Charles Frederick Heywood

House Surgeon at the Ether Demonstration

Leroy D. Vandam, M.D.*

IN Robert C. Hinckley's pictorial recreation of The First Operation Under Ether, a select group of figures holds center stage. (fig. 1). Most prominent and rightfully so is the patient, Edward Gilbert Abbott, draped in white and further illumined by a covered table in the foreground bearing a sponge basin and several surgical instruments. While this centered group depicts the reputed participants in that memorable event, one figure not so obviously portrayed is the House Surgeon at the Massachusetts General Hospital (MGH). Stood up and in shaded profile, Charles Frederick Heywood gently supports Abbott's right hand. As we shall see, Heywood played a somewhat pivotal role in the arrangements for the etherization. With his educational background, prestigious appointment at the hospital, and the worldwide implications of this first public demonstration, one might have thought that Heywood was at the threshold of an illustrious surgical career.

Charles F. Heywood was born in Boston, Massachusetts, on November 14, 1823, the son of Samuel P. and Sarah Blanchard Heywood. Both parents came from the vicinity of Windchendon, Massachusetts.† Samuel, then residing in Cambridge, was President of the Cochituate Fire Insurance Company operating at 55 State House, Boston. On February 24, 1870, at the age of 75, the father would succumb to heart disease and pneumonia. According to his handwritten last testament, probated that year, 1870, there were two other siblings, Maria Louisa and Sarah Augusta, the latter, wife of Justin A. Jacobs, designated executor of the will. The son was bequeathed a sum of $3,000 plus the residual and his (Charles') three children an amount of $50 each.

Charles Heywood's early education, most likely in Cambridge, is not traceable, and his father Samuel is not listed among the graduates of Harvard College. However, given that he was a prominent member of the mercantile establishment, it is logical to suppose that Samuel would have supported Charles' matriculation at the College. And so he did. Charles eventually was awarded a Bachelor of Arts (B.A.) degree as a member of the class of 1843.* Official records of his undergraduate years at Harvard reveal that Charles was, on one occasion, permitted to attend public worship with his family; at another time allowed to drop the study of mathematics in favor of some other course; and later privately admonished for having five times subjected himself to the notice of the Parietal Board. On still another occasion he was referred to the President for allowing another person to sleep in his room. Having left college because of illness, he was readmitted to the Junior class for the academic year 1842–1843. There is little to suggest that he was ever an exceptional pupil. Having earned a B.A. degree as voted in 1843, he gained admission (not a difficult thing to attain) to the Medical School at a time when it was known as the Massachusetts Medical College and located on Mason Street. Ultimately, on August 21, 1846, he was listed among the candidates recommended for the medical degree by letter from the Dean, Dr. Walter Channing, later the Professor of Midwifery and Medical Jurisprudence. In 1848, Channing wrote the classic, "A Treatise on Etherization in Childbirth."

Instruction in medicine in those days was hardly according to a well planned curriculum, rather more in
I had the pleasure of making the acquaintance of the two Drs. Bigelow, Dr. John C. Warren, Drs. Jackson, Parkman, Townsend and some others, who were all very courteous; but my stay in Boston has been too limited to allow me to see much of them. The elder Dr. Bigelow, you are aware, is the Professor of Materia Medica, in the Medical College at this place. He, and his son, Dr. Henry J. Bigelow, with one or two associates, have a private class of twelve or fifteen students, with whom they follow an excellent plan of instruction, consisting of a course of reading, lectures, and examinations.

While at the Medical College, Heywood had several classmates who would later be involved in one way or another with the ether demonstration. The term of instruction commenced in November and on November 6, 1844, William Thomas Green Morton, a dentist, and subsequently the etherizer at the demonstration, matriculated at the College. Since Morton’s medical studies were interrupted because of his involvement with experiments on ether, he failed to achieve a Doctor of Medicine (M.D.) degree. While at the Medical School, Morton was domiciliary with Charles T. Jackson who would later lay claim to the discovery.

