Isaac Hays, MD

Nineteenth-Century Pioneer in Ophthalmology

Leon Morgenstern, MD

Isaac Hays (Figure) was a distinguished pioneer in the early days of American ophthalmology.1-6 His contributions may have been mightier by the pen than by the scalpel, but his niche in the history of ophthalmology is secure. In addition to actively practicing ophthalmology and fostering its growth into a recognized medical specialty, Hays also had the time and talent to edit one of the premier medical journals of his day, to become one of the founders of the American Medical Association (AMA), to author the first code of ethics of the AMA, and to edit or write works as diverse as Treatise on Diseases of the Eye, American Ornithology, and Descriptions of the Inferior Maxillary Bones of Mastodons.

Isaac Hays, the eldest of 4 children, was born into a wealthy Philadelphia, Pa, merchant family in 1796. When he graduated from the University of Pennsylvania with a bachelor of arts degree in 1816, his father, intending for him a career in the East India trade (the family enterprise), started him out in the “counting house.” The young Isaac decided after a year that the trade was not for him, and he opted instead for a career in medicine. At this critical juncture in his life, Hays was fortunate to become the pupil and preceptor of a physician of great stature and culture in Philadelphia, Nathaniel Chapman, MD, who later became the first president of the AMA. Beginning as Chapman’s office apprentice, Hays enjoyed a friendship and relationship with Chapman that was to influence not only his early career but also his eclectic pursuits for almost 4 decades thereafter.

Hays entered the Medical School of the University of Pennsylvania in 1818 while still serving as apprentice to Chapman, and he graduated in 1820 with a doctor of medicine degree. Medical faculties at that time were small and were rarely full-time. Among his teachers, and arguably the most famous, was Philip Syng Physick, MD, a general surgeon whose teaching and practice included fractures, amputations, bladder stones, and infectious diseases in addition to cataract surgery. He was a dynamic and charismatic lecturer. Among his pupils, along with Hays, were George Frick, MD, who wrote the first American textbook on ophthalmology and later became the first American surgeon to devote himself exclusively to ophthalmology; William Gibson, MD, who devised the first successful operation for strabismus; and George McClellan, MD, who founded the first eye hospital in Philadelphia.

EARLY AND MIDDLE YEARS

Shortly after entering practice, Hays was appointed to the staff of McClellan’s Institution for Diseases of the Eye and Ear, the third ophthalmology hospital in the United States. This hospital was soon eclipsed by a rival institution, the Pennsylvania Infirmary for Diseases of the Eye and Ear (the fourth ophthalmic hospital in the United States), dedicated to caring for the afflicted poor. It was here that Hays began to make his mark in ophthalmology, publishing articles such as “Observations of the Inflammation of the Conjunctiva,” “Inflammations of the Sclera,”

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The Pathology and Treatment of Iritis, and Diseases of the Cornea. In 1830, his chapter, "Diseases of the Eye," appeared in the authoritative textbook Practice of Medicine, edited by William Potts Dewees, MD (1833). Hays was the most active and productive member of the staff.

It was not until the 1830s that Hays became associated with the hospital that was to be the most important in his ophthalmologic career. In 1825, James Wills, a wealthy Quaker merchant in Philadelphia, bequeathed his estate for the establishment of "The Wills Hospital for the Relief of the Indigent Blind and Lame" (later for the blind alone). The hospital was opened in 1834, with Hays as the eldest of the 4 surgeons on the staff. It was at the Wills Hospital that Hays made his most notable contributions to ophthalmology. He was the first to publish a study on noncongenital color blindness. He also reported the first case of astigmatism in America, that of a Rev Mr Goodrich, whose cylindrical lenses were made by the noted optical firm of the Messrs McAllister of Philadelphia. Hays prescribed similar lenses for astigmatism in 2 subsequent cases.

It was also at the Wills Hospital that Hays devised a needle-knife for cataract extraction. Although it later became obsolete, in its day the needle-knife was regarded as a useful adjunct in cataract surgery.

The major contribution of Hays, however, during his years in practice and during his attendance at the Pennsylvania Infirmary and at Wills Hospital was his prodigious output as an author and editor. (Wills Hospital, now known as Wills Eye Hospital, is affiliated with Jefferson Medical College of Thomas Jefferson University in Philadelphia. It still ranks as one of the best in the United States.) The year he graduated from medical school he joined the staff of the Philadelphia Journal of Medical and Physical Sciences, edited by his esteemed mentor, Nathaniel Chapman. By 1827 he was appointed coeditor of the journal, which was renamed The American Journal of the Medical Sciences. To these journals Hays brought an active and intense ophthalmologic perspective, both writing and editing articles of ophthalmologic importance. By 1841 he had become sole editor of the journal, which during his tenure was also known as "Hays' Journal." For 52 years he was associated with the journal as coeditor or editor. William Osler, MD, doyen of American medicine, called it "one of the few great journals of the world." When Hays relinquished the editorship, the helm passed to his son, I. Minis Hays, MD.

