombay, 1876)
6. Reports on leprosy, second series (London, 1876)
7. Spirillum fever: Synonyms famine or relapsing fever as seen in western India (London, 1882)

PRIVILEGED POSTS AND AWARDS

In 1877, Henry Vandyke Carter was appointed as principal of Grant Medical College and first physician of the affiliated Jamsetjee Jhejeebhoy Hospital.^[6] Subsequently, he also held the offices of Secretary and the President of the Bombay Medical and Physical Society, and later on, the Dean of Medical Faculty of the University of Bombay. Carter retired in 1888, and was appointed Honorary Physician to the Queen in 1890 when he was in London.^[1]

In recognition of his work on relapsing (*Spirillum*) fever in India, he received the Stewart Prize of the British Medical Association at the annual meeting at Worcester, London, UK, in 1882.^[6]

Before leaving India, Carter donated a mighty sum of Rs. 10,000 for creating a lectureship in physiology under the name of Lord Reay, the then Governor of Bombay.^[6]

After 30 years of fruitful time spent in India, he returned to England in 1888. Carter died of tuberculosis at Scarborough on 4 May, 1897.^[1] Carter lived a life with different facets – as a simple, unassuming human being; a gifted artist; and an observant scientist. This article is to refresh the memories of Indian scientists on the studies of this most unrelenting, dedicated scientist and to enable young minds in India to emulate his principles.

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