It is probable that both Heywood and Morton attended a demonstration given before the medical students by Horace Wells in January 1845 concerning the anesthetic properties of nitrous oxide, which he had first tested on himself on December 11 the year before. This demonstration took place sometime after January 17, when Wells could have traveled to Boston and back to Hartford, Connecticut, as there are no entries in his day book after January 17. It is usually stated that the nitrous oxide demonstration, which proved to be a failure, took place at the MGH, but there is no record of this in their archives. However, lectures frequently were given at public halls in the vicinity of the medical school: Quincy Hall, above Faneuil Hall Market, and Phoenix Hall and Boylston Hall, over Boylston market, Washington Street corner of Boylston. After the first ether anesthetics at the hospital, more than a few operations were performed at hotels or other facilities in the vicinity. In corroboroning of this, at the Bromfield House, on or about November 21, 1846, Dr. J. Mason Warren performed an operation before an audience consisting of Drs. Jackson, Reynolds, Smith, Flagg, Gould, Shurtleff, Lawrence, Parsons, Briggs, and others. Morton was the etherizer.

John Collins Warren makes no reference to the abortive nitrous oxide demonstration in his journal on the
days in question, although there were almost daily accounts of medical school activities. Thus, on January 16, 1845, both Morton and Heywood probably were present at an affair noted in the journal.

Ther. 40°. Bar 29.8. wind west-weather very mild and the snow nearly disappeared. Last evening had the whole body of Med1 Students at my house about one hundred & fifty. Had some conversations with several of them. One who appeared to be a physician in practice said that my lectures were as clear and satisfactory as possible.

In the journal for December 31, there is an intriguing note relative to anesthesia: “Experiments with chloroform, self inhalation on a handkerchief.” In his practice, Warren apparently had for some time employed the inhalation of ether for therapeutic purposes involving chest ailments and others, a common medical practice for many years.

Other medical students around Heywood’s time were Charles Hosea Hildreth, who matriculated in 1847; Charles Bertody, subsequently House Physician at the MGH and Heywood’s contemporary there; and John Call Dalton, later to become one of the country’s pioneering physiologists. These students and others were either depicted by Hinckley as having been present at the demonstration or assumed to have been there by those who have analyzed the painting.

In the sporadic announcements appearing in the *Boston Medical and Surgical Journal (BMSJ)* on those granted the M.D. degree from the Massachusetts Medical College, there is no mention of Heywood. In 1847, attendance at the then 2-year school was reported as 165. However, those cited in the *BMSJ* were merely a fraction of the number of students in attendance, principally those who had written theses. For example, George Hayward, Jr., in March 1843, was granted the degree in connection with a thesis on hip and joint disease. Similarly, in 1847, John Call Dalton discoursed on the subject of urine.

It is somewhat surprising that Heywood was appointed to the position of House Surgeon at the MGH because, from all accounts, he does not seem to have been an illustrious student. Presumably, the appointment as House Surgeon was a prestigious one, widely

---

Fig. 2. (A) Charles Frederick Heywood’s signature (bottom) on matriculation in 1844 at the Massachusetts Medical College, in the same hand that wrote the admission history and physical examination for Edward Gilbert Abbott, as well as the postoperative notes. Note his chosen instructor, Dr. Bigelow. (B) The signature enlarged. Reproduced with the permission of the Boston Medical Library in the Francis A. Countway Library of Medicine, Boston, Massachusetts.
sought. Possibly, some connections with the faculty or the impression he might have made were enough to result in his appointment on August 12, 1846. At the time, he resided at City Wharf House (probably a boarding house) on Leverett Street, close to the Hospital. Apparently, there were no house officer's quarters available at the institution. One year later, on August 28, 1847, he received a stipend of $50 for his year of service (Archives, MGH).