Considering his literary talent and ophthalmologic expertise, it is surprising that Hays wrote no books; in the authorship of books he was "always the bridesmaid, never the bride." In 1830, as previously noted, he wrote the chapter "Diseases of the Eye" in Dewees' Practice of Medicine. In 1843, he edited the American edition of Sir William Lawrence's A Treatise on Diseases of the Eye, a well-known English book. In subsequent editions, his notes and commentary added much to the original treatise. In 1849, he edited the American edition of T. Wharton Jones' Principles and Practice of Ophthalmic Medicine and Surgery, again supplementing the text with his own notes. Working abroad from ophthalmology, he edited Arnott's Elements of Physics, Wilson's American Ornithology, and Hoblyn's Dictionary of Medical Terms. He was truly an indefatigable editor. When Hays died, Samuel David Gross, MD, said of him that he was "the most gifted medical journalist of the 19th century."

In medical organizations, Hays was a joiner, a founder, an officer, and an honoree. One of his earliest appointments, presaging his career as a world-famous editor, was as chairman of the Publishing Committee of the Academy of Natural Sciences, to which he was elected while still a medical student in 1818. He was a founder of the Franklin Institute in Philadelphia, which exists to this day as a premier scientific institute and library. When the Pennsylvania Infirmary for Diseases of the Eye and Ear was organized in 1822, Hays was elected secretary as well as 1 of 9 managers. When its successor, the Wills Hospital, was opened in 1834, Hays was 1 of the 4 original surgeons to be appointed by the president of its Board of Managers. In 1835 he became a fellow of the College of Physicians in Philadelphia, in which he was chairman of the building committee and a long-time editor of their transactions.

The role of Hays in the history of the AMA began in 1847 when he was chairman of the Committee on Arrangements for the annual meeting of The National Medical Convention, held at the Academy of Natural Sciences in Philadelphia. From that meeting of The National Medical Convention came the formation of the AMA, with Hays as one of its principal founders. At the same meeting he was elected the first treasurer of the AMA and the chairman of the Committee on Publications. He also is credited with authorship of the first Code of Ethics of the AMA, a predecessor of the current and more voluminous Code in use today. (Although the committee reporting the Code was headed by John Bell, MD, Hays is cited as having done "most of the work in the preparation of the principles.")

When the American Ophthalmological Society was founded in 1864, Hays was made an honorary member at its first meeting. Six years later, he was elected the first president of the Philadelphia Ophthalmological Society. It is obvious that he was recognized by his peers and colleagues as one of the leaders in the phenomenal growth of the specialty of ophthalmology, in no small measure due to his efforts. The years 1850 to 1870 have been called "The Golden Age of Ophthalmology."
LAST YEARS AND DEATH

A few years before his death, in his own indefatigable fashion, he began an American Cyclopedia of Practical Medicine and Surgery. Unfortunately, this work never got beyond “Axilla,” and it is probably the only work he left unfinished in his lifetime. Death came to Hays in 1879 at age 83 years when he fell victim to an influenza epidemic that swept Philadelphia that year.

When Hays began his career in medicine and ophthalmology, in the early decades of the 19th century, ophthalmology was firmly ensconced in the province of general surgery. Philip Syng Physick, Hays’ teacher at the University of Pennsylvania, was one of the foremost general surgeons of the day, yet he practiced, wrote about, and taught ophthalmology to an extent that he was considered one of the foremost eye surgeons of his day. Many decades later, David Hays Agnew, MD, professor of the Principles and Practice of Surgery at the University of Pennsylvania in 1871, was preeminent in ophthalmology in his practice, writing, and teaching. Similarly, Samuel David Gross, another surgical great, professor of surgery at Jefferson Medical College, was also proficient in the surgical treatment of the eye. The latter 2 surgeons were immortalized in paintings by Thomas Eakins (The Agnew Clinic and The Gross Clinic), but it was not eye surgery that was pictured. It was the breast and an extremity, more commonly within the province of the general surgeon.

To Hays must go the credit for helping propel ophthalmology into the realm of a specialty worthy to stand on its own. Early in his career he devoted himself exclusively to ophthalmology, and he played a major part in the success of early American eye hospitals (The Pennsylvania Infirmary and Wills Hospital). When, in 1839, he wrote that he had been told “by a professor of surgery in a school of high standing that . . . three lectures [were] ample for teaching everything of consequence relative to the diseases of the eye,” it was his idea that this notion required radical change. This he did by editing 2 authoritative British texts of ophthalmology for American physicians and by editing the premier medical journal in the United States, The American Journal of the Medical Sciences. In the journal, from 1827 to 1879, he featured and encouraged articles, discussions, and advances in ophthalmology to an extent seen in no other journal. It was not until 1862 that a journal devoted exclusively to the eye was published (The American Journal of Ophthalmology [not related to the current journal of the same name]).

The many honors from ophthalmologic societies that Hays received during his lifetime attest to his important role in the growth and development of this specialty in America. (Sometimes, in an error of historiography, his name is confused with that of a younger contemporary, Isaac Hayes, also a physician, whose chief claim to fame was his accompaniment of the physician-adventurer Elisha Kent Kane to the Arctic.) He was a pioneer and a man worthy to be remembered.

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