During his term, Heywood must have participated in only a few operations, for the record shows that between 1821 and 1846, only 333 operations had been done. Similar statistics for that era were given for the Royal Infirmary at Edinburgh and Guy's Hospital in London. More of an attraction to the MGH surgical service was the opportunity to apprentice to the leading surgeons of the Boston community, the chance to learn about the nonsurgical treatment of disease, as well as the possibility of becoming an attending surgeon later. Such an appointment Heywood may have achieved, but the record is vague on that score, and it could have been for only a short time, because he traveled abroad for several years before starting to practice in New York City around 1853.

In August 1846, when Heywood became House Surgeon, the Medical College was in process of relocating from Mason Street to a site adjacent to the MGH on Grove Street on land donated by Dr. George Parkman. A little more than a month later, on September 25, Edward Gilbert Abbott presented himself for medical evaluation at the Hospital. Five days afterward, on September 30, W. T. G. Morton, after having experimented with the inhalation of ether on himself and several animal species at West Needham, gave ether to Eben Frost, a biscuit manufacturer of Prince Street, Boston, for the extraction of an ulcerated tooth. News of this painless venture was reported the next day, October 1, in the Boston Daily Journal, as a clinical experiment reputedly witnessed by newspaper reporter Albert G. Tenney. This news item caught the eye of Henry Jacob Bigelow, recently appointed attending surgeon to the MGH. Over the course of several weeks, Bigelow witnessed additional etherizations at Morton's office on Tremont Row. His observations were transmitted to John Collins Warren, Chief of the Surgical Service at the MGH. Now, with the pace of discovery quickening, all that was required was an anesthetist and a patient who would prove to be Abbott.

As requested by Warren, Charles Heywood became the go-between and issued the invitation, written in his own hand, then delivered to Morton. (The original letter is preserved in the Morton Book in the collection of the Massachusetts Historical Society, Boston, Massachusetts.)

[on white paper]

Dear Sir

I write, at the request of Dr. J. C. Warren—to invite you to be present on Friday [sic] mg, at 10 o'clock, at the hospital & to administer to a patient who is then to be operated upon—the preparation which you have invented to diminish the sensibility to pain

Yours respectfully

C. F. Heywood

House Surgeon to M.G. Hospital

October 14, 1846

Dr. Morton

Tremont Row

By now E. G. Abbott had been a patient at the MGH for nearly a month. The hospital admission note and accompanying physical examination were the first on the record for that day, transcribed in Heywood's hand. These descriptions, the operative note (written by J. C. Warren) and the postoperative progress notes are models both of accuracy and clarity. In the current era of utilization review, it is worthy of note that Abbott, admitted on Friday, September 25, was discharged "well" on December 7, after an uneventful course, free of the prevalent nosocomial infection or "hospitalism."

On October 22, Heywood wrote a testimonial letter concerning the two etherizations that recently had been successfully performed at the MGH, according to the Morton Book (Massachusetts Historical Society).

[on blue notepaper]

I certify, that I assisted in the administration, of Dr. Morton's Preparation, to two patients operated upon by Drs. Warren and Hayward at the Mass. Gen' Hospital on the 16th & 17th of October—that, under its influence both these individuals submitted to operations lasting from 5 to 10 minutes, without suffering—and that—they speedily recovered from its effects—

C. F. Heywood

House Surgeon

Mass. Gen' Hospital

Oct. 22-1846.

Other than several other letters written in connection with the ether controversy, Heywood failed to publish in the medical journals either during his term as House Surgeon or after he had begun to practice in New York City. His name does not appear as a junior author on
any of the many articles written at the time by surgeons at the MGH, usually appearing in the *BMSJ*. On the other hand, joint authorship was a rare event in those days in contrast to the current mode, where multiple authorship is sometimes oppressive. This lack of academic accomplishment may explain why Heywood may not have achieved attending physician status at the Hospital, although he had applied for that position in 1848. In 1849, Heywood resided at 2 Bowdoin Square, where he practiced as a physician (Archives, MGH). His later conversion in 1853 to a purely medical practice in New York City could be explained by a lack of surgical accomplishment.

Heywood’s obituary, published in the *BMSJ* on February 20, 1893, states that, after 3 yr of service at the MGH, which would imply the year 1849, he spent 5 yr of study in Paris. He then returned to this country and to the medical staff of St. Luke’s Hospital in New York City. There is no record of what he might have accomplished abroad. St. Luke’s Hospital, formally organized in 1851, owed its origins to a church sisterhood that occupied a beautiful and convenient house purposefully erected for them next to the Church of the Holy Communion. In 1854, at an adjoining hired house, the sisters opened an infirmary, which was the beginning of the work of the Hospital. The infirmary, furnished with 15 beds, was attended gratuitously by Dr. C. F. Heywood and had more than 200 patients when it was transferred, May 1858, to the walls of St. Luke’s. In subsequent annual reports, Heywood is listed as an attending physician. The date of his termination of service is February 1862. §

Thereafter, Heywood practiced medicine at several locations in the city, frequently changing his address and visiting hours. The last office location is given as 27 West 31st Street, hours 9–11 AM and 5–6:30 PM. In 1887, his residence was listed as Pelhamville, Westchester, New York. He would die at the age of 70, February 14, 1893. In the City Medical Register, he was listed as a member of the New York Academy of Medicine, Pathology Society, Harvard 1847. The New York Academy of Medicine had been founded in 1847, and Heywood acted as its Recording Secretary from 1859 to 1859. In retrospect, it would seem that, although involved in medical circles, he showed little tenacity or remarkable achievement in any of his professional endeavors.

In those New York City days, Heywood must have had many reminders of the personalities involved in the 1846 ether demonstration. On January 14, 1853, Heywood wrote an extended letter to the U.S. Senate Select Committee investigating the claim of W. T. G. Morton, M.D., for the discovery of etherization. In this communication, Heywood, while referring to the controversy over the discovery, stated that he “did not believe that any one party had a right to make a claim like that.” He traced the development of anesthesia according to periods, the first being the age of animal magnetism and use of opium, “both unsatisfactory as anodynes.” In the second phase, “It is satisfactorily proved that Dr. Wells had established the aforementioned points [inhala- tion and insensibility to pain], as early as October 1844. Morton’s [Wells’s student] administration of ether to the first case of surgery at the MGH in October of 1846” followed. Finally, “To the spirit of Dr. Horace Wells belongs the honor of having given to suffering humanity the greatest boon it ever received from science.” Thus did Heywood declare himself and enter the fray.

Heywood was a contemporary of several of that group of New York, Boston, and Philadelphia physicians who, among their other actions, petitioned the Congress, appealed to the public, and attempted to raise a national fund for W. T. G. Morton’s benefit. Among these physicians in New York City were Valentine Mott, Marion Sims, and Willard Parker, the latter President of the New York Academy of Medicine during Heywood’s term as Recording Secretary and a Consulting Surgeon to St. Luke’s Hospital. These men were adherents of the committee who, in 1858, had recruited Nathan Payson Rice, M.D., to prepare the Morton biography, *Trials of a Public Benefactor*, published in 1859. Rice was a graduate of Harvard College 1849 and the Medical School in May 1853. A New York practitioner 29 yr of age, Rice had written a number of medical articles for books and magazines to supplement his scant resources from surgical and medical practice. Coincidentally, John Call Dalton was listed as a Pathological Chemist on the staff of St. Luke’s Hospital.

One wonders what might have been Heywood’s emotional reaction when W. T. G. Morton was brought by ambulance to St. Luke’s Hospital on Wednesday, July 15, 1868, to die there the next morning. During this final visit to New York, Morton, concerned over a report depriving his claims to the discovery, found himself

---

§ Birnbaum DJ: Personal communication. 1993.

| Van Poznak A: Personal communication.
Charles Frederick Heywood

Fig. 3. Robert C. Hinckley’s preliminary sketch (around 1883) of Charles Frederick Heywood for his rendition, The First Operation Under Ether. Reproduced with the permission of Richard J. Wolfe.¹

engulfed in an extended heat wave. Beset by fatigue and sleeplessness, he was treated by the well known Drs. Sayre and Yale, who prescribed leeches to his temples, cups on the spine, and ice to the head. In an effort to escape the heat, Morton drove through Central Park with Mrs. Morton until they came to its upper reaches, and he leaped from his carriage to bathe his aching head in the lake’s cool waters. He soon lapsed into unconsciousness. Although commonly said to have suffered from apoplexy, death, according to the medical examiner, resulted from heat stroke. There had been 50 fatalities in New York City over the previous 3 days and a parallel high mortality in Boston. On July 17, the New York Tribune properly identified the gentleman of Boston: “The record of deaths by sunstroke in our issue of yesterday includes the name of William Thomas Green Morton, M.D. whose labors in introducing the anesthetic process into surgical operations have given him an eminent place among the benefactors of the human race.”

About 10 yr later, William James Morton, M.D., the first-born son of W. T. G. Morton and Elizabeth Whitman, in Charlton, Massachusetts, practiced medicine for a time in New York City. Heywood could not have been unaware of his presence. Long active in supporting his father’s claims to the discovery, William James pursued an interesting and varied career after graduation from the Harvard Medical School in 1872. While in New York, he was a member of the American Neurological Association; then he studied neurology in Paris, followed by an appointment as Professor of Mental Diseases at the University of Vermont. Ultimately, he became an authority on electrotherapeutics, as well as one of the first physicians to use the x-ray in the treatment of skin diseases.¹⁵

The best known depiction of the ether demonstration is The First Operation Under Ether, painted by Robert Hinckley, begun in 1882 in Paris and completed in the United States in 1891. In his research concerning those physicians and students who might have been present at that epochal event, Hinckley wrote to Heywood around May 1883 for confirmation of his selection of likely subjects. Richard Wolfe notes that, on May 1, 1883, Heywood penned a long letter in response.¹¹ For various reasons, including inaccuracies, incorrect dates, and suggestions as to who might have been present on October 16, 1846, Heywood’s reply is of limited value in documenting those present at the ether trial. In the painting, Hinckley’s portraits of those believed to be present bear little resemblance to the actual participants. Such artistic license is exemplified by a preliminary sketch of Heywood (fig. 3) in which he appears to be a handsome youth of strength and character, although there is no photograph for comparison as he might have been in his youth.

One final observation may strengthen the impression that Charles Frederick Heywood’s medical career was hardly a distinguished one after such initial promise. In his obituary, following the statement that he had practiced in New York for 40 yr and for 10 yr as one of the visiting physicians at St. Luke’s Hospital, there was an indication that he had of late been a member of the medical board of the Equitable Life Insurance Company.

The author thanks these medical historians for their critical scrutiny of this manuscript: Richard J. Wolfe, Guillermo C. Sanchez, M.D., and Philip Cash, Ph.D.

References

2. The Boston Directory for the Year 1851, embracing The City Record. Boston, George Adams, 1851, p 122
3. Harvard University Yearbook. Cambridge, Harvard University, 1930
4. The Collection on Harvard University Graduates in the Pusey Library. Cambridge, Harvard College

Anesthesiology, V 82, No 3, Mar 1995
6. Statements Supported by Evidence of W.T.G. Morton, M.D. on the Claim to the Discovery of the Anaesthetic Properties of Ether. Submitted to the Honorable The Select Committee Appointed by the Senate of the United States 32d Congress, 2d Session, January 21, 1853, p 386


12. Statements Supported by Evidence of W.T.G. Morton, M.D. on the Claim to the Discovery of the Anaesthetic Properties of Ether. Submitted to the Honorable The Select Committee Appointed by the Senate of the United States 32d Congress, 2d Session, January 21, 1853, pp 100–101

